ECONOMIC SURVEY of LATIN AMERICA 1948

PREPARED BY THE SECRETARIAT OF THE ECONOMIC COMMISSION FOR LATIN AMERICA

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PREFACE

The *Economic Survey of Latin America, 1948,* undertaken at the request of the Economic Commission for Latin America, is the first comprehensive review of the economic situation in that region to be issued by the secretariat of the Commission. In providing extensive statistical and other data for appraising the region's most urgent economic problems and needs, the report should be a valuable contribution to concerted international action for the better utilization of the wealth of the Latin-American Republics and for the promotion of economic progress and development in that region.

Trygve LIE
Secretary-General

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Symbols employed. The following symbols have been used throughout the *Survey:*

. . = not available
— = nil or less than half the final digit shown
. = statistical category not applicable

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LETTER OF TRANSMITTAL

Santiago
13 September 1949

Sir,

In accordance with the instructions of Mr. A. D. K. Owen, Assistant Secretary-General in charge of Economic Affairs, I have the honour to transmit to you herewith the *Economic Survey of Latin America, 1948.*

A resolution adopted by the Economic Commission for Latin America during its first session (E/CN.12/59) requested the Executive Secretary to undertake an economic survey of Latin America with the facilities and resources at his disposal. This survey represents the first step in the long and difficult task of preparing a complete and fully documented study of economic conditions in Latin America.

Work for this first survey was hampered by the scarcity of statistical data in some of the countries, by the difficulty of obtaining recent information and by the lack of comparability among available figures, because of differences in methods of compiling data and discrepancies in periods covered. It is hoped that this situation will improve as a result of the development of the statistical services of the Latin-American Governments, for which purpose they will have the co-operation of the United Nations and the specialized agencies.

In many cases it has been necessary to refer to a phenomenon which affects the region as a whole by means of illustrative data from a single country or a group of countries; this procedure has been adopted when it is known that similar conditions prevail throughout the region, though complete data are not available for all countries.

It was planned that the survey would cover the period from 1937 to 1947, to include both pre-war and post-war conditions, in order to comply as closely as possible with the terms of the resolution adopted by the Commission. With few exceptions, 1947 is the most recent year for which data are available.

The survey has been divided into two main parts: "Trends in Production" and "Other Economic Aspects". The first presents the salient features of industrial and agricultural development; the second discusses the effects of such development on special aspects of the economy—especially foreign trade, the balance of payments and the inflationary process.

So far as possible, the data included in the Survey have been obtained from the Statistical Office of the United Nations and other official sources.

In preparing this survey, the secretariat has received valuable assistance from the International Monetary Fund, the Food and Agriculture Organization of the United Nations and other specialized agencies which have furnished studies or information.

I have the honour to be, Sir,
Your obedient servant,
Gustavo MARTÍNEZ CABANAS
Executive Secretary
Economic Commission for Latin America

Hon. Trygve Lie,
Secretary-General,
United Nations,
Lake Success, New York

INTRODUCTION

The rhythm of Latin-American economic development has depended, since the middle of the last century when it became integrated in the international market, to a very great extent upon the stimulus of external factors. The most important of these has been foreign trade, followed by foreign investment.

Both these factors were considerably weakened by the Great Depression, and it was then that the Latin-American countries began to turn definitely towards industrialization.

A means of compensating the weakening of external factors on which its growth depends has been sought in industrialization, which is now gradually absorbing that part of the increment in manpower which could not be absorbed by primary production and related activities. At the same time imports, which could no longer be paid for with exports or foreign investment, were replaced by internal production.

The process of industrialization which had thus begun to gather strength was greatly stimulated when the Second World War rendered it impossible for Latin America to satisfy a large part of the needs of its population through imports. It was also impossible to renew or increase industrial equipment. This led to a maximum use of existing equipment and to improvisation in order to replace the imports of both finished consumer goods and the materials necessary for their manufacture.

The emergency thus revealed to the Latin-American countries the wide field of industrialization in which they could develop industries supplying current consumption, and which, if a sound anticyclical policy is followed, would not only increase employment, but also protect their economies from the adverse effects of external fluctuations.

As a result industrial production in 1947 registered an increase over 1937 of about 50 per cent in those Latin-American countries which were already in a relatively advanced stage of development, whereas that of the less developed countries was somewhat lower (about 30 per cent).

It is a significant and outstanding fact that with a few exceptions this increase has taken place without in any way prejudicing agriculture or primary production in general. Agriculture has continued to develop, but the rate of industrial growth has surpassed it and has contributed more directly to the improved standard of living. In other words, although industrial development has been more rapid, agriculture retains its dominant role in the Latin-American economy and accounts for 60 per cent of total employment.

It is significant, however, that this proportion is tending to decline. Technical progress makes it possible to increase primary production

without a corresponding increase in employment, and therefore provides one of the main sources of manpower for industry.

There is ample room for improvement in this field, as all authorities agree that an appreciable increase in output could be obtained with the use of modern techniques in Latin-American agriculture. In this, as in other matters, extreme generalizations should be avoided. Some countries have made substantial technical advances in agriculture, while others are still in a primitive stage. The figures shown for 1947 as compared with the average for 1934-1938 provide some indication of the opportunities for improvement.

The population of Latin America has increased by approximately 23 per cent while the increase in food production was 20 per cent.

Nevertheless the level of nutrition tended to improve during this period, due to the fact that those countries with a deficit in food production resorted to larger imports, while those with a surplus increased their consumption by decreasing exports. This is an encouraging symptom in so far as it indicates an increase, albeit relatively small in most countries, in *per capita* consumption; but at the same time it reveals that inflation, among its many consequences, may raise hope of improvements, which are not always compatible with reality.

This consideration has a special significance in relation to exports. If, on the one hand, the war emergency has shown the industrial possibilities of Latin America, on the other it has clearly demonstrated that their development depends on an active foreign trade.

The necessity to import, after the severe restrictions imposed during the war, was everywhere clearly manifest. Even when the pent-up demand for imports has been satisfied, the need for imports remains at a high level, and as a result imports and other liabilities in the balance of payments tend to increase at a faster rate than exports. The explanation is simple. The high level of employment generally obtaining in Latin America calls for a correspondingly high level of imports of consumer goods. Due to the prevailing economic structure of Latin America, moreover, industrial development requires large imports of capital goods. Added to this, inflation tends to increase the demand for imports, thus bringing about an adverse pressure on the balance of payments which tends to deplete a large part of previously accumulated monetary reserves.

The balance of payments with the United States since 1941 illustrates this fact. Between 1941 and 1945 the gold and short-term net assets of Latin-American countries in the United States increased by the considerable sum of $US2,317 million. The gain had been reduced by approximately half, however, before the end of 1948 as a result of the increase of imports and other foreign payments.

This does not explain the whole situation, however, as in order to meet its deficit with the United States, Latin America had not only to draw on its gold and short-term reserves but also on part of the dollar

receipts resulting from the favourable balances of payments with the countries of Europe and the rest of the world.

This form of multilateral compensation could obviously not continue without a severe drain on monetary reserves. The Latin-American countries were therefore compelled to adopt restrictive measures in order to protect their reserves from the consequences of inflation and the high level of employment. In part these measures were designed to prevent a return of foreign trade to its former channels, in which the direction of exports did not always coincide with that of imports. It is obvious then that the foreign trade of Latin America is passing through a period of readjustment in which imports are being redistributed according to the availability of different currencies.

In all these fluctuations there is, moreover, an important factor affecting the rhythm of the economic growth of the Latin-American countries. Will exports again provide them with a persistent stimulus towards development as before the world crisis? In this as in other cases the future is not clear and it is necessary to look into the cause of recent events. The figures for the quantum of Latin-American exports since the war, notwithstanding the extraordinary increase in values, show a relatively small increase in volume; in fact this has fluctuated on an almost stable level, first falling and later rising to a figure not much higher than before. In 1947 it was only 16 per cent more than ten years earlier, while population in the same period increased by about 23 per cent.

It is necessary to consider not only the quantum but also the prices of exports, which varied appreciably. If they are examined as a whole, however, the present relation between the prices of primary products exported by Latin America, and those of the finished goods imported, does not appear to have improved fundamentally in comparison with the 1930's, when it was influenced by the world crisis. The price relation, which has been deteriorating steadily since the 1870's, has therefore not recovered. If this fact is considered in conjunction with those mentioned in connexion with the quantum, it leads to the conclusion that if the Latin-American countries generally have increased their real incomes since the war, this might be due primarily to the development of their internal activities rather than to exports.

These exports comprise mining as well as agricultural products. In fact, with the exception of Venezuelan oil, the increase in exports of minerals after the momentary expansion resulting from the war is not very marked. It should be noted in passing that if in some countries mining products constitute an appreciable share of exports, and therefore of foreign exchange available for imports, they do not absorb more than 6 per cent of the total population employed, in the best of cases.

The outstanding role of exports cannot be overlooked as they provide, ultimately, the principal means of acquiring the capital goods

necessary for furthering economic development in industrial activity, as well as in agriculture and other branches of primary production.

This development depends to a large extent on the increase in productivity per man, and similarly the increase in demand will only be possible through this increase in productivity. The factors of economic development are therefore very closely related. The key to the situation is a high capital investment per man employed, without which productivity cannot approach that obtaining in countries enjoying a high standard of living.

The main obstacle to the accumulation of high capital investment per man in Latin America is the scarcity and misdirection of savings. Hence the need to resort to foreign capital in order to reach an intensive rhythm of economic growth in Latin America.

Savings are scarce in Latin America. Nevertheless, because of the world crisis and the war, a large part of the industrial growth was brought about through domestic savings. While this trend promises well for the future, there is still a wide scope for foreign investments. A great disinvestment took place in the real capital of transport systems in general and it is difficult to imagine how, given the scarcity of savings, a sufficient quantity can be spared to renew and modernize equipment without prejudicing the rest of industrial capital formation. The same observation applies to the development of sources of energy and other investments where the lack of foreign capital may mean a delay of many years in the rise in the standard of living of the masses.

The relative scarcity of savings and their misdirection combined with the great public and private needs for investments in Latin America, have generally led to inflation. It is true that the credit expansion was first stimulated by external factors, namely, the large accumulation of gold and foreign exchange during the war; and that during the moderate phase of this expansion there was an increase in the employment of productive factors and, consequently, in real income. Afterwards, however, the expansion acquired its own momentum, and instead of producing an appreciable increase in production, it led to an exaggerated rise in prices, with the adverse economic and social consequences which are now a cause of such concern to governments.

These, then, are the most significant facts of the economic evolution of Latin America in recent years. The satisfactory solution of these problems depends to a large degree on systematic research into the structure and functioning of the economies of the various countries.

PART ONE

TRENDS IN PRODUCTION

CHAPTER 1

MANUFACTURING

I. INTRODUCTION

Manufacturing production in the Latin-American countries represents only a small fraction of the total value of industrial output in the world. In 1937 the combined net value of manufacturing and mining in Latin America amounted approximately to 2.3 per cent of the world total and was comparable to Canada's share of 2.2 per cent.[1] Such a volume of output is also small in relation to the population of Latin America, which totalled some 119 million people in 1937 or 5.6 per cent of the world total.

By the end of 1947 industrial expansion in the countries that had not been directly affected by warfare, and recovery in the war-devastated nations, led to an increase of 21 per cent in the world's manufacturing and mining output over that of 1937. In Latin America industrial activity was probably between one-third and one-half above the pre-war level, which represented a greater rate of increase than the world average. Thus, the share of Latin America in total world production increased to between 2.6 and 2.9 per cent of the total. In relation to its population, however, the increase in industrial output in Latin America was smaller than in the world as a whole. In 1937-1947 the population of the region increased by 22.3 per cent to 146 million, whereas that of the world increased by approximately 8 per cent in the same period. As a result, the proportion of the population of the Latin-American Republics in the world total rose from 5.6 to 6.3 per cent.

The average world increase in industrial production since the pre-war period, which has mainly been due to the expansion in the United States, conceals very great disparities among nations and regions. The rate of increase in Latin America was slower than in the northern part of the Western Hemisphere, where United States and Canadian industrial production in 1947 amounted to 165 and 163 per cent, respectively, of 1937, after having declined from still higher levels attained in 1943-1944.

The rate of recovery in Europe, largely based upon a fuller utilization of existing plant capacity, proceeded at a rapid pace upon the termination of hostilities. Including Germany, Europe's industrial output recovered from 48 per cent of the 1938 level in the first quarter of 1946 to 86 per

[1]This estimate by the United Nations Statistical Office is not altered by the omission, from the total for Latin America, of six small countries whose manufacturing and mining output is negligible. The value of manufacturing and mining production is not segregated in view of the absence of separate data for these two activities in several countries outside of Latin America.

cent in the third quarter of 1947.[1] Excluding Germany the rise was from 80 to 99 per cent. Thus industrial production in Europe since 1946 has increased at a higher rate than in the rest of the world, and also more than in Latin America. This trend continued also in 1948. Thus, the pre-war position of Europe in the world is being re-established to a certain extent, even though the primacy of the Western Hemisphere in industrial production, largely concentrated in the United States, seems to have been secured.

Despite the development of manufacturing production in Latin America achieved since 1937, agriculture is still the main economic activity in the region. Measurements of manufacturing in the economies of the Latin-American countries—by means of national income and employment data—indicate in most cases, especially in the less developed ones, its secondary position and at the same time a relative increase in its significance. National income data available for six countries provide a rough measure of the varying degrees of industrial development in the countries concerned (see table 1). They do not provide, however, any indication of comparative levels of *per capita* production, which is distinctly higher in Argentina than in any of the other countries of Latin America.

TABLE 1. MANUFACTURING AS A PERCENTAGE OF NATIONAL INCOME IN SIX LATIN-AMERICAN COUNTRIES, 1938-1946

Percentages

	Argentina	*Chile*	*Colombia*	*Dominican Republic*	*Mexico*[a]	*Peru*[b]
1938	18	..	..	..	21	..
1939	18	..	..	..	23	..
1940	18	17	17	12	24	..
1941	19	18	..	9	25	..
1942	20	20	..	13	24	14
1943	21	20	..	13	24	..
1944	21	..	..	12	25	..
1945	21	..	..	16	25	..
1946	..	..	..	16	26	..

Note: The percentages measure the relationship between the value added by manufacturing and current net national product at factor cost except in the case of Argentina where the data relate to current domestic gross national product at market prices, i.e., net national product at factor cost plus indirect taxes, allowances for depreciation and maintenance minus subsidies.

Sources: The percentages shown in the above table, except in the case of Colombia, have been derived from the data in *National Income Statistics of Various Countries, 1938-1947*, Statistical Office of the United Nations, 1948. The percentage for Colombia was obtained from "National Income Estimates of Latin American Countries," by Loreto M. Domínguez in *Studies in Income and Wealth*, vol. 10, National Bureau of Economic Research, New York, 1947.

[a]Including construction and electric power and gas.

[b]Including small industry and handicrafts.

[1]Data include manufacturing, mining and building for fifteen countries which before the war accounted for about three-quarters of the total value of industrial production of Europe (excluding the USSR). *Source: A Survey of the Economic Situation and Prospects of Europe*, United Nations Economic Commission for Europe, Geneva, 1948.

Another measurement of the significance of manufacturing in various countries, based upon employment, shows considerable disparity among them (see table 2).

TABLE 2. PERSONS ENGAGED IN MANUFACTURING COMPARED WITH THE TOTAL GAINFULLY EMPLOYED POPULATION IN NINE LATIN-AMERICAN COUNTRIES[a]

		Persons engaged in manufacturing	
			Per cent of employed
	Year	*Thousand*	*population*
Argentina[b]	1947	1,151	20
Brazil[c]	1940	1,400	10
Chile[d]	1940	298	17
Colombia	1938	441	10
Cuba	1943	190	13
Mexico[e]	1940	640	11
Panama	1940	15	7
Peru	1940	380	15
Venezuela	1941	207	17

Sources: Yearbook of Labour Statistics, 1945-46, International Labour Office, except for Mexico, data for which were obtained from *Compendio Estadístico, 1947,* Dirección General de Estadística and for Argentina, for which data on employment in manufacturing are reported in the *Mensaje Presidencial,* 1948. For Argentina the number of persons engaged in manufacturing, expressed as a per cent of the total employed population, has been estimated by United Nations Economic Commission for Latin America.

[a]Including employment in handicrafts but excluding employment in construction, unless otherwise indicated.

[b]Including mining and excluding handicrafts.

[c]Including construction.

[d]Excluding handicrafts.

[e]Including construction.

Yearly series of employment in manufacturing in five countries, used as indicators of manufacturing output in a subsequent section, permit the conclusion that the percentage of persons engaged in manufacturing within the total of the employed population has increased. While it is probable that within a period of ten years the structure of the economies of Latin America did not permit an appreciable change in the proportion of the employed population to the total population within each country (perhaps with the exception of Argentina) the rate of increase of employment in manufacturing was greater than that of the total population as is shown below.

GROWTH IN POPULATION AND EMPLOYMENT IN MANUFACTURING IN FIVE LATIN-AMERICAN COUNTRIES: PRE-WAR AND POST-WAR

	Index numbers: pre-war year = 100		
	Pre-war and post-war years	*Population*	*Employment in manufacturing*
Argentina	1937-47	114	134
Chile[a]	1937-47	121	122
Dominican Republic	1937-46	132	183
Mexico	1937-46	123	132
Uruguay	1936-47	111	150

[a]The 1947 figure for employment in Chile somewhat understates the true picture since the index does not include all of the new establishments.

The relatively small role of manufacturing in the economies of Latin America indicates that despite the increase that has taken place in this field since pre-war, the economic structure of the region has not been basically altered. However, the considerable differences in the economies of the various Republics do not always permit such a generalization at a country level. Since 1937, developments in those parts of Latin America that had already entered into a more advanced stage of industrialization, particularly Argentina, Brazil, Chile and Mexico, did alter their economic structure more profoundly than was the case for the region as a whole. As in the rest of the world, it appears that economic development in Latin America, proceeding at a different pace in each country, has accentuated the dissimilarities that existed in the region before the war.

II. PRODUCTION

Over-all measurements

VOLUME

In the first two post-war years the average level of manufacturing production in the four industrially most developed countries of Latin America was approximately one-half higher than before the war (see table 3).[1]

TABLE 3. MANUFACTURING PRODUCTION IN ARGENTINA, CHILE AND MEXICO

	Index numbers, base: 1937 = 100		
Year	*Argentina*[a]	*Chile*	*Mexico*
1937	100	100	100
1938	104	..	98
1939	109	102	98
1940	112	115	104
1941	125	127	111
1942	138	126	122
1943	151	127	129
1944	155	122	141
1945	149	134	149
1946	151[b]	145	163
1947	162[b]	148	143

Sources: For Chile and Mexico, *Monthly Bulletin of Statistics,* United Nations; for Argentina, *Memorias* of the Central Bank of Argentina.

[a]Index of net value of production at constant prices.

[b]Provisional.

It is probable that the aggregate increase in the other countries of the region ranged between one-fourth and one-half of the pre-war level.

[1]A partial index of industrial production in Brazil is shown in Appendix A.

The structural differences between such countries on the one hand, and the relatively more developed ones on the other, as determined by the relative weight of the consumer goods industries, seem to have been the main factor in the smaller rate of growth of the less developed nations.

Partial data on the output of such industries as flour mills, sugar and alcohol refineries and meat processing in the countries where the processing of foodstuffs for export is not significant, usually show a moderate growth which was not appreciably outweighed by the rapid expansion of the dairy, vegetable oil, beverages and tobacco industries. Even though the relatively simple technical processes employed in these categories of production permitted in some cases an appreciable increase, output was held back by the fact that agricultural production for the domestic market of such commodities as wheat, corn, sugar, potatoes and meat was only moderate and in some countries almost stationary. This applies also to the food-processing sector of Brazilian manufacturing.

Despite the greater relative significance of the food-processing industries in the relatively less developed countries, their rate of development was far from being uniform. In Cuba, Uruguay and the Dominican Republic, where it was possible to expand the processing of foodstuffs for export, due to a greater elasticity of supply, manufacturing output probably expanded as much as or even more than in the industrially more developed countries of the region. Data on employment in manufacturing for the two latter countries indicate such a trend. The importance of the textile industry in Colombia, which represents approximately 20 per cent of the net value of manufacturing output in that country, and the development of the oil-refining industry in Venezuela have probably also led to a rise in manufacturing output to comparable levels. In most of the other countries of Latin America, however, where industrialization is only in its initial stage, the rate of manufacturing development is likely to have been smaller.

Furthermore, the less developed countries of Latin America were more handicapped in the expansion of manufacturing output by the low degree of integration of industrial production, shortages of skilled labour and management, as well as by the fact that in contrast to those countries which possess even a small metallurgical industry, they do not produce any industrial equipment. Another factor which makes it probable that on the whole the expansion of manufacturing in the less developed countries of Latin America in 1937–1947 was less rapid than in the more industrialized ones, is that the former had in 1937 less unused plant capacity than the latter.

Differences in levels of income and in its distribution seem, on the whole, to have strengthened the discrepancy of growth between the various countries of Latin America, because of the greater demand for domestically produced manufactures in those countries where industrial production already had deeper roots.

EMPLOYMENT AND POWER

The expansion of manufacturing output in Latin America was accompanied by an increase in employment in all countries for which data are available (see table 4).

TABLE 4. EMPLOYMENT IN MANUFACTURING IN FIVE LATIN-AMERICAN COUNTRIES

Index numbers, base: 1937 = 100

Year	*Argentina*[a]	*Chile*	*Dominican Republic*	*Mexico*	*Uruguay*[b]
1937	100	100	100	100	..
1938	104	107	..	102	100
1939	108	109	..	104	112
1940	111	116	..	105	114
1941	117	135	115	110	121
1942	124	133	123	114	124
1943	126	126	130	119	130
1944	131	122	139	123	136
1945	133	124	131	128	138
1946	137	128	183	132	146
1947	147	122	..	..	150

Sources: For Argentina, *Monthly Bulletin of Statistics,* United Nations, and *Síntesis Estadística Mensual de la República Argentina;* for Chile, *Estadística Chilena.* The indexes for the Dominican Republic, Mexico and Uruguay have been calculated on the basis of data provided by the Director General of Statistics, by the Bank of Mexico and by the *Consejo Nacional de Subsistencias y Contralor de Precios,* respectively.

[a]Including employment in mining.

[b]Base: 1936.

The changes in productivity which a comparison between tables 3 and 4 suggests are pointed out later. For Uruguay and the Dominican Republic data on employment in manufacturing may be considered as indicative of manufacturing production. In addition, although no comparable data are available for Colombia, there was a 42.6 per cent increase between 1938 and 1945 in the employment in manufacturing in Bogotá, where about one-fifth of the manufacturing labour force in the country is employed.

Data on output of electricity by public utilities for industrial use merely indicate a trend showing the growth of manufacturing.[1] In Colombia, sales of energy for industrial use by four major producers supplying the three main manufacturing centres of the country, increased by 179 per cent from 1937 to 1947, although other users are probably also included. Data for Panama (Panama City and Colón) show a 50.4 per cent increase between 1940 and 1947.

[1]A correlation between sales of electricity by public utilities to "industries" and manufacturing output is not usually satisfactory since such data, when available, usually include sales to consumers other than manufacturing establishments. Moreover, data on the production of electricity by the manufacturing establishments themselves are generally not available. In addition, shifts in the utilization of prime movers in favour of electric energy seem to have taken place.

Output of main commodities

Data for the production of individual processed foodstuffs indicate a general upward trend (which sometimes tapers off for certain commodities in post-war years) resulting not only from an increased output in agriculture, but also from a greater volume of exports, and a higher degree of processing of foodstuffs for foreign markets and domestic consumption. Fragmentary data indicate, for example, an increase in wheat flour output, sugar and alcohol refining, and meat and lard production, and an even greater increase in the output of vegetable oils and meat, fish, vegetable and fruit canning or other forms of processing. Upward trends are also noticeable in the output of condensed and evaporated milk, as well as butter and cheese. In nearly all countries of Latin America where beer is produced, there has been a remarkable and steady increase in output. In Cuba, for example, output doubled between 1937 and 1947, and in Venezuela there was more than a fourfold increase over the same period. The disappearance of alternate sources of supply and increased domestic demand stimulated the output of domestic wines and other alcoholic beverages. Production of soft drinks seems to have developed at an even greater rate. Increased purchasing power showed itself in a greater volume of production of cigarettes, almost exclusively destined for the domestic market of the respective countries.

The second most important manufacturing group in Latin America is the textile industry, consisting mainly of the production of cotton yarns and fabrics.[1] Between pre-war and 1947 commercial cotton consumption in Latin America increased at a greater rate than in any other part of the world: from an average of 1.10 million bales (216.8 kilogrammes net weight) for the period 1934–1938, to 2 million in 1945–1946, and 1.95 million in 1946–1947, or 82 and 77 per cent respectively. This signifies a more than threefold increase over 1909–1913. Cotton mill consumption in Latin America in 1934–1938 represented 3.9 per cent of the world total, 12.2 per cent in 1945–1946 and 11.7 per cent in 1946–1947.

The cotton mills, though concentrated mainly in Brazil and Mexico, expanded production in all Latin-American countries where the industry is in existence, partly as a result of higher consumer incomes and partly because of the drastic decline in imports. Furthermore, in these two countries as well as in Colombia, cotton textiles became a significant export. In the case of Brazil, the largest Latin-American cotton textile exporter, exports increased from 8.5 million yards before the war to 290 millions in 1943. The expansion of cotton textile output, while general in Latin America, was not uniform in all countries, being greatest where pre-war production met only part of domestic demand and where

[1]George Wythe, *La Industria Latinoamericana,* Fondo de Cultura Económica, Mexico-Buenos Aires, 1947 (Spanish edition); this source has also been used in subsequent passages without being specifically quoted.

domestic production was stimulated primarily by the gap produced by the decline of imports (see table 5).

TABLE 5. CHANGES IN THE VOLUME OF PRODUCTION OF COTTON TEXTILES IN EIGHT LATIN-AMERICAN COUNTRIES, 1937–1947

Index numbers, base: 1937 = 100

Year	*Argentina*	*Bolivia*	*Brazil*[a]	*Chile*	*Colombia*	*Cuba*	*Mexico*	*Peru*
1937	100	100	100	100	..	100	100	..
1938	95	100	88	99	..	112	98	100[c]
1939	113	119	93	105	100[b]	150	93	117
1940	128	106	87	114	99	134	99	125
1941	148	119	103	133	129	344	113	157
1942	193	129	111	131	156	204	119	177
1943	216	160	147	156	166	232	121	183
1944	246	179	144	179	192	287	124	167
1945	248	208	142	184	195	244	124	175
1946	250	254	138	177	..	313	122	182
1947	257	219	112	186	196	380	118	196

Note: The index numbers for Argentina relate to the production of cotton yarn, output of which amounted to 25,680 metric tons in 1937. The index numbers for Bolivia, Brazil and Chile relate to the production of woven cotton fabrics. Production in the base year 1937, in million metres, amounted to 5.04 in Bolivia, 963.8 in Brazil and 12.8 in Chile. The index numbers for Cuba relate to imports of raw cotton and yarn (3,330 metric tons in 1937); for Mexico to the weight of pure cotton fabric produced (38.5 thousand tons in 1937); for Colombia and Peru to consumption of raw cotton by the reporting textile mills (11,116 metric tons in Colombia in 1939 and 6,114 metric tons in Peru in 1938).

Sources: Original data from *Monthly Bulletin of Statistics,* United Nations, and from official statistical sources of the countries concerned.

[a]Data on textile production until 1944 are from the Brazilian Institute of Geography and Statistics, for 1944-1946 from the Textile Executive Commission, and for 1947 from the Getulio Vargas Foundation.

[b]Base 1939.

[c]Base 1938.

The increase in cotton textile output was largely achieved by a more intensive utilization of existing capacity, as a result of which the question of re-equipment became more acute in post-war years. In Brazil, for example, imports of textile machinery declined from a yearly average of 10.1 thousand tons in 1937–1939 to a 1.7 thousand ton average in 1943–1944. By 1947, however, the pre-war average had been surpassed. Despite these and other handicaps of production, *per capita* commercial consumption of cotton in Latin America increased from about two kilogrammes in 1934–1938 to nearly three kilogrammes in 1946–1947. Even though there are considerable differences among the various Latin-American countries, the regional average is still considerably lower than the 15.3-kilogramme average in the United States; the disparity is the more significant because textiles other than cotton are relatively less used in Latin America than in the United States.

Wool production in Argentina and Uruguay represented 12.8 per cent of the world total in 1934–1938, 18.0 per cent in 1945–1946 and 17.2 per cent in 1946–1947. Most of it is destined for export unwashed, although an increasing proportion of Argentine wool is being washed before shipment. In the other countries, with the exception of Chile, nearly all the wool produced is utilized by the domestic industries. As in the case of cotton, there has been a considerable expansion in wool manufacturing in a number of Latin-American countries (see table 6).

TABLE 6. TRENDS IN WOOL PRODUCTION, 1939–1947

Index numbers, base: 1937 = 100

	Argentina[a]	*Bolivia*[b]	*Brazil*[c]	*Chile*[d]	*Mexico*[e]	*Peru*[f]
1939	100	100	100	100	100	100
1943	159	124	85	162	104	107
1944	168	144	90	178	112	106
1945	183	147	..	192	117	106
1946	207	146	..	165	..	..
1947	215	139	..	175	..	111[g]

Sources: Official or the best non-official data available. For Argentina, data for 1939, 1942 and 1945 published by the *Confederación Argentina de Industrias Textiles* and for other years output estimated by the same source.

[a]Production in base year: 12.3 thousand tons of yarns. By 1945 output of woollen textiles had increased by 39 per cent from 13,650 metric tons in 1939.

[b]Production in base year: 651,000 metres of woven fabrics.

[c]Production in base year: 6,560,000 metres of woven fabrics mixed with other fibres.

[d]Production in base year: 3,243,000 metres of woven fabrics.

[e]Production in base year: 4,056.7 metric tons of wool fabrics.

[f]Index based on consumption of wool by industry. Base year consumption: 2,800 metric tons.

[g]Provisional.

The wool textile industries produce almost exclusively for the domestic market; only Argentina has a relatively minor export of woollen textiles. In the Andean countries there is also a handicraft production of woollens of some significance.

The expansion of textile production is even more striking in the case of rayon. In addition to Argentina and Brazil, which had been producing rayon filament yarn before the war, three other countries started production during the war and a fourth in 1946 (see table 7). The output, however, is still small in comparison to that of the more highly developed countries: France, for example, with a population one-third less than Latin America's, produced 41 thousand tons in 1946 as compared to a total of 17.7 thousand in Latin America.

Despite the limited over-all significance of the metallurgic and engineering industries, they appear to have developed at a more rapid pace than the other branches of manufacturing. This was largely owing to the fact that as a result of the war and the curtailment of imports, a sudden gap developed in the supply of iron and steel and engineering

TABLE 7. PRODUCTION OF RAYON YARN IN SIX LATIN-AMERICAN COUNTRIES, 1937–1947

Metric tons

	Argentina	*Brazil*	*Chile*	*Colombia*	*Mexico*	*Peru*	*Total*	*Index*
1937	839	3,289	..	..	..	..	4,128	100
1938	1,225	5,062	..	..	..	..	6,287	152
1939	2,631	6,176	..	82	..	..	8,889	215
1940	2,694	6,493	..	249	..	..	9,437	229
1941	3,445	6,942	50	531	..	..	10,988	266
1942	3,781	7,480	311	606	25	..	12,203	296
1943	3,218	7,017	478	633	215	..	11,561	280
1944	3,833	8,757	735	739	179	..	14,243	345
1945	4,116	9,167	798	982	170	..	15,233	369
1946	4,200	10,448	1,250	1,418	249	18	17,583	426
1947	4,681	10,319	1,442	1,588	1,633	197	19,860	481

Source: Rayon Organon, 1947, Textile Economics Bureau, New York.

products which had to be filled by the small industry previously in existence, and without which several branches of industrial production would have been seriously jeopardized.

The development of the metallurgic and engineering industries was greatest in Argentina, Brazil, Chile and Mexico, where the range of engineering products was also expanded. Furthermore, production of machine tools was initiated or expanded in Argentina and Brazil, and to a lesser extent in Mexico. Severe limitations of steel and other metals, only partly relieved by a greater use of scrap, as well as shortages of equipment and skilled labour, prevented the still greater expansion that demand required.

The shortages which were experienced during the war were an important factor in the resolve to increase or to establish the domestic production of pig iron and steel. A new steel industry began operations at Monclova in Mexico in 1945, at Volta Redonda in Brazil in 1946, and in Chile a steel mill is under construction near Concepción. The expansion of the iron and steel industry constitutes an integral part of Argentina's Five-Year Plan, while Peru and Colombia are also considering the establishment of a metallurgic industry. Data on the production of iron and steel in three Latin-American countries reflect above all the activity of the new Brazilian and Mexican industries. Their capacity, however, is still very small (see table 8).

One of the manufacturing activities which serves as an indicator of investment is the cement industry. While apparent consumption of cement (production plus imports) is shown in the chapter on Construction, data for twelve countries representing approximately 91 per cent of the total population of Latin America show an 80 per cent increase in cement production between 1937 and 1947 (see table 9).

TABLE 8. PRODUCTION OF PIG IRON AND STEEL IN THREE LATIN-AMERICAN COUNTRIES, 1937–1947

Thousand metric tons

	Brazil		*Chile*		*Mexico*	
	Pig iron and ferro-alloys	*Steel ingots and castings*	*Pig iron*[a]	*Laminated steel*[a]	*Pig iron and ferro-alloys*	*Steel ingots and castings*
1937	98.1	76.4	..	..	57.7	15.7
1938	122.4	92.4	2.4	5.9	98.4	73.6
1939	160.0	114.1	5.9	7.4	99.6	77.1
1940	185.6	141.2	6.6	9.6	93.2	94.8
1941	208.8	155.4	6.6	21.7	96.6	94.9
1942	213.8	160.1	4.4	26.1	123.8	94.6
1943	248.4	185.6	9.3	23.1	123.3	176.1
1944	292.2	221.2	5.9	25.7	135.2	180.7
1945	259.9	205.9	6.8	27.0	218.3	191.5
1946	370.7	342.6	13.6	25.0	282.3	251.2
1947	480.7	387.0	11.3	29.9	337.5	321.5

Sources: Monthly Bulletin of Statistics, United Nations, and official statistical publications of the countries concerned.

[a]1937 to 1939, gross tonnage (including slag etc.); beginning 1940, net tonnage.

TABLE 9. CEMENT PRODUCTION IN LATIN AMERICA, 1937 and 1945–1947

	Thousand metric tons	*Index numbers, base: 1937 = 100*		
	1937	*1945*	*1946*	*1947*
Argentina	1,056	102	109	130
Bolivia	11	256	300	356
Brazil	472	136	145	160
Chile	313	131	185	192
Colombia	123	246	270	281
Cuba	121	195	245	248
Ecuador	16	238	246	215
Guatemala	11	249	275	280
Mexico[a]	345	215	214	205
Peru	83	319	314	308
Uruguay	142	150	189	193
Venezuela	45	260	288	327
TOTAL, above countries	2,838	148	164	180

Note: In 1947 output in Nicaragua amounted to 27.2 thousand tons and in the Dominican Republic to 16.8 thousand tons.

Sources: Original data from *Monthly Bulletin of Statistics,* United Nations, or from official statistical publications of the countries concerned. Data for Cuba for 1938-1947 are from *Cuba Económica y Financiera,* May 1948. Data for Uruguay are from the Ministry of Finance.

[a]Data for Mexico do not reflect fully the expansion of cement production since they do not include output of new plants.

Despite the increase achieved in the ten years under review, average *per capita* production of cement amounted to about 37.7 kilogrammes in 1947 in the twelve Latin-American countries for which data are available, while for Latin America as a whole the figure would be

somewhat lower. During the same year average *per capita* production of cement in Canada amounted to 150.5 kilogrammes and in the United States (together with Puerto Rico) to 217.7 kilogrammes. Yet there are considerable differences in cement production among the various Latin-American countries; the highest *per capita* production is in Uruguay, amounting to 119.1 kilogrammes in 1947, which is followed by Chile's, amounting to 108.7 kilogrammes.

In addition to food processing and textile production, the output of other consumer goods in Latin America also showed rising trends. Thus, the expansion of textile production was accompanied by a greater output of wearing apparel. Nevertheless, an appreciable proportion of such output is still produced in house industries or small enterprises that are not reflected in production statistics. Production of wearing apparel by manufacturing processes may therefore account in some countries for only a small part of total domestic production. In Chile, for example, shoe factory production averaged only 0.6 pairs *per capita* in 1947; in Peru the average was 0.26 pairs in 1945.[1]

The leather industry expanded particularly in the hide-exporting countries, where an effort was made to process a greater proportion of the hides for export. The quality of products in this branch of industry seems to have improved in several countries during the period of time under consideration, although in general there is a lack of skilled personnel in this field.

A chemical industry producing consumer goods, such as pharmaceuticals and toilet articles, exists in various stages of development throughout Latin America. It showed a rapid growth during the war years, followed in some countries by a decline as a result of increasing imports. Expansion of production of basic chemicals such as caustic soda, soda ash, sulphuric acid and others was mainly limited to the more developed countries where the industry existed before the war. In this field also a shortage of skilled personnel is noticeable in most countries.

Paper and cardboard production, which on the whole is still considerably under-developed, has gained significance particularly in Chile, Mexico, Brazil and Argentina, accompanied by an expansion of the publishing industry. The region as a whole produces approximately one-half of its paper requirements and only about one-fifth of its wood-paper needs.[2] Lack of imports stimulated a greater output in the timber industry, while the growth of construction building contributed to a higher level of output in the woodworking industry.

Production of tires and rubber products was hampered by the lack of imported crude rubber, even though domestic production in the tropical parts of the region increased considerably during the war. In

[1]In 1947 total production, including handicrafts, was estimated at nearly one pair per person.

[2]Lloyd J. Hughlett, ed., *Industrialization of Latin America,* New York, 1946.

addition to countries such as Argentina, Brazil, Mexico and Uruguay where the tire industry had been established before the war, production also started in Chile, Cuba, Colombia and Peru.

Principal causes of increased production

During the war several factors had been at work throughout Latin America, making for an over-all increase in manufacturing production. It is probable that these factors led to a greater rate of increase of domestic industrial production than in any comparable period of the economic history of the region. Chief among them was an increased purchasing power derived from exports and credit expansion, and also shortages of imported manufactures. In nearly all cases, however, scarcities of imported capital goods, raw materials and fuels limited this expansion in varying degrees. It is likely that, as a result of the war, investment in manufacturing in some countries proceeded at a lower rate than in pre-war years. This negative aspect was more than compensated, from the standpoint of production, by the increase in demand which the war brought about.

Shortages of manufactures in other Latin-American countries led to an increase in the exports of manufactured articles, especially from Mexico, Brazil and Argentina, as is shown in the chapter on Foreign Trade. Furthermore, there was a general trend towards a greater degree of processing of raw materials and foodstuffs destined for export, partly because of economic reasons and partly because of the need for saving shipping space. In Argentina, for example, the value added by manufacturing in the total value of exports increased from 17.2 per cent in 1936 to a peak of 39.1 per cent in 1944, subsequently declining to 32.8 per cent in 1947. This increase was mostly due to an increase in the processing of raw materials and foodstuffs, particularly linseed, combined with an expansion of their volume of exports. The post-war decline was due mainly to a contraction in the exports of manufactures.

At the end of the war the continuing high level of exports of primary commodities and the great rise in their prices, together with the foreign exchange holdings which had been accumulated during the war years, made possible the import of a considerable volume of manufactures. These, combined with a decline of exports of manufactures from the more developed Latin-American countries, adversely affected the volume of domestic industrial production. However, internal factors came more into play and contributed to the checkered pattern of manufacturing production. Among these, the levelling off of Argentine manufacturing output since 1944 was due in part to a decrease in labour productivity, while at the same time demand was stimulated by an easy-money policy. The accelerated manufacturing expansion in Chile was due in part to the Government's policy of facilitating imports of industrial equipment and in part to domestic credit expansion. The increased plant capacity

in Mexico, stimulated by a pent-up demand for manufactures, was mainly responsible for the remarkable increase in manufacturing production in 1946 as compared to 1945. During 1947 a recession took place in the economy, partly owing to certain credit restrictions which had been adopted in order to maintain monetary stability. Even more important was the fact that foreign manufactures were imported in very great volume. Only in the second half of the year were they reduced by means of import quotas, prohibition of certain imports and an increase in tariffs.

In Brazil, the partial index of industrial production was maintained in 1947 on the same level as in the preceding year, largely because the metallurgic industry, which increased rapidly subsequent to the opening of the Volta Redonda steel mill, compensated for the decline of the cotton textile output.

On the whole, manufacturing production in Latin America still seems to be on the increase, although at a distinctly slower pace than during the war. Many of the shortages that limited output during the war, particularly of equipment, fuels and raw materials, are receding. Today's main limiting factors of manufacturing output are, on the one hand, shortages of foreign exchange for the requirements of industry and, on the other hand, the limitations of the domestic markets. Both limiting factors, though to a smaller degree than before the war, are still largely dependent on the level of Latin-American exports.[1]

III. STRUCTURE

General characteristics

Manufacturing in the Latin-American countries shares certain general characteristics of the other productive activities in the region. One of them, despite the very considerable differences among these countries, is the low productivity of labour. Determined primarily by the relation of investment to manpower, productivity in manufacturing is generally higher than in agriculture and lower than in mining.

The low proportion of investment per worker can be illustrated only in an approximate manner. For instance, an industrial worker in Latin America is aided on the average by motor power of two horsepower as compared to six horsepower available per worker in the United States.[2] There are, moreover, considerable differences in the value of investment in manufacturing per worker among the various Republics, ranging between $US900 and approximately $US3,000 in countries where censuses or estimates were made during the last decade. In Canada investment amounted to C$5,542 in 1939.

[1]The significance, for investment in manufacturing, of the low level and misdirection of domestic savings is discussed later.

[2]*Report of the Director*, Third Labour Conference, Mexico, International Labour Office, Montreal, 1946 (Spanish edition).

Multiple reasons, varying from country to country, account for the low average investment per worker in Latin-American manufacturing. Most of these reasons depend on the common traits of the wage and price structures of the region. The generally low wage rates often make it more economical to employ more labour and less equipment per unit produced than in countries with higher wage rates. In part, this is also due to higher interest rates prevailing in Latin America as compared to the more developed countries. Furthermore, in many Republics, the small size of the domestic market does not permit the utilization of mass-production techniques. The high-cost production of manufactures supplying the domestic market, protected by tariffs and other means, often makes possible, in a cause and effect relationship, the use of obsolete machinery and processes. Also, in several instances, shortages of skilled labour necessitate the use of simple and less productive equipment.

Average data, however, conceal great differences in the structure of the two chief sectors of manufacturing in the countries of Latin America. Thus, the export sector, consisting mainly of the processing of primary commodities, includes numerous optimum-size enterprises with a relatively high degree of capitalization. Likewise such enterprises are found more frequently in the sector producing for the domestic market of the more developed countries of the region.

The data assembled in table 10 from the latest official industrial censuses in nine countries give a general picture of the over-all structure of manufacturing industries.[1]

The other countries have not taken an industrial census but their manufacturing industries are relatively less developed than those of the countries shown. The table indicates that in terms of the number of establishments, employment, investment and value of production, Argentina, Brazil, Mexico and Chile stand out as the most important industrial countries of the area. In 1937 they accounted for close to 75 per cent of the net value of mining and manufacturing production in Latin America.

These data reveal not only the small amount of investment per worker but also by inference the small size of the interprises in which manufacturing output takes place. This, together with the production pattern of manufacturing, indicates that as a whole the region is still in an early stage of industrialization.

On the average, food processing and textile industries represent by far the most important manufacturing group. Taken together the food,

[1]The data shown are not strictly comparable because of variation in the bases of the censuses from which they are derived. For certain countries the censuses include only establishments employing five or more workers; for others, only establishments with a minimum value of output. Even in the same country the bases of the various censuses taken are sometimes not uniform. Furthermore, censuses are not always available for the same years.

TABLE 10. THE STRUCTURE OF MANUFACTURING INDUSTRIES IN NINE LATIN-AMERICAN COUNTRIES[a]

	Year	Establishments	Numbers employed:	Capital investment[b]	Value of production	
					Gross[c]	Net[d]
		Number	Thousands	Millions of US dollars		
Argentina[e]	1935	11,101	404	..[f]	771	269
	1943	19,266	787	..	1,849	701
Bolivia[g]	1942	1,130	13	11	17	..
Brazil[h]	1940[i]	40,881	816	612	829	336
Chile[h]	1939	3,566	103	132	135	51
	1945	4,244	149	396	451	210
Colombia[j]	1945	7,853	135	256	365	83
Guatemala[e]	1946	757	23	..	42	22
Mexico[k]	1940	12,954	291	428	372	..
Uruguay[h]	1936	10,549	66	110	116	48
Venezuela[g]	1936	8,025	46	65[l]	71	41

Note: The following conversion rates per US dollar have been used: Argentina (1935) using the 1936 rate, 3.41 pesos; (1943) 3.60 pesos; Bolivia (1942) 46.46 pesos; Brazil (1940) 18.87 cruzeiros; Chile (1939) 30.85 pesos; (1945) 31.10 pesos; Colombia (1945) 1.755 pesos; Guatemala (1946) 1.00 quetzal; Mexico (1940) 5.40 pesos; Uruguay (1936) 1.991 pesos; Venezuela (1936) 3.92 bolivares.

Sources: Official national censuses for the years indicated.

[a]The data have been adjusted to exclude mining, public utilities and building.

[b]Value of land and building, machinery and equipment, furniture and accessories and inventories, unless otherwise indicated.

[c]Value at the factory of goods made or processed, including by-products and other work done.

[d]Value of gross production less cost of materials, containers, fuels and purchased electric energy and of contract work: i.e. value added by manufacturing.

[e]Establishments employing five or more workers.

[f]Total investment in manufacturing computed in the 1935 census amounted to 2,474,390 pesos (approximately $US726 million).

[g]Information is unavailable as to the minimum size of establishment included.

[h]All manufacturing establishments.

[i]Data on production refer to 1939.

[j]Establishments with an annual gross value of production of more than 6,000 pesos.

[k]Establishments with an annual gross value of production of 10,000 pesos or more.

[l]Value of paid-in capital.

beverages, tobacco and textile industries account for between 40 and 75 per cent of total employment in manufacturing in nine countries, and certainly for a higher percentage in the region as a whole. In the last year for which complete data were available, these industries included 73 per cent of the total labour force in manufacturing in Venezuela, 63 per cent in Mexico, 61 per cent in Colombia, close to 60 per cent in Brazil, 43 per cent in Chile and 41 per cent in Argentina (see table 11).

In terms of output the pattern just described appears even more clearly. The food, beverages, tobacco and textile industries represent from 60 to 75 per cent of the total gross value in manufacturing production in the countries selected, as shown in table 11. In the United States, with a population almost equal to that of Latin America, the food,

TABLE 11. NUMBER EMPLOYED AND GROSS VALUE OF PRODUCTION IN MANUFACTURING, BY MAJOR GROUPS, IN NINE LATIN-AMERICAN COUNTRIES[a]

	Year	All manufacturing	Food products	Beverages	Tobacco products	Textiles and clothing	Lumber and lumber products[b]	Leather and leather products	Chemicals and chemical products	Basic metals and metal products[c]	Miscellaneous
Numbers employed: Percentage distribution											
Argentina	1943	100.0	(.....23.0.....)			17.7	9.3	4.3	4.3	19.6	21.9
Bolivia	1942	100.0	16.4	17.2	1.5	24.6	3.7	9.0	2.2	0.7[d]	24.6
Brazil	1940	100.0	21.2	3.7	—[e]	34.7	8.1	1.8	4.4	10.7	15.3
Chile	1945	100.0	17.9	3.0	1.0	21.1	7.9	10.4	7.4	16.6	14.6
Colombia	1945	100.0	20.3	6.9	5.6	28.4	6.1	6.6	4.0	6.3	15.8
Guatemala	1946	100.0	17.7	8.8	4.4	32.3	8.8	2.2	3.1	4.0	18.6
Mexico	1941	100.0	22.3	3.8	1.4	35.1	3.8	1.0	4.5	13.1	15.5
Uruguay	1936	100.0	31.1	5.9	1.7	17.3	5.0	6.7	3.2	15.5	13.8
Venezuela	1936	100.0	(....55.8....)		4.8	12.2	3.9	8.7	4.6	0.1	9.6
Gross value of production: Percentage distribution											
Argentina	1943	100.0	31.1	6.2	1.5	19.3	4.8	4.3	6.1	14.6	11.9
Bolivia	1942	100.0	27.4	24.9	6.0	23.2	1.6	6.1	5.0	0.5	5.2
Brazil	1939	100.0	31.4	4.4	—[e]	27.8	4.4	2.0	7.5	11.3	11.2
Chile	1945	100.0	31.7	3.9	3.5	18.5	4.5	8.8	9.3	9.4	10.3
Colombia	1945	100.0	41.2	8.1	2.5	18.7	3.0	4.4	4.4	3.4	14.4
Guatemala	1946	100.0	22.9	24.5	8.6	21.9	4.3	1.9	4.0	2.4	9.5
Mexico	1940	100.0	27.2	4.7	3.5	28.3	1.9	1.3	7.5	10.0	15.5
Uruguay	1936	100.0	44.2	10.0	2.7	14.2	2.8	5.0	3.9	8.7	8.4
Venezuela	1936	100.0	(....45.4....)		12.8	9.6	3.9	7.0	9.5	1.8	9.9

Source: Official national censuses for the years indicated.

[a]The data have been adjusted to exclude mining, public utilities, and building.

[b]Including manufacture of furniture and fixtures.

[c]Manufactures of basic form of metals (castings, forgings etc., and their products, including machinery.

[d]Excluding tin smelting.

[e]Included in food products.

beverages, tobacco, and textile industries accounted for only 25 per cent of industrial employment and 28 per cent of the gross value of production in manufacturing industries in 1939.[1] In Canada the same industrial group employed 33 per cent of the industrial labour force and produced 35 per cent of the total value of manufacturing output in 1939.[2]

The food products and textile industries also represent the most important groups from the standpoint of investment, accounting for between 50 and 65 per cent of the total at the time of the latest industrial censuses in a number of Latin-American countries. The proportion would be substantially higher for the region as a whole. In Canada the corresponding figure was 23 per cent in 1939.

The metal and metal products industries, including machinery, occupy a much less important place in the industrial structure of Latin-American countries than in that of other countries which have reached a higher stage of industrialization. Even in Argentina, Brazil, Chile, Mexico and Uruguay this group accounts for only from 13 to 20 per cent of the labour force engaged in manufacturing and 9 to 15 per cent of the gross value in total manufacturing output. In Canada the metal and metal products industries had attained before the war nearly as much importance as the food and textile industries combined, accounting for 28 per cent of the gross value of industrial production in 1939. In the United States the same group represented about 35 per cent of the whole industrial structure in 1939, in both employment and value of production.

In comparison with previous periods of development, available data suggest that the changes in the structure of manufacturing in Latin America have been relatively small, in view of the high level of economic activity during the past ten years. In part, this was due to the shortages of capital goods imports so that the increase in manufacturing output was mainly achieved by a fuller utilization of existing plant capacity. In numerous lines, however, new installations were a more significant factor. Despite these difficulties, however, a more appreciable structural change took place in the more developed countries than in those where industrialization is still in its first stages. In the former the expansion of the chemical and metallurgical industries progressed more rapidly than would have been likely under normal conditions.

Changes in the pattern of employment

In Argentina, despite an absolute increase, the food, beverages, tobacco and textile industries, taken as a group, accounted for 45 per

[1] *U.S. Statistical Abstract 1948*, U.S. Department of Commerce, Bureau of the Census, Washington, D.C.

[2] *Canadian Statistical Abstract, 1947*, Federal Bureau of Statistics, Ottawa. The marked development of the Canadian metal industries, stimulated by war demands, led to a relative decline of the food processing and textile groups. In 1944 they employed only 23 per cent of the industrial labour force and accounted for 27 per cent of the total value of manufacturing output.

cent of the total industrial labour force in 1935 and for 41 per cent in 1943, with more than half of these numbers engaged in food processing. The metal products group, including machinery and equipment, maintained the same relative importance, accounting for 20 per cent of total industrial employment. These data reveal the small relative changes which took place in the Argentine industrial structure up to 1943, for they represent the two most important industrial groups in Argentina. The above percentages have been based on available industrial censuses which cover the entire industrial labour force of the country. Only partial data are available to reveal the changes that took place up to 1947. The indexes of industrial employment published by the Argentine Government (which cover only about half of the total employment in manufacturing industries) show that while the over-all increase in the industrial labour force was 47 per cent in 1947 over the level of 1937, the increase in employment in food processing was 58 per cent, in textiles 53 per cent, in metal and metal products 25 per cent, and in machinery and vehicles 34 per cent. These figures would seem to indicate that during the war and post-war periods, a greater development had taken place in the non-durable consumer goods industries, mainly food, beverages, textiles etc., than in durable consumer and capital goods, particularly metal and metal products. In part this was owing to the shortage of metal imports during the war, whose effect was particularly severe in Argentina. Because of their limited scope, however, available data probably omit numerous enterprises and, as a consequence, it is likely that the progress realized in new industrial fields, such as metal products and chemicals, has been more rapid than shown above.

In Chile, on the basis of data shown in the latest industrial censuses, the food products industries included 27 per cent of the total industrial labour force in 1939 and only 22 per cent in 1945. In contrast, the relative share of textiles rose from 16 to 17 per cent and that of metallurgical and metal products from 12 to 17 per cent. Employment in the sugar and beer industries decreased slightly[1] but there was an increase of 191 per cent in the labour force employed in cotton textiles, a relatively new industry. The chemical, stone, glass and ceramics groups showed even much larger increases in employment over the period under consideration than did cotton textiles, but as the weight of these industries remained small in the total industrial structure of the country, they had comparatively little effect. On the whole, the food products, beverages and tobacco industries have remained the most important ones in Chile, followed closely by textiles.

Changes in the industrial structure of Mexico are more difficult to assess because of the lack of a comparable basis in the industrial censuses

[1]Since the output of these two industrial groups increased by about 20 per cent, the decrease in employment was caused by technological improvements and the closing of inefficient plants through mergers in the beer industry.

taken. The total number of employees in manufacturing industries increased by 20 per cent from 1937 to 1945. In the food canning industries employment rose by 84 per cent, in cement by 92 per cent and in glass by 120 per cent, while the labour force in iron and steel plants, principally foundries, increased by 26 per cent. Since then, the beginning of a structural change is likely to have taken place as a result of the establishment of a steel industry at Monclova and of new plants utilizing copper, aluminium, zinc and lead, which are being processed in the country.

A similar comment may be made on Uruguay, where foodstuffs, beverages and textiles are the main groups of the industrial structure, representing 88 per cent of the value of output. The general index of industrial employment in 1947 had risen by 50 per cent over the level of 1936; for foodstuffs the rise was 30 per cent, beverages 59 per cent, textiles 68 per cent, vehicles and transport equipment 68 per cent, and metal products 195 per cent.

In spite of the substantial advances made in the chemical and pharmaceutical fields and the new iron and steel industry, the structure of Brazilian industry remains as before the war, characterized by the over-all importance of the food and textile industries, which still represent approximately 60 per cent of the total value of industrial output. It is probable that the relative importance of the metallurgical products, which was about 10 per cent of the total in 1940, is appreciably higher today.

In the other countries of Latin America the changes in the industrial structure have been limited to a substantial development of the light consumer goods industries, principally food, beverages, tobacco and textiles. In the absence of industrial censuses, these changes can only be measured in terms of output, discussed under the preceding section of this chapter.

Size of establishments

The size of the market and the technological processes used are the main factors determining the size of manufacturing establishments in Latin America. The data available do not always make it clear that it is the processing establishments engaged in production for the international market which are most frequently of optimum size. Such establishments are also to be found among industries producing consumer goods in the more developed countries of Latin America. In the smaller countries attempts to establish large-scale plants have frequently been made by means of granting privileges, usually in the form of a monopoly, to a single enterprise producing a given commodity, as for example cement. In this way a contrast may often be found between a few large-scale enterprises and a number of smaller establishments which, from the

standpoint of employment, may be considered as handicraft shops. Their co-existence is a notable feature of the structure of manufacturing in most Latin-American countries.

In its present stage of economic development, Latin-American manufacturing is still characterized by the existence of a great number of small establishments. For Argentina as a whole only 56 enterprises, or 0.1 per cent of the total number of establishments, employed more than 1,000 workers in 1941. The enterprises employing 100 workers or more represented only 2 per cent of the total. In the state of São Paulo, which includes most of the largest establishments in Brazil, 0.9 per cent of the total number of establishments had 1,000 or more workers and 2.3 per cent had 100 or more workers in 1939. In certain countries the size of the industrial establishments is shown in their industrial census in terms of investments. In Colombia 85.2 per cent of the enterprises had a capital of less than 25,000 pesos (approximately $US14,000).

Most of the industrial censuses do not take into account handicrafts, a very important activity in many Latin-American countries. It may be said that their importance is in inverse proportion to the degree of development reached by those countries. Even in Argentina, however, its importance remains large, since 23 per cent of the total number of industrial establishments include only one artisan. In almost all Latin-American countries a considerable proportion of leather goods, homespun fabrics, food products, household articles etc., are made by handicraft industries. In certain countries, such as Guatemala, this production may constitute a major part of their industrial structure.

Geographical concentration of manufacturing

One of the main features of the industrial structure of the Latin-American countries is the high degree of geographical concentration of manufacturing enterprises in a few population centres. This concentration, usually in the capital city, a few major ports or in cities at a relatively short distance from the sea, is determined primarily by the existence of such markets, as well as by the availability of labour, power and transport facilities. Until now the predominance of consumer industries has permitted this concentration at points where transfer-cost considerations made markets the determining factor for the location of manufacturing activities. The same considerations led to the establishment in the vicinity of seaports of plants processing agricultural products for export. The only major exceptions are represented by the mineral refining and processing establishments which are located near the mines.

In Argentina the great concentration of manufacturing in the city and province of Buenos Aires has declined slightly during the period under review, as is shown in the statistics that follow.

GEOGRAPHIC DISTRIBUTION OF ARGENTINE INDUSTRIAL ESTABLISHMENTS BY NUMBERS

Percentage distribution

Year	*Federal Capital*	*Buenos Aires*	*Santa Fé*	*Córdoba*	*Other provinces*
1937	30	30	12	8	20
1943	31	28	12	9	20
1947	27	28	13	10	22

Source: Memoria y Balance, Banco de Crédito Industrial Argentino, Buenos Aires, 1947.

In Brazil the east, central and southern regions account for about 80 per cent of industrial production in terms of value. In 1938 the State of São Paulo, which includes 15 per cent of Brazil's population, accounted for 43 per cent of the total output of manufactured goods, followed by the Federal District with 14 per cent. Since São Paulo represented 17 per cent of total Brazilian industrial production in 1907, its development has been by far the most rapid as compared to the rest of the country.

In Chile more than three-fourths of the industrial establishments are located in the provinces of Santiago, Valparaíso and Concepción. In Mexico, in terms of value of output, more than one-third of the manufacturing centres are located in the Federal District and the State of Mexico. However, Monterrey and other cities also constitute important centres.

The distribution of pay-rolls indicates that in Cuba the province of Havana is by far the country's most important manufacturing area except for the sugar industry. In Colombia industrial production is mainly located in the departments of Cundinamarca (Bogotá) and Antioquía (Medellín) which account respectively for 16 and 20 per cent of the number of establishments and for 28.9 and 28.5 per cent of investment.

In Peru manufacturing industries are highly concentrated in Lima, Callao and Arequipa. In Bolivia 80 to 90 per cent of all industrial enterprises are in La Paz. In these two countries the transportation problem is the major factor hindering industries from developing in the vicinity of potential raw material and foodstuff sources.

The excessive geographic concentration of manufacturing is an unbalancing factor in the economic structure of many countries in Latin America, aggravating the already great differences in productivity and standards of living among their various regions. These contrasts could be attenuated, and a new link between manufacturing and agricultural production could be created by means of a policy designed to promote small industries in the provinces wherever this is warranted

by economic considerations.[1] The success of any such policy, however, depends in a large measure upon the development of transportation facilities, particularly of highways and electric power, and of some measure of technical training.

IV. FACTORS AFFECTING PRODUCTION

Raw materials

The relatively high proportion of raw materials of domestic origin utilized by manufacturing in most countries in Latin America is due mainly to the broad range of natural resources they possess, the character of their manufacturing, which is largely based upon available local raw materials, and the generally small degree of industrialization in the region (see table 12).

According to the data assembled, Argentine industry has the largest domestic raw material basis among the Latin-American countries surveyed. Estimates for Brazil (not shown in the table) indicate a comparable proportion. In contrast, Bolivian manufacturing imports more than 50 per cent of its raw materials. Approximately 78 per cent of the total raw materials used by the combined manufacturing enterprises in Argentina, Bolivia, Chile, Colombia, Guatemala and Mexico were of domestic origin in 1945.[2] This group of countries represented 62 per cent of the net value of manufacturing and mining production in Latin America in 1936.

Obviously, there are wide differences in the share of domestic raw materials used by the various manufacturing groups of those countries for which data are available. The high percentage in the food processing group is due in large part to the perishable character of the raw materials utilized, such as in the meat, dairy, vegetable and fruit canning industries. Thus for the area as a whole, the degree of self-sufficiency in foodstuffs for industrial processing is high. In other cases the large share of domestic raw materials is due to their bulky character and its incidence upon transportation costs, as in the case of lumber and building materials (the latter are not shown in table 12 because of incomplete data).

Most of the agricultural commodities which are not produced in certain Latin-American countries because of soil, climate or other factors are imported from within the area, so that there exists a considerable exchange of tropical and temperate-zone agricultural raw materials such

[1] *Report of the FAO Preparatory Commission on World Food Proposals,* Washington, D.C., February 1947.

[2] Estimate based on the latest national industrial censuses and other official statistics. Where figures for 1945 were lacking, data for previous years were adjusted. All data relative to the proportion of domestic and imported raw materials are subject to an appreciable margin of error favouring the former, due to duplication.

TABLE 12. VALUE OF DOMESTIC RAW MATERIALS USED IN EIGHT LATIN-AMERICAN COUNTRIES, BY MAJOR MANUFACTURING GROUPS, AS PERCENTAGE OF TOTAL RAW MATERIAL CONSUMPTION

	Year	*Food*	*Beverages*	*Tobacco*	*Textiles*	*Lumber*	*Leather*	*Chemicals*	*Basic metals*	*All manufacturing*
Argentina	1943	(.....96.....)			80	56	97	73	59[a]	82
Bolivia	1942	44	49	..	19[b]	..	67	18	..	36
Chile	1945	74	76	61	50	95	81	60	58	70
Colombia	1945	92	76	80	40	91	84	43	10	78
Guatemala	1946	82	46	50	29	99	80	70	..	58
Mexico	1940	93	65	77	81	74	84	53	40	77
Peru	1945	..	10[c]	..	70[d]	25	73[e]	..	..	..
Uruguay	1936	90	84	19	61	26	86	50	43[f]	74

Sources: Official national censuses for the years indicated.

[a]Metal products excluding machinery; for machinery and vehicles, 59 per cent.
[b]Textile and clothing industries.
[c]Beer industry only.
[d]Cotton, woollen and rayon textile industries.
[e]Hides and shoes only.
[f]For electrical equipment and accessories only; for transport equipment, 10 per cent.

as sugar, cotton, lumber, wheat and wool between the various countries. Argentina and Uruguay, with their great wealth of agricultural and cattle resources, are obviously first among Latin-American countries in degree of self-sufficiency from the standpoint of raw materials needed by the food and leather products industries. Bolivia, on the contrary, is largely dependent upon imported food products because agriculture is still under-developed and transportation from potential domestic sources is inadequate.

Compared to the foodstuffs processing group, textile industries rely to a relatively greater extent on imported raw materials. The pattern from country to country is also more chequered than for the commodities mentioned above. Certain countries have large fibre export surpluses; the production of others is sometimes insufficient for the needs of domestic manufacturing, but a great part of the foreign fibres are imported from other Latin-American Republics. On the whole it may be said that in its supply of textile fibres, Latin America is much more self-sufficient than Europe.

In the chemical industries group the share of domestic raw materials is generally smaller than in those mentioned above. One of the reasons is their more recent development, prior to which numerous enterprises in this field consisted mainly of the final stages of the production process, limited at times to simple mixing and bottling. Other reasons depend on the fact that the entire production process demands a higher degree of technical knowledge than is available in the respective countries, and that the quality of the raw materials used must meet more exacting specifications than in the industrial groups mentioned previously. In the less developed countries of Latin America practically all heavy chemical products have to be purchased abroad. Even in the more developed countries of the region, the raw materials of the basic chemical industries include sizable imports, with some of key significance, in spite of substantial progress made since the war.

The metal-working industries depend to a large extent on imports of unwrought and semi-fabricated iron and steel and on tin, zinc and other non-ferrous metals. In the less developed countries of the area almost all of these products are imported, while in the more advanced ones such as Argentina and Chile about 40 per cent are imported. With the development of iron and steel industries in Brazil, Mexico, Chile and Argentina (and perhaps at a later stage in other countries such as Peru and Colombia), the domestic raw material basis of the metal industries may increase substantially, and a smaller proportion of fabricated steel products will be required from abroad.

There has been a marked increase in the consumption of domestic raw materials by manufacturing in Latin America during the war, caused by military requirements of the supplying countries and by shipping shortages. In Argentina the percentage of domestic materials

consumed by industries increased from 73 per cent in 1939 to 82 per cent in 1943. In Chile the corresponding rise was from 64 per cent in 1939 to 70 per cent in 1945. In the countries indicated, the consumption of domestic raw materials increased considerably in the tobacco, textile, metal products and glass industries. It was almost stationary for food and beverages in Chile, while in Argentina the food industries have used a larger share of domestic raw materials than before the war. The consumption of raw materials in the metal industries increased considerably in Mexico and Brazil. Since the end of the war the volume of both domestic and imported raw materials used by the Latin-American manufacturing industries has increased in absolute terms as a result of the industrial development of the area. In relative terms, however, the proportion of domestic raw materials consumed has increased at a more rapid pace, the prevailing shortages of foreign exchange and other causes having spurred the exploitation of local resources.

By itself the degree of self-sufficiency in raw materials is not an economic criterion for the determination of the soundness of the respective industries. From the standpoint of the producer, the leading considerations are those of landed cost and quality. Nevertheless, the issue is more complex from the standpoint of the policy makers, who are often faced with contradictory demands: those of manufacturers advocating duty-free entry of foreign raw materials in order to reduce their costs and those of raw materials producers asking for tariffs and other forms of protection for the sake of maintaining employment.

The cost and quality of domestic raw materials, together with other cost considerations, constitute the primary element in any industrialization policy resting upon economic grounds. A comparative cost analysis of raw materials, both domestic and foreign, at present and future demand levels should be of considerable assistance in the application of industrialization policies in each country of Latin America. The issue is fairly clear in the case of those raw materials which are normally able to compete on the international market and, other conditions being favourable, manufactures established on such a basis possess an inherent advantage. It may also be found that the cost of several domestic raw materials might be reduced to the level of those of imported origin as a result of a higher domestic demand expected in the future. Furthermore, there is broad scope in most countries for economic policy to contribute to an improvement of quality and to promote a greater standardization of raw materials. At the same time the development of transportation, electric power and other factors of production, particularly by means of a greater degree of mechanization, may be expected to reduce the costs of raw materials. Beyond these limits, production of domestic raw materials cannot be encouraged on economic grounds, when these raw materials are the main factor accounting for the high costs of a given type of manufacturing production.

In view of the considerable sensitivity of the Latin-American countries to external economic forces, cost considerations relative to raw materials can only be an element in a policy that is intended also to provide some degree of stability. It is from the latter standpoint that an expansion of raw material production for domestic use, together with its diversification, can contribute to economic stability and, by increasing the purchasing power of the producers, can also provide a broader market for the country's industries. Anti-cyclical policies would be more feasible, at least in the more developed countries of Latin America, if there were a production of domestic raw materials large enough to enable them to stretch their foreign exchange availabilities to pay for those imports that are essential for the maintenance of high level of employment and production. Only a detailed study could show to what extent, and along which lines, cost considerations and a higher volume of domestic raw material production can be reconciled within the framework of an industrialization policy.

Power

Between 1937 and 1947 the combined production of fuels and electric power in Latin America increased by 82 per cent, representing an increase of from 4.3 to 6.8 per cent in total world output.[1] For electric power itself the increase amounted to about 74 per cent (see table 13).

Despite recent progress, slow development of the sources of power in Latin America has contributed to the lag in the expansion of manufacturing. The coal resources of the region are very small; moreover, deposits are often not easily accessible or are of poor quality. Thus in the nineteenth century, when the technology of power generation rested largely upon the availability of coal, it seemed that manufacturing development in Latin America would encounter a basic obstacle. Even though coal still remains the most important single source of power in the world (amounting to 57 per cent of the total in 1935) the shift toward hydro-electric power and petroleum that occurred in recent decades has substantially improved the prospects of industrial development in Latin America. The lack of coal resources and particularly the insufficiency of coal which can be subjected to the coking process, are nevertheless an obstacle to the development of metallurgical and some heavy chemical industries. Moreover, the insufficient supply of coal deprives the chemical industry of valuable coal by-products of domestic origin.

The large hydro-electric potential of Latin America, estimated at about 13 per cent of the world's total, is a considerable asset to manufacturing, even though installed capacity represents only about 3 per cent of the world total. In some countries this potential has made possible a

[1]Brown coal, petroleum and hydro-electric power have been converted into coal equivalents by means of constant conversion factors.

Source: Economic Report: Salient Features of the World Economic Situation, 1945-1947, United Nations, Lake Success, 1948.

TABLE 13. CHANGES IN THE VOLUME OF ELECTRICITY PRODUCTION IN CERTAIN LATIN-AMERICAN COUNTRIES, 1937–1947

Countries	Production in 1937 in million KWH	Index numbers, base: 1937 = 100									
		1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
Argentina	2,196	106	112	116	120	126	133	132	127	139	153
Bolivia	48	140	150	177	196	204	246	246	271	287	302
Brazil[a]	1,020	109	125	114	125	135	148	164	181	199	216
Chile	480	105	105	120	127	132	142	152	185	205	225
Colombia	186	114	135	136	145	151	163	182	213	248	279
Cuba	259[b]	106	113	117	120	124	130	146	160	174[c]	187[c]
Dominican Republic	15	160	153	187	193	193	173	193	233	273	333
Guatemala[d]	25	104	112	112	120	128	144	128	136	152	160
Mexico[e]	2,480	101	99	102	102	106	110	111	124	134	145
Panama[f]	27	111	115	137	163	170	185	200	196	230	259
Peru[g]	68	110	126	141	160	174	188	201	219	238	268
Venezuela	99[b]	107	113	138	162	172	176	191	214	241	283
Uruguay[h]	197	112	120	138	148	140	132	149	171	188	..
ESTIMATED TOTAL for above countries	7,100	105	110	113	118	124	130	135	146	160	174[i]

Note: Actual production in 1937 and the index numbers for subsequent years relate to electricity generated by public utilities unless otherwise stated.

Sources: Original data from the *Monthly Bulletin of Statistics,* United Nations, and from official statistical publications of the countries concerned.

[a]Consumption of electricity in Rio de Janeiro and São Paulo.
[b]Estimated production.
[c]Derived from data for total electricity generated, assuming that production of public utilities increased proportionately.
[d]Consumption of electricity in Guatemala City.
[e]Total electricity generated in Mexico.
[f]Consumption of electricity in Panama and Colon.
[g]Consumption of electricity in Lima and Callao.
[h]Total electricity generated in Uruguay.
[i]Estimate.

displacement, in relative terms, of thermal energy in favour of hydro-electric power. In Brazil, for instance, where the total installed capacity increased from 12,085 kilowatts in 1900 to 1,496,859 kilowatts in 1947, hydro-electric plants represented 45.5 per cent of the total capacity in 1900 and 83.1 per cent in 1942. In oil-producing countries, on the other hand, a relative shift in favour of thermal energy has taken place in recent decades. In Mexico hydro-electric energy represented 63.3 per cent of a total installed capacity of 392,396 kilowatts in 1926, and only 54.2 per cent of a total of 893,449 kilowatts in 1947.

From the standpoint of electricity consumption by manufacturing industries in Latin America, hydro-electric power is not on the whole the main source of energy. Of approximately five million horsepower of installed motor power, less than one third utilize power of hydro-electric origin, the rest utilizing electricity of thermal origin. Moreover, in numerous instances the irregularity of hydro-electric power output requires the utilization of thermal energy sources during the slack season.

The distribution of coal, petroleum and hydro-electric power resources is very uneven throughout Latin America, as a result of which conditions for development of manufacturing industry vary from one country to another. Among the industrially more developed, Mexico is almost completely self-sufficient in sources of energy. The displacement in favour of petroleum was partly due to the low price policy followed by the Government petroleum monopoly with regard to fuel oil sold to railways and industries. The insufficient increase of petroleum output in recent years is leading, however, to a policy of petroleum conservation and a decline in exports. The present trend is toward a considerable expansion of hydro-electric capacity.

In contrast to Mexico, Argentina is the least self-sufficient in sources of energy among the more developed countries of Latin America, with imports of fuels and lubricants representing 16 per cent of total imports in 1937-1939, 21.0 per cent in 1946 and 13.6 per cent in 1947. Thus, despite a 21.1 per cent increase in domestic crude petroleum production between 1939 and 1947, imports of petroleum and derivatives increased by 87.1 per cent during the same period of time despite a severe curtailment from 1942 to 1945. In 1947 domestic production represented only 45.3 per cent of the total volume of crude oil and derivatives, as compared with 56.8 per cent in 1939. Partly as a result of the increase in the utilization of petroleum, but even more because of shortages in the United Kingdom and the United States, imports of coal in 1947 were only 40 per cent of the 1939 level. While there has been a considerable increase in domestic coal output, it represents a very small fraction of Argentina's requirements. In order to diminish foreign currency expenditures on fuels, current plans call for an increased production of domestic petroleum and coal as well as for a large-scale development of hydro-electric power,

While a shift toward hydro-electric power has been indicated in Brazil, the proportions of energy consumed show the under-developed character of the economy of that country; in 1940, 84 per cent of energy consumed was derived from wood and charcoal, with only 8.7 per cent from coal, 6 per cent from petroleum and 1.3 from hydro-electric power.[1] While the utilization of wood and charcoal is also important in numerous other Latin-American countries, few estimates of its significance in relation to other sources of energy have been made. The deforestation generally entailed by this practice, and the uneconomic utilization of wood, together with its consequent loss of by-products, are leading to efforts aimed at substituting other sources for wood. Brazil's deficient production of coal (despite a 161 per cent increase from 1937 to 1947) and the absence of any significant petroleum exploitation, led to a scarcity of fuels during the war. The expansion of manufacturing during that time was hampered by lack of electric energy, particularly in São Paulo. Fuels and lubricants represent an appreciable proportion of the country's imports, amounting to 13 per cent of the total in 1937-1939 and to 9.5 per cent in 1947. A solution of the energy problem is being sought in the development of the country's great hydro-electric potential and its still little-known oil resources.

With an output of 2.2 million tons in 1948, Chile is the most important coal-producing country in Latin America. Nevertheless its coal production is not sufficient to meet all its requirements, and some 700,000 tons of fuel oil are imported annually for the mining industry in the northern part of the country. Its imports of petroleum derivatives amounted to 8 per cent of total imports in 1937-1939, but only 6.1 per cent in 1947 despite an increase in volume. Oil fields were discovered in 1947 south of the Magellan Straits but have not yet started production. The projects that are being carried out to utilize the great hydro-electric potential of the country have not kept pace with increased demand. As a result, a shortage of electric power has hampered industrial production in recent years.

Both Colombia and Peru have a considerable hydro-electric potential, as well as petroleum export surpluses; their coal deposits have been exploited only to a very small extent because of high production costs. Other Latin-American areas, whose resources are only partly known, seem to be less well endowed with sources of energy. This is particularly true of Central America, where only hydro-electric power is available, and of Cuba, which does not even possess this form of energy but generates electricity mainly by burning imported fuel oil.

Self-sufficiency in sources of power is only one of several criteria to be taken into account when considering the economic basis of manufacturing in Latin America. The cost of fuels and purchased electricity represents only a relatively small part of production costs, amounting in

[1] *The SALTE Plan, Energy Sector* (English edition), Rio de Janeiro, 1948.

Chile, for example, to an average of less than 4 per cent. The transport costs of coal, however, generally require that iron and steel production be located in proximity to coal deposits, and several other types of manufacturing, such as cement and aluminium, also usually depend on the availability of domestic sources of energy. On the other hand, development of light industries can take place even in countries dependent on imports of fuels. Latin-American foreign exchange considerations affect the policy relative to sources of power in these countries.

The insufficient degree of utilization of the sources of energy in Latin America is mainly due to the large capital outlays necessary for the development of hydro-electric power and of petroleum. It is for this reason as well as because of the highly specialized technical knowledge required, that foreign capital has played an important, and often decisive, part. At present, with the major exception of Brazil, the growth of foreign-controlled light and power enterprises has been slow in comparison with those operated by Governments and other public bodies. Difficulties connected with investment in power development were accentuated during the war throughout Latin America by a drastic reduction of imports of equipment. The present trend seems to be to finance hydro-electric development by loans from foreign public sources (the Export-Import Bank and the International Bank for Reconstruction and Development).

The development of sources of energy, which in most countries of Latin America is regarded as an essential condition of further economic growth, should also benefit manufacturing indirectly, since with a parallel expansion of other activities, particularly transport and agriculture, an increase in purchasing power and a broadening of the domestic market for manufactures can be expected.

Manpower

The economically active population in Latin America seems to represent a smaller percentage of the total population than in the more developed countries. While the labour force in the United States amounted to 59.2 per cent of the total population in 1940, the proportion was lower in most Latin-American countries, amounting, for example, to 52.1 per cent in Peru and 51.6 per cent in Colombia. In part this is due to the age structure of the population of Latin America, where there is a larger proportion of children, and probably also to the fact that a larger proportion of the female population is engaged in unpaid household activities within their own families.

With the exception of those countries with an advanced agriculture, such as Argentina, Uruguay and Cuba, there is a considerable difference between the productivity and real wages of labour in manufacturing and those in agriculture. Besides better wages and working hours, employment in manufacturing offers social security schemes and other incentives.

Consequently, industrial enterprises are seldom faced with a shortage of unskilled labour, which can be drawn from agriculture, usually without a decrease in the output of the latter type of production. Moreover, they are able to draw labour from other low-paid occupations, particularly domestic services. The rate of increase of the labour force resulting from the growth of the population in most countries seems to be greater than the increase in employment in manufacturing. For example, in Mexico, despite a 32 per cent increase in employment in manufacturing in 1937-1946, there was a 10.6 per cent increase in the agricultural population (including dependants).

Urbanization, however, for which industrialization is partly responsible, has contributed to a stagnation and even a decline in the agricultural output in a few areas. In part this was the result of the lack of appreciable progress in the productivity of agriculture. Other factors, particularly an insufficient mobility of labour, and deficiencies of the transport systems, also led to a decline of agricultural production as urbanization and industrialization advanced. Such, for instance, has been the case in the State of Rio de Janeiro, where the decline of agricultural production led to a deterioration of the food supply in Brazil's capital city.

There are several over-all characteristics which distinguish the manufacturing labour force of Latin America from that of the more developed countries. Partly as a result of the structure of manufacturing in the region, with its predominance of foodstuff processing and textiles, the proportion of women employed is larger than, for instance, in the United States.[1] While in the latter country in 1940 only 17.8 per cent of the labour force in manufacturing consisted of women, the percentage amounted to 24.8 per cent among wage-earners in Chile in 1945, and to 33.4 per cent of the total labour force in Colombian manufacturing in the same year. In the state capitals in Brazil, nearly 33 per cent of the labour force in 1944-1948 consisted of women. In Argentina industrialization during the past decade has brought about an increasing degree of female employment in manufacturing.

Another characteristic is seen in the age-group composition of the labour force in manufacturing. For example, the Colombian manufacturing census of 1945-1946 showed that a very large percentage of wage-earners were in young age groups, 27.9 per cent of the total being in the 16-20 years bracket, 23.7 per cent being 21 to 25 years old, 17.8 per cent in the 26-30 years groups, and only 2.6 per cent being more than 50 years of age. These data indicate that industrial expansion draws upon young manpower, since industrial unemployment is negligible; but they may also point to employment practices current in the country. Furthermore, as a result of the low life expectancy of the population in most of Latin

[1]Although a larger proportion of the total female population is gainfully employed in the United States than in the Latin-American countries, a smaller proportion thereof is engaged in manufacturing.

America and of unsatisfactory health conditions, the average number of useful years per manufacturing worker is probably lower than in countries with better health conditions.[1]

There is general agreement on the adaptability of Latin-American labour to industrial processes, particularly in those countries where newly recruited labour does not originate from self-sufficient agricultural communities with a distinct cultural tradition of their own. Nevertheless, as stated earlier, a number of factors contribute to a labour productivity which in Latin America is lower than in the more developed countries. Technological reasons are partially responsible, i.e., the smaller amount of comparable equipment per worker indicated in a preceding section. In some areas the low level of productivity is due to the unsatisfactory conditions of health and nourishment of the labour force, lack of incentives and an inadequate degree of general and technical education. Among various other factors, inflation during the period under survey contributed to a weakening of incentives, for real wages in industry apparently declined in several countries. While in other countries an increase in real wages took place, it is difficult to assess its magnitude because of statistical deficiencies.

It is probable that there was a general decline of labour productivity during the war, resulting from the drastic reduction of imports of manufacturing equipment and spare parts, the state of full employment and the consequent hiring of less efficient labour, and the creation of inefficient enterprises and improvisation among management. Available data do not permit an accurate measurement of productivity, but indicate such a trend. It may also be assumed that in most Latin-American countries, omitting non-economic factors, productivity began to increase in 1946 as a result of renewed imports of equipment and spare parts.

Labour efficiency also suffers from the fact that the level of general education is not satisfactory. Illiteracy ranged before the war from 82 per cent in Honduras and 80 per cent in Bolivia, to 12 per cent in Argentina. It should be noted, however, that the percentage of illiteracy among manufacturing labour is considerably smaller. Thus, in Colombia it amounted to only 12 per cent as compared with 39 per cent for the population as a whole. The technical training of manual labour is less advanced than in most of the economically developed countries, although progress is being made in this direction, particularly in Argentina, Chile, Brazil and Mexico.

In addition to their effect upon the health and nutrition standards of the labour force, indicated above, generally low wage rates contribute to the small size of the domestic market for manufactured goods. An indication may be seen in the fact that before the war more than half of the

[1]In Chile average life expectancy is 42.8 years, and in the Federal District of Brazil, 43.3 years (in 1939-1941), as compared to 65.1 years in the United States.

total expenditure of a worker's family in Latin America went for food, as compared to one-third in the United States.

While comparison of wage rates of various countries, converted to a single currency, is of limited significance in indicating standards of living, it may be pointed out that according to the International Labour Organisation, the following average wage rates, including those paid to men as well as to women, prevailed in Latin America: In Argentina 258.1 pesos ($US61.1 at the 4.22 rate of exchange) per month in manufacturing, construction and mining in 1947; in Chile 76.41 pesos ($US1.77 at the 43.0 rate) per day in manufacturing and construction in 1947; in Colombia (Bogotá) 2.66 pesos ($US1.52) per day in manufacturing, mining, transport and services in 1946; in Uruguay 79.51 pesos ($US41.80) per month in manufacturing and construction in 1946. According to another source the average wage in manufacturing in the Federal District of Mexico amounted to 46.94 pesos ($US9.66) per week in October 1945. It should be noted that these wage rates are subject, from the standpoint of labour costs, to increases based upon various provisions of social security legislation. In the United States weekly wages in manufacturing and construction amounted to $US49.25 in 1947 and in Canada to $C34.16. These data are of some significance when considering the value added by manufacturing to the exports of the Latin-American countries; the relatively low wage rates prevailing in the region give it a competitive advantage in the exports of those commodities which require a large amount of labour, if other cost factors are comparable. As has been indicated above, the latter condition does not as a rule prevail in the manufacture of finished goods.

In contrast to the usually plentiful supply of unskilled and semi-skilled industrial labour, there has always been a shortage of skilled labour in manufacturing. As indicated above, this is being remedied in part by an expansion of technical training.[1] On the other hand, immigration, which is a source of additional manpower particularly of skilled labour of some significance especially in Argentina and to a smaller degree also in Brazil, Uruguay and Peru, had been largely paralysed during the war when the expansion of manufacturing was greatest. Since then only Argentina has received a large number of immigrants, of whom 70 per cent entering that country in 1947 were reported as having found employment in industry.

The shortage of technical and managerial personnel is even greater, though there has been considerable progress in this field in Latin America. The proportion of foreigners among such personnel is gradually decreasing, partly as a result of broader training opportunities and a more widespread orientation toward technical professions among the younger

[1]In Brazil, for instance, a large-scale programme of this type is being carried out with the financial support and under the direction of the industrial enterprises themselves, under the name of SENAI (National Service of Industrial Apprenticeship).

generation, and partly as a result of legislation prescribing a minimum proportion of local personnel (including wage earners) in all enterprises. The smaller countries, nevertheless, are faced with the handicap that employment opportunities for numerous categories of technicians are limited, and that the training of such technicians within those countries would require outlays beyond their present possibilities if it were to be of the same level as in the more advanced countries.

Despite recent progress, technology in Latin America is still not of an indigenous character, since nearly all new developments in this field are taking place outside the region. It is in this field that, in terms of costs, outside assistance might be most effective.

Costo and demand

In general, only fragmentary information relative to the cost structure of manufacturing in the Latin-American countries is available. Moreover, the insufficient accuracy of such data reveals magnitudes rather than precise measurements. On the whole, it appears that, mainly as a result of the relatively small value added by manufacturing, raw materials represent a larger share of total production costs than in the more highly industrialized countries. Also, wages, salaries and taxes probably represent relatively smaller items. In contrast, profits per unit, which are likely to be understated in the information available, are usually higher in Latin America.[1]

The fact that most of the manufacturing production of finished goods in Latin America is sheltered by protective tariffs and other means does not in itself provide sufficient evidence to permit the conclusion that production costs are higher than those prevailing in the world market. Such a conclusion may be drawn, however, from the fact that most finished goods production in the region under normal international supply conditions cannot yet compete abroad with that originating from the economically more developed countries. This excludes, of course, those manufacturing activities that consist largely of the processing of domestic raw materials and foodstuffs, or that produce goods which by their character do not normally enter international trade.

Allowing for the considerable differences that exist among various industries and countries in the region, a number of factors, most of which will be pointed out subsequently in greater detail, contribute to high pro-

[1]As an illustration of the cost structure of Chilean manufacturing the percentage breakdown of the 1940 gross value of output relative to industries which employed about 59 per cent of the labour force computed in the 1937 census was as follows: raw materials 56.7, fuels 2.4, power 0.8, amortization and depreciation 3.0, taxes and fees 5.5, rents 0.6, insurance 1.3, interest 0.8, various items 2.6, wages 10.4, salaries 3.3, salaries to owners 1.5, social security payments 1.5. Thus, total production costs amounted to 91.5 per cent of the gross value of output, profits accounting for the rest. (*Source: Renta Nacional 1940-1945,* Corporación de Fomento de la Producción, Santiago de Chile, 1946.)

duction costs. On the whole these factors are more conspicuous in those countries where manufacturing development has been slowest, and are at the same time cause and effect. Among the main factors is the low productivity of labour owing to the low degree of mechanization of the production processes; an insufficient degree of integration of the industrial structure in each country; lack of training and experience on the part of labour and management and the inadequacy of incentives.

In some areas of Latin America health conditions are unsatisfactory, and labour efficiency is further reduced by excessive heat or altitude. In the more complex production processes, the lack of an industrial tradition on the part of the technical as well as the administrative personnel—a lack which is only being remedied gradually—contributes to increased costs. In certain industries, existing establishments are often considerably smaller than the optimum size necessary for minimizing costs, usually because of limitations of demand. Domestic raw materials, particularly when not produced in the volume required by an active export trade, are in numerous instances available only at price levels which are higher than those prevailing in the international market. Among other factors contributing to increased costs are relatively high power and transport rates, as well as high interest rates. Finally, factory prices of manufactures include profit margins that, on the basis of the fragmentary information available, seem to be higher in Latin America than in the economically more developed countries.

In addition to cost factors, quality considerations also constitute obstacles to the competitive character of Latin-American finished manufactures under normal supply conditions. Production controls, beginning with raw materials and following through all phases of production, are not applied in a general manner. The great domestic demand for finished goods during the war and the semi-monopolistic position of numerous enterprises have weakened the incentives toward an improvement in quality. On the other hand, public authorities in numerous countries have increased their efforts toward a broader utilization of quality controls and standardization of production.

Since the bulk of the production of finished goods is limited to the respective internal markets, domestic purchasing power becomes a significant factor affecting manufacturing output in Latin America. The only general indicators of purchasing power that are available are national income estimates, which show a low *per capita* income throughout the area, even though there are very considerable differences among individual countries. For example, in 1940 when the *per capita* income in the United States was $589 and in Canada $US527, the average for Latin America, in comparable dollars, was about one-sixth of the United States figure. It ranged from approximately $334 in Argentina to about $30-40 in some of the smaller countries.

In the less developed countries of Latin America the low level of national income and its uneven distribution have the effect of limiting to a considerable extent the market of consumer goods to a minority of the population, nearly all of it in the urban centres. Even in the more developed countries with the exception of Argentina, Cuba and Uruguay, the market for manufactures is quite narrow in relation to their population numbers.

During the period under review the demand for Latin-American manufacturing increased considerably, but it appears that this was mainly due to the sharp reduction of imported manufactures during the war. In Argentina, for instance, where a marked increase in the production of manufactures took place, the volume of available goods, excluding building materials and machinery, declined from an index number of 122 in 1938 to 109 in 1945, the base year being 1935. On a *per capita* basis, the decline was from an index number of 116 to 94 in the same period. The expansion of demand, based upon an increase of national income measured at constant prices, seems to have been small even in such a relatively developed country as Chile, where only an 8 per cent increase took place between 1940 and 1945.[1] During the same period of time the population of the country grew by 6.4 per cent so that the yearly *per capita* increase in real income was about 0.24 per cent. The increased demand for Chilean manufactures, in addition to the shortage of imported manufactured products, which was the dominant factor, was also the result of a shift in expenditures for consumer goods. It is possible, too, that the effect of inflation upon the distribution of income contributed to an expansion of the demand for manufactures.

The small size of most industrial establishments in Latin America is one of the chief consequences of the narrowness of the domestic markets. In those industries which are characterized by mass-production methods the size of the market often does not permit an enterprise to be established in the optimum size demanded by technological considerations or, if established, to utilize its full capacity. In addition, institutional rigidities of various kinds including licensing, intended to maintain previously established enterprises, at times prevent the establishment of optimum-sized plants.[2] The fear of over-production sometimes leads some Governments to prohibit or to subject to licence the imports of certain types of industrial equipment (textile machinery, for example) in which considerations of the size of the market and the preservation of existing profit margins play a role. In Chile, the licensing of new industries is also undertaken with a view to the foreign exchange requirements of the projected establishments. In the smaller countries, particularly those of

[1] *Renta Nacional, op. cit.*

[2] Nevertheless, a number of establishments built in recent years in the more developed countries of Latin America (particularly in Argentina, Brazil and Mexico) and producing for the domestic market seem to approximate optimum size.

Central America and the Caribbean, the system of development by concession is utilized, which by granting a monopoly to a given enterprise ensures the creation of an establishment which is supposed to satisfy the domestic demand for a given commodity. While such concentration of production permits lower costs than would otherwise be possible, the monopolistic position of the concessionary does not encourage a continuous effort toward a reduction of costs, and usually permits, despite various safeguards, excessively high profits.

In addition to the limiting factors upon manufacturing derived from the narrowness of the domestic market, the fluctuations of purchasing power due to external factors have an unfavourable influence upon the growth of manufacturing from a long-range point of view. While ultimately the development of manufacturing in Latin America will exercise a stabilizing influence upon its economies, nearly all of them are still highly sensitive to international cyclical disturbances.[1]

FINANCING

GENERAL CHARACTERISTICS

Investment in Latin America originates both from domestic and foreign sources in proportions that vary among the individual countries. While the proportion of domestic to foreign investment is not in itself an indication of economic growth, and foreign investment will be dealt with later, it may be noted that, largely as a consequence of low incomes, the level of investment appears to be relatively low in most countries of Latin America. Even in the more developed ones, such as Chile, gross investment in recent years varied between 8 and 11 per cent of national income, while net investment averaged 5 per cent. In Brazil net investment was somewhat over 10 per cent of estimated national income.

In most countries of the region, savings are made mainly by a small high-income group as well as by industrial and commercial enterprises. Those accumulated by the low-income groups are very limited, or negative. An exception, however, is constituted by compulsory savings as represented by that part of the tax and social security payments which is invested.

Savings are not only of a small magnitude, but they are directed to a great extent into non-reproductive investments. In the case of Chile, for example, construction building (excluding public works, direct investments of the *Corporación de Fomento* and investment of the railways) represented between 23.5 and 38.3 per cent of total gross investment in 1940-1944. According to less precise estimates, housing construction in Brazil in 1947 absorbed between 65 and 70 per cent of net savings, nearly

[1]This sensitivity is not aggravated by large-scale unemployment of a magnitude comparable in relative terms to that occurring in the highly industrialized nations of the world.

two-thirds of which were invested in office and residential buildings for upper-income groups in the main cities of the country.[1] Developments such as these are due not only to the distribution of income prevalent in Latin America but even more to the historical preference for investment in real estate. The inflationary pressures that manifested themselves in recent years in most of the countries in the region strengthened this tendency even more.

Co-existent with the preference to invest in real estate is the tendency shown by a large sector of Latin-American private enterprise to hold liquid assets, which gives it in most cases a distinctly stronger speculative character than in the economically more developed countries. The preference for commercial activities which this entails also affects profit margins[2] and the direction of investment in industry. Since manufacturing enterprises aim at high profit margins within a short period of time there is a tendency, apparent particularly during the last war, to invest in those activities producing goods, the demand for which permitted such quick yields. As a result, production was directed toward satisfying the demand of the higher-income groups to a larger extent than usual. During the war, moreover, this trend led to investment in numerous enterprises with insufficient regard for their competitive possibilities in the post-war period. Price controls generally were either non-existent or insufficiently effective to offset this investment pattern. Nevertheless, in some countries efforts have been made by the Government to direct private productive investment into objectively desirable channels by granting them special privileges, extending to them preferred credit facilities, or by creating joint corporations with private capital.

INVESTMENT FROM DOMESTIC SOURCES

Private domestic investment in production in general, and in manufacturing in particular, in so far as it is of a non-inflationary character, has two sources to draw from: reinvestments and the savings of institutions and individuals. In the case of investment in manufacturing, even though there are no over-all data to indicate with sufficient precision the relative significance of the two sources, there are indications that the retention of profits constitutes the most important one. At least this seems to have been the case in Argentina and Brazil during the

[1]*Report of the Joint Brazil-United States Technical Commission,* U. S. Department of State, Washington, D.C., 1949.

[2]The discrepancy between profits in commerce and manufacturing seems to have been even greater under inflationary conditions, and in a sellers' market, than usual. In this way, for instance, profits of commercial corporations in Rio de Janeiro and São Paulo in 1946 were reported to have amounted to 31.9 per cent over capital and reserves, while those of manufacturing corporations were 16.9 per cent. In 1947 they were 22.8 and 14.3 per cent, respectively. (*Conjuntura Econômica, Fundação Getulio Vargas,* Rio de Janeiro, January 1949.)

period of abnormally high profits achieved in wartime. In countries with less developed capital markets reinvestment was probably of even greater significance. This is due partly to general, and partly to institutional, economic factors. Among the former, the most important is the preference mentioned above for investment in real estate, shown both by the savings institutions and by individuals. In the case of Chile, at the end of 1945, over 57 per cent of the total investment of the social security institutions was in real estate (mortgage loans and ownership) while only 12 per cent consisted of securities of all kinds.[1] A similar orientation seems to prevail among savings banks and insurance companies. In the deposits and savings banks of Mexico industrial securities represented 19.7 per cent of their investments in mid-1948, mostly stocks of national corporations.

The availability of medium- and long-term credit within the banking systems is generally restricted, due to the predominant role of the commercial banks and their short-term operations. Costly long-term credits, however, are sometimes available to industry with the commercial banks in the form of short-term loans and advances which are periodically renewed.

While in several countries there are governmental and semi-governmental institutions designed to accommodate the credit needs of industries, their resources for the granting of medium- and long-term credits are very limited, with exceptions of varying significance in the Mexican, Argentine and Chilean systems. For instance, in Mexico the *Nacional Financiera,* reorganized in 1941 primarily as an investment bank, has been successful in strengthening the capital market and facilitating industrial credit. On the other hand, the industrial credit banks (*Sociedades Financieras*) were of a lesser use in stimulating manufacturing production than might have been expected. In Argentina industrial credit seems to be broader than in any other Latin-American country, representing 34 per cent of total bank credit in 1944 and 42 per cent in 1947. One-fifth of the credit extended to industry in the latter year had been made by the *Banco de Crédito Industrial Argentino.* In Chile, the *Corporación de Fomento de la Producción* has probably been the most successful agency of its type in Latin America. There is not enough information to permit assessment of the extent to which the credits granted by these various institutions are derived from voluntary savings.

As far as private individuals are concerned, in addition to their preference for real estate investment, only a small minority are familiar with the factors affecting prices of industrial shares and the advantages of investment in this field. The great fluctuations in the prices of shares, particularly during the war and post-war years, have added a speculative character to the market that may have acted as a deterrent to the small

[1]These data apply only to the institutions which are within the jurisdiction of the *Dirección General de Previsión Social.*

investor. Also the organization of the securities markets in Latin America does not seem to be sufficiently widespread. The scope of their operations is generally narrow except for a few centres, notably Buenos Aires.

While the volume of savings for investment in manufacturing is reduced by the general factors mentioned above, several institutional considerations also hamper the financing of industry. A sizable number of corporations, including many of the most successful, are owned by a small group of individuals (in most cases the founders' families) and their stock is closely held.[1] The role of private investment groups is further enhanced by the fact that, as a result of the weakness of the stock exchanges, issues of new securities are often arranged with such groups and sold to them directly.

As a result of the low level of savings and the prevalent investment pattern, the banking system, including the central banks, is looked upon as the most readily available source of development credit, both public and private. Since there has been a high level of employment during the past ten years in nearly all countries of Latin America, the effects of such a course were largely inflationary.[2] Under inflationary conditions, the general increase of the level of prices reduced consumption expenditures of fixed-income groups and in some countries also those of wage-earners. Nevertheless, such "forced savings" may have been more than offset by the consumption expenditures of other social groups. In the case of Chile, for example, which went through a strong inflationary process during the period under review, consumption expenditures increased from 59 per cent of gross national income in 1940 to 64 per cent in 1942 and 63 per cent in 1943. This development was also in part the result of shortages of imported capital goods during the war. Whether the rate of savings decreased or increased, it appears that under inflationary conditions a larger proportion than would otherwise be the case was invested in real estate, the traditional form of protection against losses in "real" income and capital, instead of being directed into reproductive channels.

The characteristics of domestic private investment in Latin America have an unfavorable effect upon the financing of development by governmental authorities. To the extent that such development is to be financed by non-inflationary means, the governmental resources are largely limited to tax revenues, because government bond markets, when they exist, are generally narrow. Under such circumstances, a policy regulating the volume of private investment and the long-term rate of interest through government security issues can seldom be undertaken effectively.

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[1]A practice that also weakens the market is followed for fiscal purposes in Chile, for instance, where some corporations with large profits increase their capital by selling new shares to their stockholders only, at prices that are well below current quotations.

[2]The effect of the rate of investment was inflationary to the extent that investment was financed by the creation of additional credit which, when taken together with non-bank investment, was greater than the current rate of voluntary saving.

FOREIGN INVESTMENT

In the absence of a sufficient capital formation in most countries in Latin America (with Argentina as a major exception), foreign investment is of particular significance. It has permitted a greater volume of total investment than would otherwise have been the case or, conversely, it has permitted a greater measure of consumption than a given rate of investment would have made possible. In addition, foreign capital, particularly in railways and public utilities, has created new investment opportunities for domestic enterprise.

Foreign investment in manufacturing in Latin America is chiefly concentrated either in the processing of raw materials and foodstuffs largely for export, or in the production and assembly of finished articles for the domestic market by branches or subsidiaries of the foreign firms. The former type of investment requires relatively large outlays and is represented by such industries as meat packing or sugar processing, where foreign capital predominated until recently and, in some countries, still predominates. The second type of investment developed particularly after the First World War and more recently often takes place in association with domestic capital.

Manufacturing[1] in Latin America has attracted only a small part of total foreign investment in the region. In 1943, of an estimated $3,425 million invested by United States citizens or corporations in Latin America, $2,450 million were direct investments, of which only $322 million, or 13 per cent, were in manufacturing. This amount was much smaller than the $817 million invested in Canadian manufacturing, and represented only 15 per cent of the United States investment in manufacturing in the world[2] (for a breakdown of investment in manufacturing as a percentage of total United States direct investment in the various Latin-American countries, see appendix B). Even though total British investments in Latin America, estimated at the end of 1947 at an equivalent of approximately $US5,400 million[3] were larger than those of the United States, it is probable that they included a smaller investment in manufacturing than those of the latter country.

On a national level, the small degree of concentration of foreign investment in manufacturing is illustrated by the case of Mexico, where in 1945, after a considerable growth, such investment represented only 8.5 per cent of the total foreign investment. Foreign investment thus appears to constitute the smaller part of the total investment in manufacturing in most countries of Latin America; in Argentina it amounted

[1]Excluding smelting, refining and refining operations, and sugar mills.

[2]The most complete coverage of United States owned assets ever obtained, including property of United States citizens abroad, based on data for 31 May 1943, gave a total of $3,425 million for Latin America, consisting of the following classes (in millions of dollars): interests in controlled enterprises 2,737; securities 319; bullion, currency and deposits 31; real property 71; interests in estates and trusts 10; miscellaneous 258. (*Source: Census of American-Owned Assets in Foreign Countries,* United States Treasury Department, Washington, 1947).

[3]*The South American Journal,* January 1949.

to approximately 20 per cent in 1941, and in Brazil to a similar share in 1943. In Cuba, however, foreign investment in manufacturing, including sugar processing, is considerably greater in relative terms.

In Latin America over the past ten years the proportion of domestic investment in manufacturing tends to show a greater relative increase than foreign investment, chiefly as a result of a greater rate of investment of domestic origin. The partial liquidation of investments of enemy aliens during the war contributed to this trend. The introduction of exchange controls in the early 1930's and the restriction imposed upon remittances of profits, causing their reinvestment within those countries where such controls were applied, also contributed to the nationalization of some foreign investments in manufacturing. In some cases this led to the transfer of the head offices of some firms, particularly European firms, to Latin America. This process was accelerated during the war, notably in Argentina. It is probable that a sizable part of the refugee capital that was invested in Latin America was also nationalized as the investors became citizens of the respective countries.

On the other hand it appears that in Mexico the flow of direct United States investments in manufacturing is leading to a net increase of foreign investment in that field. Despite its rise from 81 million pesos in 1938 to 246.7 million in 1945 (equivalent to $US17.9 million and $50.8 million, respectively), foreign investment in manufacturing is nevertheless very small in comparison to domestic investment in that country.

In most countries, the process of nationalization of investment in manufacturing was due, in addition to the causes indicated above, to a considerable decline in the flow of private foreign investment in the region following the "great depression". Since then development in Latin America has had to rely to a greater extent than before on three sources: domestic investment, foreign private investments (mostly in subsidiaries) and loans from United States governmental sources, as represented particularly by the Export-Import Bank. The relatively small number of utilized loans suggests that the number of economically sound projects presented was insufficient to warrant the utilization of a greater part of the commitments made by the United States. In some cases the reason was the unwillingness of Governments or their agencies to assume new obligations because of the unfavourable prospects of the balance of payments. All of the loans obtained were for productive uses, signifying either a direct or an indirect stimulus to manufacturing. The loans granted to some Latin-American countries by the International Bank for Reconstruction and Development are of a similar character.[1]

While foreign investment, whether of private or governmental origin, appears desirable in order to accelerate development in Latin

[1]As of the beginning of 1949 the International Bank has approved the following loans to Latin-American countries (in millions of US dollars): Chile 16.0; Brazil 75.0, and Mexico 34.1.

America, it should be distinguished from the foreign currency expenditures that are necessary for its financing. Private foreign investment even when associated with domestic capital usually does cover all foreign currency expenditures incurred in establishing a given enterprise, and often a sizable share of the domestic currency expenditure as well, but credits from such public agencies as the Export-Import Bank or the International Bank for Reconstruction and Development are usually limited to the foreign currency expenditures of a given project.

The proportion of foreign and domestic currency expenditure varies greatly according to the type of project envisaged, but it is likely that foreign expenditures represent on the average only about one-third of the total.[1] The extent to which development in general, and manufacturing in particular, are hampered on the one hand by the low level of domestic savings and by their possible misdirection, and on the other, by the lack of foreign investment, can only be ascertained at a country level.

In all countries, however, the importance of the foreign exchange receipts derived from exports of the Latin-American countries, and the necessity of expanding such exports for the financing of the foreign currency expenditures of development projects, is manifest. Also, the high degree of sensitivity of the Latin-American countries to cyclical fluctuations suggests the need for international co-operation in order to time investments in the excess-savings countries with those planned in the area.

V. INDUSTRIALIZATION AND FOREIGN TRADE

Effects of industrialization

Industrialization has a doubly stimulating effect upon the imports of manufactures. First, a large volume of capital goods imports is required, particularly in Latin America. Secondly, higher real incomes lead to an increased demand for consumer goods, part of which, particularly those of the durable and semi-durable types, are bought abroad. There is thus a general tendency among countries undergoing rapid industrialization to increase rather than to decrease imports of manufactures. Canada, which since the beginning of this century has expanded its manufacturing output more rapidly than any other country in the Western Hemisphere, is a case in point: from a base period of 1901-1905 manufacturing output increased to an index number of 318 in 1926-1929, and the quantum of imports of manufactures rose to 284 during the same period of time.[2]

[1]This estimate, made by the Joint Brazil-United States Technical Commission, may be valid for that country only.

[2]*Industrialization and Foreign Trade,* League of Nations, 1945. This source has been used also in subsequent passages without being specifically quoted.

Higher real incomes resulting from the progress of industrialization or other causes, such as an expansion of exports, lead to an increased demand for consumer goods which affects both domestic and foreign suppliers. This relationship between domestic and foreign suppliers is determined by the country's industrial structure and foreign trade policy on the one hand, and by the distribution of income on the other.

The latter factor is of particular significance in determining the effects of industrialization upon foreign trade in many countries of Latin America. This is a consequence of the general fact that the demand schedules for manufactures and foodstuffs vary with different income levels. Thus in the case of low-level incomes, the demand for manufactures is quite small compared to that for foodstuffs, so that a small increase in real income leads to a further, though less than proportionate, increase in food consumption. To the extent that there is an increase in real terms in the low-income groups in Latin America, which has not been accompanied by an expansion in food production for domestic consumption, such an increase is reflected above all in increased food imports.

The income distribution in most Latin-American countries is such that the demand for manufactures, particularly those of foreign origin, is more concentrated in the higher-income groups than is the case in the economically more developed parts of the world. It is also there that the fluctuations of income resulting from changes in production and exports are greatest. The consumption pattern of higher-income groups in general shows on an ascending scale a relatively larger expenditure for manufactures than for foodstuffs. In the United States, for instance, with a fivefold increase of family income, the demand for manufactures increases three times as much as does that for foodstuffs. To the extent, therefore, that industrialization contributes to an expansion of higher incomes, it generally leads to increased import of consumer goods, particularly of those that are not yet produced in a given country or that are of better quality.

In addition to an expansion of imports in absolute terms, the industrialization process implies a diversification of imports of manufactures and at times a complete change in their composition. For example, textiles prior to 1914 constituted more than half of the total imports of Latin America. Their substitution by textiles of domestic origin was accompanied by an increase of imports of durable and capital goods. In no case did the replacement of imports of given types of commodities by domestic manufactures lead to a contraction in the total volume of imports.

That this trend is of a general character is shown by the fact that thirteen of the world's most highly industrialized countries absorbed over one-third of the manufactures entering international trade in 1935, although they comprised only one-fifth of the total population. Similarly,

among the countries which export mainly primary commodities, it is those whose industrialization has progressed most that have the highest level of imports of manufactures.[1] It can be anticipated, therefore, that the process of industrialization in Latin America will follow the general trend of higher levels of imports of manufactures, together with an alteration in their composition.

Industrialization and foreign trade during the Second World War

In preceding sections of this chapter the causes have been pointed out of the expanded output of manufacturing in Latin America since pre-war years and the external causes that prompted this development. Structural changes which took place in manufacturing have also been indicated.[2]

Because of numerous factors of a non-economic origin which were at work during the greater part of the period under survey, a number of distortions in the normal cause and effect relationship between industrialization and foreign trade took place. Their effect was heightened by the fact that in most Latin-American countries the supply of manufactures depends to a large extent upon foreign trade. The increasing scarcity of imported manufactures resulting from the war had a stimulating effect upon domestic manufacturing output. To this may be added the fact that the industrial plant—as, for instance, the Brazilian textile industry—had not been working at full capacity since the "great depression". Thus the reduction of imports led in the first place to an expansion of demand benefiting primarily the already established enterprises; then secondary effects came into play. Chief among them were increased employment and higher money incomes, which in a cumulative way expanded the demand for locally produced manufactures.

It appears that the foreign trade multiplier is low in Latin America under normal trade conditions.[3] With increasing exports the foreign supplier soon shares the stimulating effects, since a relatively high proportion of the increased incomes is spent on imports. This relationship underwent considerable change during the war. The increased incomes resulting from expanded exports were directed in a much larger proportion toward the purchase of domestically produced goods, because of limited import possibilities, and as a result the foreign trade multiplier effect must have risen considerably. Consequently, manufacturing production and employment in all Latin-American countries increased appreciably from 1941 as is shown at the beginning of this chapter. More-

[1]For instance, in 1926-1929 the net *per capita* imports of manufactures of four British Dominions were from forty to fifty times higher than those of India and China.

[2]See section II (production), subsection on causes of increased production, and section III (structure of manufacturing).

[3]Seymour E. Harris, ed., *Economic Problems of Latin America,* New York, 1944.

over, the abnormal situation of the import trade permitted the maintenance of high price levels without active competition on the part of foreign manufactures. In many countries industrial enterprises were able to reach unusually high profit margins, a sizable part of which was reinvested.

At the same time the difficulty of importing new equipment prevented a normal growth of the industrialization process, so that numerous investments were made in technically obsolete or worn-out equipment. The decline of imports of equipment and the utilization of existing equipment at a level considerably above the average necessarily led to the creation of new enterprises, which all too often lacked a sound economic basis.

The composition of Latin-American imports in 1946-1947

The great expansion of Latin-American imports since 1945 did not have the repercussions which might have been feared upon the new industries created in the preceding period. The extraordinary pent-up demand and the great reconstruction needs of the devastated countries disrupted the equilibrium of international demand and supply. Also, the increased prices of imported commodities were not always truly competitive. These facts contributed in various ways to a more gradual and less complete readjustment of the new industries to post-war conditions.

In any case, not even the doubling of the volume of Latin-American imports which took place between 1945 and 1947 was sufficient to meet the current and deferred demand for consumer goods. This was partly because these imports comprised an unusually large share of capital goods. Imports of industrial and agricultural equipment, as well as of railroad equipment, motor vehicles (excluding passenger automobiles) and motor vessels (excluding sales to Panama) increased from $US621 million in 1946 to $US1,267 million in 1947. Imports of these categories totalled only $167 million in 1939.

This orientation of imports in favour of capital goods prevented in part the re-establishment of effective competition in those sectors where domestic industry had expanded during the war. High price levels were maintained, which were often an essential condition for their continued existence. Since 1947 the gradual tightening of the import controls has restricted the inflow of non-essential commodities in many countries. Thus, foreign exchange shortages acted as an additional protection for domestic industries.

In Argentina, Chile and Mexico, the share of consumer goods in total imports in 1946-1947 decreased as compared with the average for 1937-1939 (see table 14). This decrease was notable particularly in the case of Argentina. The marked increase in the imports of that country

TABLE 14. IMPORTS OF CAPITAL AND CONSUMER GOODS IN FOUR LATIN-AMERICAN COUNTRIES: PRE-WAR AND POST-WAR

Per cent of total value of imports

	Machinery and equipment			*Raw and semi-processed commodities*			*Fuels and lubricants*			*Foodstuffs*			*Other consumer goods*		
	1937-39	*1946*	*1947*	*1937-39*	*1946*	*1947*	*1937-39*	*1946*	*1947*	*1937-39*	*1946*	*1947*	*1937-39*	*1946*	*1947*
Argentina[a]	13.0[b]	12.0[b]	30.9[b]	37.0	43.6	35.0	16.0	21.0	13.6	8.0	6.6	4.0	26.0	16.3	16.5
Brazil	33.2	..	31.5	23.0	..	17.9	13.0	..	9.5	15.7	..	18.1	15.1	..	23.1
Chile	19.8	20.1	24.7	34.8	40.3	37.6	8.0	6.8	6.1	..	..	..	37.2[c]	32.5	31.6
Mexico	34.0	25.7	..	31.3[d]	36.8	..	..	..	..	6.3	13.5	..	28.7	20.3	..

Note: The trade categories of the respective countries are not strictly comparable.

Sources: Official publications of the countries concerned; for Brazil, the Joint Brazil-United States Technical Commission; for Mexico, the Bank of Mexico.

[a]The data for Argentina for 1947 have been calculated on the basis of the increase in volume from 1946 to 1947.
[b]Includes passenger automobiles.
[c]Includes foodstuffs.
[d]Includes fuels and lubricants.

in 1946 and 1947 benefited mainly the machinery and equipment group, which represented 12 per cent of the total value of imports in 1946, and 30.9 per cent in 1947.[1] Brazil was the only country among the more developed ones in Latin America where a relative increase in the imports of consumer goods took place in 1947. During that year imports into Brazil were completely free (the import licensing system was not introduced until May 1948) and tended to satisfy the demand for consumer goods prior to that for capital goods.[2]

Despite the substantial changes indicated above in the composition of imports, especially in the replacement of light manufactures by equipment and durable goods, there are numerous indications that the pre-war pattern tends to reassert itself to the extent that foreign exchange controls or other governmental action do not oppose it. In Colombia, for example, manufactures, which represented nearly 92 per cent of total imports in 1937-1939 and which in 1944-1945 had declined to 81.5 per cent, increased again to 88 per cent of the total value of imports in 1946. Whereas capital goods had increased from 13.1 per cent of total imports in 1939 to 25.4 per cent in 1943, such imports had in 1946 already declined to 14 per cent. This does not imply that an absolute decrease of semi-processed goods had taken place, or that these had been replaced by finished goods. There was, however, a relative increase in the imports of consumer manufactures demand for which had not been satisfied during previous years. These developments in Colombian imports are summarized below.

COLOMBIA: IMPORTS OF SOME SEMI-MANUFACTURED GOODS AS PER CENT OF TOTAL IMPORTS

	1938	*1942*	*1946*
Yarns and prepared fibres	3.0	8.2	2.7
Semi-processed chemicals	4.6	8.7	4.7
Iron and steel semi-manufactures	3.9	1.7	4.1

Textile products, mainly cotton textiles, decreased between 1937-1939 and 1946 from 18 to 8.9 per cent in Colombia's total imports, and from 17.2 to 9.8 per cent in those of Chile. In Argentina cotton textile production increased by 92 per cent between 1939 and 1945. During the same period of time cotton yarn production in that country increased by approximately 104 per cent. Such products had already been displaced in previous years from the imports of Mexico and Brazil. In this particu-

[1]Including passenger automobiles.

[2]For instance, imports of refrigerators in Brazil attained an index number of 422 (1937-39 = 100), and those of spare parts for automobiles, an index number of 551. Imports of passenger automobiles which in 1937-39 represented 2.8 per cent of the total value of imports, increased to 4.1 per cent in 1947. The fact that Brazilian import duties are specific and not *ad valorem* undoubtedly facilitated imports of luxury articles and of consumer goods in general. In this way, the increase in the price levels of imports had the effect of a reduction of import duties.

lar field the changes that have taken place seem to be of a permanent character.

The general composition of Mexico's imports furnishes another example of a partial re-establishment of the pre-war pattern. The share of manufactures within total imports decreased from 71 per cent in 1939-1941 to an average of nearly 60 per cent in 1942-1945. Nevertheless, in 1946 the pre-war proportions had already been re-established, despite a significant development of the country's manufacturing industries.

In the case of capital goods an increase in domestic production does not necessarily result in a decrease in imports of the same type of commodities. The development in Brazil of iron and steel production as well as of coal and cement did not prevent the imports of these commodities from being considerably higher in 1947 than in 1937-1939, as may be seen below.

BRAZIL: PRODUCTION AND IMPORTS OF SELECTED COMMODITIES IN 1947

Index numbers, base: 1937-39 = 100

	Production	*Imports*
Iron and steel products	410[a]	129
Coal	219	112
Cement	145	731

[a]Pig iron and steel ingots and castings.

Similarly, the expansion of cement production in Colombia, which from a base period of 1936-1939 attained an index number of 272 in 1947, did not prevent a marked increase in cement imports to an index number of 232.8 in the same year. A like development can be noted in the expansion of chemicals production in Argentina, Brazil and Chile, where output was able to satisfy only a small part of the increasing requirements of these countries in this basic sector of industrial development. Imports of chemicals and pharmaceuticals increased by 50 per cent between 1937-1939 and 1947 in these three countries.

In some countries industrialization was accompanied by the creation of a heavy industry of some significance. The general tendency in these countries, as in Brazil, is towards an immediate increase in the imports of consumer goods as a result of the concentration of investment in a sector which will have its effect upon the supplying of consumer goods only indirectly and in the long run.

The immediate consequence of the creation of a heavy industry seems to be a relative decrease in imports of semi-processed commodities and raw materials (at least in countries with coal and iron ore resources) and a relative increase in imports of consumer goods. It may be anticipated that increased real incomes resulting from a higher level of production will contribute to an expansion of the demand for imports of high-quality goods.

Other countries of Latin America concentrated their efforts on an expansion of consumer goods industries. In this case industrialization should be reflected by a short-run replacement, in part, of consumer goods by imports of capital goods and semi-manufactures, and in some cases by raw materials. Here again the increase in real incomes owing to the development of production will affect demand by diversifying and expanding it.

THE LONG-TERM ISSUE

From the standpoint of the Latin-American countries the relationship between industrialization and foreign trade presents two problems: first, whether it is possible, and to what extent, to increase their supply of manufactures by means of an increase in trade with the industrialized nations; secondly, what might be the consequence on foreign trade of an increase in domestic manufacturing output. In both cases—increasing imports or developing domestic manufacturing—the objective is an increase in the *per capita* supply of manufactures, and a rise in the standards of living.

Unless industrialization increases substantially in Latin America, it is difficult to realize the magnitude of the imports of manufactures that would be necessary to increase the total supply of such goods in the region to a level comparable to that prevalent among the industrialized countries. Actually, a completely unrealistic volume of foreign trade would have to be envisaged. In order to increase the 1939 *per capita* supply of manufactures (excluding processed foodstuffs, beverages and tobacco) in Argentina, Brazil, Chile and Mexico taken together, to 50 per cent of the Canadian level of that year, it would have been necessary to increase the imports of manufactures of these four countries by $7,236 million. This would amount to 30 per cent of total world imports (including raw materials and foodstuffs).[1]

An increase in imports necessarily assumes a similar expansion in exports.[2] Yet the possibility of a multiple increase in the exports of primary commodities can be contemplated only in exceptional cases. In a general way, the expansion of Latin-American exports is limited by the low elasticity of the demand for raw materials and foodstuffs in the

[1]Estimate based upon data shown in table 15. It is likely that in view of methodological differences and also because of the relatively greater significance of the handicrafts in Latin America, the supply of manufactures in these countries is understated. In view of the magnitudes considered, however, the margin of error involved does not invalidate the conclusions which can be derived from the estimates made. These data by no means correspond to the differences in national income in the countries concerned.

[2]Actually, a greater expansion of exports than of imports must take place, since the inflow of foreign capital necessary for a substantial increase in production in Latin America has a long-term bearing upon the balance of payments, as a result of interest and dividend remittances.

TABLE 15. PRODUCTION, FOREIGN TRADE AND SUPPLY OF MANUFACTURES IN FOUR LATIN-AMERICAN COUNTRIES[a]

		Total in millions of US dollars			*Per capita, in US dollars*			
	Year	*Production (Gross value)*	*Imports*	*Exports*	*Production (Gross value)*	*Imports*	*Exports*	*Supply*
Argentina	1939	677	265	8	46.7	18.3	0.55	64.4
Brazil	1939	519	198	20	12.6	4.8	0.48	16.9
Chile	1939	72	161	0.2	14.7	32.8	0.04	47.5
Mexico	1940	241	80	27	12.2	4.0	2.37	13.8
TOTAL of the above four countries		1,509	704	73.2	18.7	8.7	0.9	26.5
Canada	1939	2,536	327[b]	239[b]	224.4	28.9	21.2	232.2

Sources: Official statistics of the countries concerned.

[a]Excludes processed foodstuffs, beverages and tobacco products.
[b]Fiscal year.

world markets. The structural changes in international trade which took place between 1914 and 1918 and the contraction occurring during the 1930's, rendered doubtful any possibility of achieving by means of international trade a broad economic development in the countries which are traditional exporters of primary commodities. On the basis of past experience it does not seem likely that this will be feasible in the future.

Those countries which are important exporters of primary commodities and which have achieved at the same time a high level of supply of manufactures, can only be considered as exceptions. They are unusually well endowed with regard to agricultural and stock-raising production, easy internal communications, abundant land and a sparse population. This is true of some British Dominions and of Argentina and Uruguay.

Nevertheless, the distinctly higher level of the supply of manufactures available in Australia, Canada, New Zealand, and the Union of South Africa was possible only to the extent to which industrialization accompanied the development of foreign trade. Already in 1926-1929 these four countries had brought their *per capita* average output of manufactures[1] up to that of France, and had doubled that of Italy.

Even in a less industrialized country with a relatively high degree of dependence of national income upon foreign trade, such as Argentina, imported manufactures amounted to less than 30 per cent of supply in 1939. The Argentine imports of manufactures of that year would have had to be increased sixfold for that country to attain the 1926-1929 level of the *per capita* supply in the four Dominions mentioned above.

Other Latin-American countries, such as Brazil or Mexico, which have a lower degree of productivity than Argentina and where production leaves smaller margins for exports, are in a much less favourable position to increase the standards of living of their populations by means of foreign trade. In order to achieve Argentina's 1939 level of supply, Brazil would have had to increase its imports of manufactures ten times and Mexico twelve times.[2]

In the long run, therefore, industrialization appears to be the principal means whereby a substantial increase in the standards of living in Latin America can be achieved. If, however, the primary goal of economic activity and public economic policy is the greatest volume of goods and services, as well as stability in their supply, industrialization cannot be the only means, since this process implies the introduction of labour-saving devices in all fields of production. It would be difficult to conceive of the balanced economic development of a country without an improvement in the technology of agriculture, transportation, power and a modernized distribution system. Historical evidence and the inter-

[1]Excluding foodstuffs, beverages and tobacco products.
[2]The estimate for Mexico refers to 1940.

connexion of all economic activities indicates that industrialization is a much more complex process than the erection of factories and the adoption of a policy permitting their survival.

Furthermore, in view of the very considerable differences among the various countries of Latin America, the time will vary when the development of manufacturing industry may be regarded as the principal means of bringing about a substantial increase in the standard of living. For some of them, the time may be the present; for others, future decades. In several it is too far off to venture an answer. Only a detailed analysis of each country, requiring more and better information than most of them possess at present, would permit an appraisal of the role and possibilities of manufacturing industry in Latin America. It is most likely, however, that in a number of cases such data would lead to the conclusion that for some time to come a further expansion of the extractive industries (including agriculture) can contribute more to the nations' welfare than an artificial stimulation of manufacturing could achieve. Nevertheless, this is seldom an alternative, since each activity requires the support of the other.

Finally, industrialization is more than a mere economic process. It is also the cause and effect of deep changes in the political and social institutions of all the countries where it takes root. Even an outline of such changes is beyond the scope of this chapter, which is necessarily limited to the outward aspects of industrialization in Latin America.

CHAPTER 2

THE CONSTRUCTION INDUSTRY

I. HOUSING CONDITIONS IN LATIN AMERICA

Every study of the construction industry in Latin America presupposes a knowledge of housing conditions which prevail in this part of the Western Hemisphere.

All information on this subject indicates an extreme shortage of adequate housing for the low- and middle-income groups. In Mexico the 1939 census revealed that scarcely 7 per cent of the dwellings in that country had running water and sewerage, while 62 per cent of the total lacked both of these facilities. In the Federal District 19 per cent of the buildings were not provided with these two basic requirements.[1]

The Chilean Association of Architects calculated in 1934 that nearly 300,000 new houses were needed in that country. Since that time the situation seems to have grown worse, for in 1945 the same organization estimated the need of dwellings at between 350,000 and 400,000 houses, which means that nearly 40 per cent of the population of that country was then without adequate housing.[2] A survey made in Argentina before the war showed that 45 per cent of families in that country were crowded into tenements.[3] It was then calculated that approximately one million new houses were needed in Argentina.[4] In Colombia in 1938 a similar survey of the important industrial centre of Medellín revealed an average of 9 persons per room.[5] In the whole country, 80 per cent of the dwellings lack water, light and sewerage services.[6] As for Uruguay, the censuses taken in 1888, 1908 and 1935 showed that the average number of persons per room in Montevideo increased as the city grew.[7] The situation in other Latin-American countries is probably no better.

The rapid progress of industrialization, as shown in the previous chapter, helped to aggravate this state of affairs, by doubling and even quadrupling the population in certain urban centres from one generation to another. The construction of low-cost dwellings did not keep pace with the rate of urban growth, as it seldom does under such conditions.

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[1] *Compendio Estadístico, Dirección General de Estadística,* Mexico, D.F., 1947.

[2] Moisés Problete Troncoso, *El Subconsumo en América del Sur,* Santiago de Chile, 1946.

[3] *Ibid.*

[4] George Soule, David Efron and Norman T. Ness, *Latin America in the Future World,* National Planning Association, New York, 1945.

[5] Soule, Efron and Ness, *op. cit.*

[6] *Encuesta Continental Sobre el Consumo de Productos de Alimentación y Vestido y Sobre la Vivienda Popular.* "Respuesta referente a la República de Colombia," Inter-American Council of Commerce and Production, Montevideo, 1946.

[7] *Op. cit.,* "Respuesta referente a la República Oriental del Uruguay."

A consequence of the influx, therefore, was the expansion of tenements in which a considerable part of the population in the great Latin-American cities live. The already serious shortage of houses became more acute with the flocking of numbers of workers to the large cities to meet the war-time requirements of industry.

Nevertheless the demand for housing resulting from this rapid increase in the urban population did not offer sufficient incentive for investment in the construction of family dwellings, even of the more modest type. The incomes of a great part of the gainfully employed population are not sufficient to meet the high cost of construction and this is one of the causes of the crowding of families with small incomes into improvised tenements.[1] A growing number of dwellings, previously occupied by middle- and high-income groups, have been transformed into tenements, thus increasing the yield of rents. This was particularly true in the case of houses in bad repair. As a consequence, the housing shortage was shifted from low-income to middle-income groups.

At the beginning of the war the steep drop in the imports of building materials made it difficult to satisfy the demands even of those that were able to pay high rents.[2] Throughout Latin America a general drop in the rate of construction was noted during the first years of the period under review.

After 1942, the situation changed rapidly because of inflationary pressure. The monetary expansion resulting from export surpluses, and in many cases the difficulties of investing in industries owing to the lack of equipment, created circumstances exceptionally favourable to the growth of construction.

In addition to private sources, the social security institutions seeking investments that would maintain their real value made the speculative character of the real estate market even more pronounced than before.[3]

As a result of the speculative tendency, construction costs increased even more than wholesale prices. Nevertheless, rent controls, which were adopted with varying degrees of consistency in almost all the Latin-American countries, did not permit rents to keep pace with increased building costs. As a consequence, many new buildings, instead of being rented, were put up for sale. Credit inflation stimulated this market, thus circumventing the limitations that had been imposed upon the building industry by means of rent controls.

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[1]This problem is not limited to Latin America. In 1938, 96 per cent of all private residential construction in cities in the United States was within the means only of families with incomes of more than $US1,500 a year. Hardly 40 per cent of city dwellers fell within this group. (*Source: Housing and Employment,* International Labour Office, Geneva, 1948.)

[2]All the Latin-American countries before the war imported steel and plate glass, and the majority also imported cement and timber.

[3]The *Relatorio do Banco do Brasil* for 1945 states that the social security institutions followed "the practice of making deposits in private banks where the rates of interest were higher than in the Bank of Brazil", and that "these deposits were used in Rio de Janeiro almost exclusively for real estate speculations".

The construction industry reached a peak in those countries, such as Brazil, in which the following three factors were playing an active part: an exceptional increase in the demand for housing; a rapid increase of liquid funds as a result of inflation, which had found no outlet in other fields; and broad credit facilities granted by social security institutions which tried thereby to protect their real incomes from the effects of price inflation.

II. CHARACTERISTICS OF THE EXPANSION IN CONSTRUCTION

Available data relative to the construction industry refer to a limited number of Latin-American countries and are not sufficiently accurate to permit comparisons. Still a certain uniformity may be observed in the development of the industry between 1939 and 1947 for an important group of Latin-American countries (see table 16).

The general trend is for a relative decrease in the first years of the period surveyed, an increased expansion in following years and finally a decline in several countries during the first two post-war years. In some countries, including Brazil, Colombia and Mexico, the period of growth had already begun in 1943. In others, such as Argentina and Chile, signs of an expansion of activities began in 1944. In Peru, an expansion has taken place since 1945.[1]

Concentration of construction in large cities

However, the expansion of the construction industry which occurred chiefly because of difficulties in investing capital in other fields, and also the tendency to speculate that had been stimulated by the continued rise in prices of real estate, led to the concentration of the construction enterprises in the large cities, and particularly in the building of apartment houses and high-cost dwellings.

In Chile, for example, the increase in construction seems to have been concentrated in the capital of the Republic, as the following indexes show.

These indexes were not influenced by the building activities carried out by the Caja de la Habitación Popular[2] which did not equal in any

[1]The indexes in general refer to civilian construction within the limits of the capital cities, since only Argentina and Chile have general indexes. These data are further limited in that with few exceptions they refer to the surface covered or to the number of dwellings and not to the floor surface or the cubic space of buildings. Furthermore, the data are taken generally from building permits and not from buildings already completed. The effort to elude the projected amendments in the building code in Buenos Aires in 1944 was reflected in an abnormal number of requests for building permits prior to that date.

[2]A governmental institution which builds dwellings for low-income groups either for rent or for sale, under long-term mortgage payments.

succeeding year the level reached in 1940 (1,905 dwellings with a capacity for 10,299 people). Although nearly 30 per cent of the Caja buildings are located in Santiago, they account only partially for the extraordinary rise in the index of construction in this municipality; it is clear that other types of construction have contributed even more.

CHILE: CONSTRUCTION ACTIVITY, 1941-1947

Index numbers, base: 1940=100

	1941	*1942*	*1943*	*1944*	*1945*	*1946*	*1947*
Total[a]	103	80	92	107	108	157	115
In Santiago municipality	93	85	107	161	152	239	144

Source: Dirección General de Estadística, Santiago de Chile.
[a]Thirteen urban municipalities including Santiago.

TABLE 16. THE BUILDING INDUSTRY IN SEVEN LATIN-AMERICAN COUNTRIES

Index numbers, base: 1939=100

	1940	*1941*	*1942*	*1943*	*1944*	*1945*	*1946*	*1947*
Argentina[a]	..	..	107	109	183	116	158	139
Brazil[b]	132	151	108	103	141	201	235	192
Chile[c]	114	117	91	105	122	123	179	131
Colombia[d]	100	98	85	126	178	116	..	..
Guatemala[e]	133	148	188	167	191	256	296	..
Mexico[f]	128	127	160	204	206	237	262	291
Peru[g]	..	100	86	85	96	136	..	..

Source: Official data of the countries concerned.
[a]Area covered, Buenos Aires.
[b]Floor area licensed, Rio de Janeiro and São Paulo, partly estimated. (*Source: Report of the Joint Brazil-United States Technical Commission,* op. cit.).
[c]Square metres of new construction in thirteen urban districts.
[d]Floor area, Bogotá and Medellín; base: 1940 = 100.
[e]New construction in Guatemala City.
[f]Index calculated by the *Secretaría de la Economía Nacional* based on iron, steel, cement and plate glass production.
[g]Area covered, Lima; base: 1941 = 100.

In Brazil, during 1944 and 1945, the years of greatest increase in construction, 83 per cent of the building activities were concentrated in Rio de Janeiro and in the city of São Paulo (as computed on the basis of the surface indicated in the building permits granted in twenty-one capitals of states and territories). In 1946, when construction activities began to decline, this share fell to 76 per cent.

If comparison is made with the indexes for Bogotá and Medellín in Colombia, there appears to be a similar concentration of construction in the capital city.

Such concentration is not found in Argentina, where other factors curbed real estate speculation. As may be seen from the index numbers on page 59, the construction trends in the federal capital and in the country as a whole show a parallel development.

COLOMBIA: CONSTRUCTION ACTIVITY, 1943-1945

Index numbers, base: 1940-1942=100

	1943	*1944*	*1945*
Bogotá	155	217	120
Medellín	95	142	126

Source: Data based on information published by the *Dirección General de Estadística,* Bogotá, Colombia.

ARGENTINA: CONSTRUCTION ACTIVITY, 1943-1946

Index numbers, base: 1939=100

	1943	*1944*	*1945*	*1946*
Federal capital	109	183[a]	116	158
For the whole country	123	176	136	174

Source: Dirección General des Estadística y Censos, Buenos Aires.

[a]For an explanation of the abnormally high index for 1944 see footnote 1 on page 57.

RISE IN CONSTRUCTION COSTS

Available data concerning construction costs indicate that the industry sometimes assumed a highly speculative character. Between 1939 and 1946, the cost of construction per square metre in Rio de Janeiro increased by 400 per cent. The price of some building materials rose still more rapidly, and cement, the sale of which was only partly controlled by the Government, reached extraordinarily high levels in 1944 and 1945.[1]

From 1943 on, construction costs rose rapidly in Chile, as may be seen below:

CHILE: RISE IN CONSTRUCTION COSTS, 1943-1947

Index numbers, base: 1940=100

	1943	*1944*	*1945*	*1946*	*1947*
Cost of square metre of construction	208	292	269	316	333
Wholesale prices	175	181	192	222	286

Source: Dirección General de Estadística, Chile.

In Mexico construction costs nearly trebled, increasing at a more rapid rate than wholesale prices, as is shown below:

MEXICO: RISE IN CONSTRUCTION COSTS, 1939-1946

Index numbers, base: 1939=100

	1940	*1941*	*1942*	*1943*	*1944*	*1945*	*1946*
Cost of construction	120	133	148	170	201	219	283
Wholesale prices	103	109	121	146	179	199	229

Source: Official data.

[1]*Conjuntura Econômica,* March 1948, Fundação Getúlio Vargas, Rio de Janeiro.

Among the various items of construction costs, wages increased less than building materials. There was considerable speculation in building sites and their prices increased more than those of building materials.

In Argentina, however, where the inflationary pressure was only felt later, and the price of cement was effectively controlled, the index of construction costs did not match wholesale prices until 1946.

ARGENTINA: RISE IN CONSTRUCTION COSTS, 1943-1947

	Index numbers, base: 1939=100				
	1943	*1944*	*1945*	*1946*	*1947*
Cost of construction	142	149	168	216	282
Wholesale prices	187	195	201	217	231

Sources: Revista de la Cámara de la Construcción and *Dirección General de Estadistica y Censos.*

The increase in construction costs which became acute in Argentina from 1946 on was due chiefly to the increase in the cost of labour, as may be seen below:

ARGENTINA: RISE IN CONSTRUCTION COSTS AND IN COST OF LABOUR, 1943-1948

	Index numbers, base: 1939=100					
	1943	*1944*	*1945*	*1946*	*1947*	*1948*
Cost of construction	142	149	168	216	282	423
Cost of labour	110	119	140	207	314	505

Sources: Rivista de la Cámara de la Construcción, El Constructor and *Mundo Maderero* of Buenos Aires.

CONSUMPTION OF CEMENT

Data relative to the consumption of cement, although representative of the expansion of the industry in a general way only, confirm the trends shown by the building indexes (see table 17). In some countries governmental authorities expanded public works projects, for the realization of which they segregated an appreciable part of the cement supply.

The increase in the consumption of cement which took place from 1945 on was made possible in part by resumption of imports of that commodity. The substantial rise in domestic production, particularly in those countries which were formerly entirely dependent on imports of this product, was not sufficient to prevent a serious shortage of cement in Latin America during the war years. Argentina, which before the war possessed an important cement industry, saw its output curtailed by the lack of fuel. In that country the output of cement is still below normal levels, and there is a serious shortage of the product.

TABLE 17. APPARENT CONSUMPTION OF CEMENT IN TWELVE LATIN-AMERICAN COUNTRIES, 1938-1947

Index numbers, base: 1938-1939=100

	Average 1938/39 (1000 m.t.)	*1940*	*1941*	*1942*	*1943*	*1944*	*1945*	*1946*	*1947*
Argentina	1,230	88	95	91	81	90	88	94	111
Bolivia[a]	21	114	114	110	110	133	133	153	181
Brazil	705	108	111	116	108	129	146	167	179
Colombia	196	104	109	107	134	153	171	203	233
Cuba	129	116	122	142	133	137	226	250	281
Chile[b]	354	113	110	108	108	109	130	165	169
Ecuador[a]	14	121	121	143	200	250	264	271	243
Guatemala[a]	11	131	193	197	210	229	275	304	309
Mexico[b]	401	122	135	149	168	173	229	258	267
Peru	152	94	114	125	136	164	178	183	..
Uruguay[b]	171	94	109	83	70	94	120	148	157
Venezuela	141	134	267	104	119	211	260	281	..

Sources: Monthly Bulletin of Statistics, United Nations, and official publications of the countries concerned; for Cuba, *Cuba Económica y Financiera,* May 1948.

[a]Production only.

[b]Production plus imports minus exports.

INVESTMENT IN BUILDING CONSTRUCTION

No exact data are available in the Latin-American countries regarding the origin of capital invested in the building industry during the recent period of expansion. In some countries, as has been seen, funds derived from the social security institutions played an important part.

As regards the significance of investment in construction, data available for Chile show the following proportions.

CHILE: BUILDING INVESTMENT AS PERCENTAGE OF GROSS INVESTMENT

	1940	*1941*	*1942*	*1943*	*1944*	*1945*	*1946*	*1947*
Total construction	41	41	41	48	52	53	54	44
Private building	24	27	27	34	38	34	42	30

Source: Corporación de Fomento de la Producción.

The private building industry in its peak period absorbed more than one third of the gross investment in Chile. There are indications that in Brazil between 1943 and 1946 an even greater proportion of savings were thus invested.

In Argentina, even though inflationary pressure was accentuated at the beginning of 1945, credit controls prevented the development of real estate speculation on a scale comparable with that experienced in the countries mentioned above. The credits granted to building concerns in that country declined from 1945 on, not only in relation to the value of credits granted to other industries, but also in relation to total credits granted within the country.

ARGENTINA: PERCENTAGE OF CREDITS GRANTED TO BUILDING ENTERPRISES

	1945	*1946*	*1947*
Of total credits granted	3.6	3.6	3.3
Of the total for industry	11.4	9.8	7.8

Source: Banco Central de la República Argentina.

From 1946 on, some Latin-American countries have taken measures to reduce real estate credit. In Brazil, at the end of 1946 and the beginning of 1947, these measures caused a complete cessation of work on hundreds of buildings under construction in Rio de Janeiro which were destined to provide thousands of dwelling units. Work on other buildings was continued by credit from other sources thereby increasing still further the already very high building costs.

The conditions under which building in Latin America was carried on during and after the war made the costs of this industry extremely high. The scarcity of materials and the difficulties in obtaining delivery, labour shortages and lastly the sudden change in the availability of credit, all played a part in slowing down progress and raising the cost of construction.

The heavy investments in this field did little to improve the general living conditions prevailing in the Latin-American countries. The circumstances governing the expansion of the building industry and the fact that it was concentrated on high-cost dwellings within the reach of only a small fraction of the population, prevented the accrual to the population as a whole of any benefit commensurate with the volume of savings invested.

In most Latin-American countries the housing shortage remains acute, especially among middle- and low-income groups. The high cost and the shortage of building materials, as well as the uncertainty of credit which followed the period of inflation, have prevented the industry from expanding as it would under normal economic conditions.

CHAPTER 3

MINING

I. INTRODUCTION

Mining in Latin America shares many aspects typical of this activity in all under-developed countries. The chief characteristic is that the bulk of the minerals produced in the region are destined for foreign markets.

As the chapter on Manufacturing shows, the industrial structure of the Latin-American countries is still largely composed of light industries in which the metal-working sector is usually of limited significance. Thus, only a small part of the basic minerals are utilized in the region, the rest being exported in various stages of processing. The same applies to silver, whereas the bulk of the gold output is purchased by the local monetary authorities. Non-metallic minerals are largely produced for domestic consumption, particularly by the building industry. Nevertheless, among the non-metallic minerals an appreciable part of the petroleum production of Venezuela, and Colombia too, is destined for export.

The large investments, particularly of venture capital, and the high degree of technical and organizational knowledge which mining requires, account for the fact that its financing and operation have been largely in the hands of foreign interests, and that these interests still finance the bulk of the basic mineral and petroleum production of Latin America devoted to exports.

Despite its decisive significance in the foreign trade of several countries—especially Venezuela, Bolivia, Peru, Chile, Mexico and Colombia—the overshadowing importance of agriculture and the development of manufacturing and services explain why mining contributes a relatively small share to the net national product (see table 18). The proportion of mining would probably be higher in the case of the first two countries if national income estimates were available.

From the standpoint of employment even those countries which derive most of their foreign exchange receipts from mining are essentially agricultural. The number of persons engaged in mining ranges from 2 to 3 per cent of the total gainfully employed population in Mexico, Peru and Venezuela, to 6 per cent in Chile. It is likely that Bolivia's mining labour force is of the same relative size as that of Chile (see table 19).

The mineral and petroleum exports of five Latin-American countries played a decisive role in their foreign exchange receipts before the war, amounting in 1937 to 90 per cent of the total value of exports in Venezuela, 86.6 per cent in Bolivia, 79.5 per cent in Chile, 76.6 per cent in Mexico, and 57.5 per cent in Peru. In contrast such exports were

TABLE 18. MINING AS A PERCENTAGE OF THE NATIONAL INCOME IN FIVE LATIN-AMERICAN COUNTRIES, 1938–1946

Percentages

	Argentina	*Chile*	*Colombia*	*Mexico*[a]	*Peru*
1938	2	..	..	17	..
1939	2	..	..	16	..
1940	2	10	8	15	..
1941	2	10	..	13	..
1942	2	9	..	13	14
1943	2	10	..	12	..
1944	2	..	..	10	..
1945	2	..	..	9	..
1946	..	..	..	8	..

Note: The percentages measure the relationship between mining production and current net national product at factor cost except in the case of Argentina where the data relate to current domestic gross national product at market prices, i.e. net national product at factor cost plus indirect taxes, allowance for depreciation and maintenance minus subsidies.

Sources: The percentages shown in the above table, except in the case of Colombia, have been derived from the data in *National Income Statistics of Various Countries 1938-1947*, Statistical Office of the United Nations, 1948. The data for Colombia were obtained from "National Income Estimates of Latin-American Countries", by Loreto M. Domínguez in *Studies in Income and Wealth*, vol. 10, National Bureau of Economic Research, New York, 1947.

[a]Including metallurgy and petroleum derivatives' industries.

TABLE 19. PERSONS ENGAGED IN MINING COMPARED WITH THE TOTAL GAINFULLY EMPLOYED POPULATION IN NINE LATIN-AMERICAN COUNTRIES

		Persons engaged in mining	
	Year	*Thousands*	*Percentage of employed population*
Brazil	1940	390	3
Chile	1940	96	6
Colombia[a]	1938	75	2
Cuba	1943	6	—
Mexico	1940	107	2
Nicaragua	1940	5	1
Panama	1940	4	2
Peru	1940	45	2
Venezuela	1941	23	2
TOTAL above countries		752	2

Sources: Yearbook of Labour Statistics, 1945-46 (ninth edition), International Labour Office, except for Mexico, data for which were obtained from *Compendio Estadístico 1947, Dirección General de Estadística.*

[a]Includes employment in quarries and similar activities.

negligible in the case of countries like Argentina, Uruguay, Paraguay, Guatemala, Cuba and others. The significance of mineral exports in Venezuela, Bolivia and Chile is increased by the fact that in the first

country they are made up almost entirely of petroleum and in the second of tin, while in Chile 54 per cent of the value of total exports consisted of copper and 20 per cent of nitrates in 1937.

The character of the international demand for basic minerals and petroleum and the influence cartels exercised upon prices and production programmes determined the considerable fluctuations in foreign exchange receipts of those countries that depend primarily upon mineral exports. These factors were mainly responsible for the violent fluctuations in the values of exports of some countries (see table 20). It should be noted in this connexion that only part of the foreign exchange receipts derived from mineral exports remains in the respective countries. In Chile, for instance, between 66.9 and 76.5 per cent of the value of copper exports in 1944-1947 remained in the country for payment of local production costs and taxes, while the balance was remitted abroad as dividends and amortization payments, together with payments for imports connected with the operation of the mines.

TABLE 20. TOTAL VALUE OF EXPORTS OF SIX LATIN-AMERICAN COUNTRIES IN SELECTED YEARS

In millions of US dollars[a]

	Bolivia	*Chile*	*Colombia*	*Mexico*	*Peru*	*Venezuela*
1913	46.7	244.7	56.9	273.6	74.7	49.8
1917	120.1	440.0	60.5	399.4	153.2	39.1
1921	44.0	268.0	67.1[b]	681.6	136.9	43.5
1929	86.0	472.3	199.1	472.0	275.4	253.8
1932	17.8	59.7	108.4	209.0	146.7	207.7
1937	36.3	192.6	86.3	211.3	92.1	253.8
1943	77.4	194.9	129.7	211.9	84.2	355.4
1947	80.6	279.1	243.7	405.8	154.3	785.2

Note: In some countries data prior to 1937 are not strictly comparable with those of subsequent years due to changes in export valuation.

Source: United Nations Economic Commission for Latin America.

[a]At $US35 per fine ounce of gold.

[b]1922.

In Venezuela and Bolivia, Government receipts depend essentially upon taxes and other revenues derived from mining. In the former country between 62 and 78 per cent of the budgetary receipts came from mining in 1946-1948, while in the latter the proportion was 54 per cent in 1944. In Mexico such revenues ranged between 11.9 and 5.1 per cent of total receipts of the federal Government from 1938 to 1945. The bulk of taxes and other revenues from mining are paid by foreign corporations in dollars or other convertible currency. In countries with differential rates of exchange, such as Chile and Venezuela, an additional tax is obtained indirectly by obliging the mining corporations to make their sales of foreign exchange at lower rates. The considerable fluctuations in the value of mineral exports indicated above results in great variations in the revenues of some Governments.

II. PATTERN OF PRODUCTION AND CHANGES IN OUTPUT

Changes in the volume of output

The position of Latin America as a mineral-producing region may be assessed from data for 1937 (see table 21). Available data for the world

Table 21. World production of metals and other minerals and per cent produced in Latin America, 1937

	World production 1937[a]	*Percentage from Latin America*
Quartz crystals (raw)	3,500	93.0
Beryllium ore	4,400[b]	77.0
Tantalum ore	285[c]	54.0
Bismuth	1,400[d]	47.0
Antimony	37,300	47.0
Silver	8,556	44.0
Vanadium	1,947	32.0
Copper	2,329[e]	22.0
Arsenic (white)	55,700	20.0
Lead	1,686[e]	17.0
Cadmium	4,200	15.0
Petroleum (crude)	334,700[e]	14.0
Tin	210,000	13.0
Zinc	1,619[e]	11.0
Chromite ore	1,068[e,f]	9.0
Tungsten ore	37,944	8.0
Nitrogen	2,880[e]	7.8
Manganese ore	2,597[e]	7.0
Gold	1,110	6.5
Molybdenum	14,872	5.0
Mercury	4,587	4.0
Titanium ore	245,000[g]	3.0
Cement	83,040[e]	3.0
Diamonds	9,612[h]	2.5
Iron ore	111,124[e]	1.5
Feldspar (raw)	453,000	1.0
Sulphur	3,331[e]	0.8
Bituminous coal	1,540,000[e]	0.3
Nickel	115,000	0.1
Cobalt	3,493	—
Bauxite (raw)	3,679[e]	—
Magnesium	20,000	—
Columbium ore	1,930[c]	—
Gypsum	10,300[e]	—
Phosphate rock (raw)	9,781[e]	—
Fluorspar (raw)	465,000[f]	—
Asbestos (raw)	487,000	—
Barite	1,101[e]	—
Potash (fine)	3,252[e]	—
Mica (raw)	50,955	—

Source: Minerals Yearbook, 1937, 1939, 1944, United States Department of the Interior.

[a]In metric tons unless otherwise stated.
[b]Data for 1943.
[c]Data for 1944.
[d]Data for 1940.
[e]In thousand metric tons.
[f]Data for 1936.
[g]Data for 1941.
[h]In thousand carats.

production of minerals in 1945 and 1946 are not complete and do not permit any conclusions as to the latest position of Latin America in the world, since output was disorganized in numerous areas affected by the war and, furthermore, there was a drop in the volume of Latin-American mining in 1946.

The data in table 21 do not reveal the degree to which mining is concentrated in a few countries. In 1937, for instance, Mexico produced 86 per cent of the total output of zinc in the region, 76 per cent of lead, 71 per cent of silver, 36 per cent of gold and 16 per cent of petroleum. Peru accounted for 15 per cent of the silver and lead output, 7 per cent of gold, 10 per cent of zinc, 6 per cent of petroleum and 7 per cent of copper. Chile accounted for the entire output of nitrates, 81 per cent of copper and 12 per cent of gold. Bolivia produced 92 per cent of the region's tin, 8 per cent of silver and 6 per cent of lead. Venezuela accounted for 63 per cent of the petroleum output and Brazil for 63 per cent of the manganese. Colombia produced 19 per cent of the gold mined in Latin America and 7 per cent of the petroleum.

The production of the principal minerals in Latin America increased by approximately one-third between 1937 and 1947. However, when the commodity of a single country, Venezuelan petroleum, is excluded from total production, the general increase has been negligible, and considering the 22.3 per cent increase in the total population, there has been a *per capita* decline in mining output in the rest of the region. The low rate of expansion in mining is due in part to the drop in the production of gold and silver. Since petroleum represented 40 per cent of the value of mineral production in Latin America in 1937, the increase in petroleum output in the region during the decade 1937-1947 is the main cause of the increase of the general mining production level (see table 22).

Most of the changes during the decade were due to external circumstances, especially to the war and its aftermath. In a smaller degree they can be attributed to the progress of industrialization in Latin America during that period of time.

At the outset of the war the Latin-American countries were partly cut off from the markets of Continental Europe; even traditional exports to the United Kingdom declined. As a result, the general level of mining output remained almost stationary until the end of 1940. The increased requirements of the metallurgic industries in the United States more than compensated for the considerable decline of exports to Europe, so that an increase of mineral production took place in 1941 as compared to 1937. Most of the increase was in petroleum, copper and tin.

A basic change occurred with the entry of the United States into the war when, from the standpoint of Latin-American mineral production, two opposing tendencies became accentuated. One set of factors—namely, higher prices (even though limited by ceilings for most minerals between mid-1941 and the end of 1945) and the virtual suspension of cartels—

TABLE 22. CHANGES IN THE PHYSICAL VOLUME OF PRODUCTION OF PRINCIPAL METALS AND MINERALS IN LATIN AMERICA, 1937-1947

		Index numbers, base: 1937=100									
	1937	*1938*	*1939*	*1940*	*1941*	*1942*	*1943*	*1944*	*1945*	*1946*	*1947*
	Thousand metric tons										
Crude petroleum	42,380	98	106	100	114	80	92	122	145	168	188
Coal	4,432	101	95	107	109	126	137	130	131	127	131
Iron ore	1,570[a]	101	102	102	112	57	44	46	49	90	130
Basic metals:		98	92	98	113	119	124	122	124	101	114
Copper	492[a]	88	85	90	112	117	120	117	115	95	105
Lead	288[a]	125	100	96	83	96	104	92	100	75	108
Tin	28[a]	101	106	145	158	145	151	145	158	141	125
Zinc	180[a]	107	93	80	100	127	140	160	160	120	173
Silver	3,746[b]	97	94	98	91	98	89	80	74	57	69
Gold	72.3[b]	108	115	125	119	114	95	89	85	79	68
Fertilizers[c]	1,440	98	100	104	99	93	82	70	98	116	115
TOTAL		99	101	102	111	98	101	110	120	121	133

Note: The index numbers for each of the metals or minerals are based on the annual physical volume of output as reported in official statistical publications. The "total" index is an aggregate of the physical volume of production of each of the component items weighted by U.S. average prices at primary markets in 1937. The prices for each of the items, except fertilizers, were obtained from the *Minerals Yearbook,* 1937, United States Department of the Interior, Washington, D.C. Fertilizer prices were obtained from the *Corporación de Ventas de Salitre,* Santiago, Chile.

The weights of the components in the base year 1937 are as follows:

Petroleum	40.0 per cent	Basic metals	30.1 per cent
Coal	1.1	copper	(17.3)
Iron ore	0.9	lead	(5.0)
Silver	12.2	tin	(4.4)
Gold	10.7	zinc	(3.4)
		Fertilizers	5.1 per cent

Source: United Nations Economic Commission for Latin America.
[a]Metal content. [b]Metric tons. [c]Sodium nitrate and phosphate rock.

favoured increased output, while shortages of equipment and transport facilities tended to restrict it. In general, with the exception of 1942-1943 when submarine warfare and the shortage of tankers led to a temporary curtailment in Venezuelan and Colombian oil output, the emphasis was upon petroleum and strategic mineral production. This also includes such minerals of minor economic significance as tungsten, molybdenum and quartz crystals, the demand for which increased extraordinarily between 1942 and 1944.

The necessity of allocating available shipping and mining equipment to those minerals that were most essential for the prosecution of the war led, on the other hand, to a curtailment of mining of iron ore and precious metals. As a consequence, mining of iron ore in Cuba and Chile was brought to a standstill, and no new equipment or spare parts were made available for the mining of gold or silver (unless mixed with basic metals). With the partial exception of the new wells sunk in Venezuela, most of the increased mineral output in Latin America during the war was achieved by more intensive exploitation of existing plants. The opening of new mines was prevented by shortages of mining equipment, as well as by the consideration that large-scale production of base metals usually requires a period of several years from the completion of the blueprints to the time when production begins. Among the several exceptions that occurred during the war was that of a large-scale nickel ore mining, which was undertaken in Cuba only to be discontinued in 1946. Furthermore, the technology of oil production permits a greater flexibility in the output (see table 23).

With the termination of the war, mining production in Latin America took on a chequered pattern. On the one side, the fact that sales contracts with the Government of the United States were about to expire in 1945, and the general uncertainty of business in that country during the reconversion period, led to a levelling-off in the output of most minerals in 1946. Gold output remained at low levels, and an increasing number of marginal producers were eliminated by rising production costs in the face of the unaltered official buying price that had been confirmed at the Bretton Woods Conference. Likewise, silver output remained below pre-war levels. On the other side, output of petroleum made very appreciable progress owing to increasing demand and prices. Also, tin sales contracts were continued until 1947, since political disturbances in Indonesia had hindered the resumption of tin exports from that country.

In 1947, when most of the uncertainties of the previous year disappeared and prices improved, mining production in Latin America, particularly oil output, rose once again, attaining record levels in numerous instances. Demand was also sustained by the fact that the United States did not proceed immediately to liquidate the stocks of strategic minerals accumulated during the war, and by the loans and grants which it made available to Europe. The general upward trend of prices stimu-

TABLE 23. CRUDE PETROLEUM PRODUCTION IN LATIN AMERICA, 1937-1947

Thousand metric tons

	Argentina	*Bolivia*	*Brazil*	*Colombia*	*Ecuador*	*Mexico*	*Peru*	*Venezuela*	*Total*
1937	2,244	16	—	2,794	286	6,956	2,304	27,780	42,380
1938	2,388	18	—	2,976	296	5,684	2,100	28,128	41,590
1939	2,652	28	—	3,384	305	6,327	1,788	30,600	45,084
1940	2,940	37	—	3,636	310	6,500	1,608	27,492	42,523
1941	3,168	30	—	3,504	205	6,355	1,584	33,408	48,254
1942	3,396	40	4	1,512	300	5,127	1,812	21,588	33,779
1943	3,552	43	6	1,884	305	5,132	1,944	26,004	38,870
1944	3,468	41	8	3,180	382	5,623	1,944	36,996	51,642
1945	3,264	49	10	3,192	344	6,420	1,836	46,344	61,459
1946	2,964	47	9	3,144	306	7,284	1,668	55,704	71,126
1947	3,108	49	13	3,528	311	8,328	1,692	62,352	79,381

Source: Monthly Bulletin of Statistics, United Nations. For Mexico, *Dirección General de Industrias Extractivas.*

lated by United States investments—particularly in Venezuelan petroleum—continued until the beginning of 1949 when a levelling-off took place with the possibility of a decline.

Despite record levels of production of numerous minerals, the share of seven leading products in the total exports of Latin America decreased from an average of 26.6 per cent in 1937-1938 to 15.55 per cent in 1946-1947, as is shown below:

	Average 1937-38	*Average 1946-47*
Crude petroleum	14.5	9.1
Copper	5.3	2.9
Tin	0.95	1.1
Sodium nitrate	1.75	0.7
Petroleum derivatives	1.4	0.65
Lead	1.7	0.65
Zinc	1.0	0.45
TOTAL	26.6	15.55

Only in Venezuela and Bolivia, and to a degree in Chile, did mineral exports represent a larger share in the total value of their exports (see table 24). In part, the decline of the share of minerals in the exports of the region was due to a smaller rate of increase in unit prices of minerals as compared to those of agricultural products. Another factor was the increased share of manufactures in the exports of various countries, particularly Mexico. However, in 1947 and particularly in 1948, the increase in unit prices of minerals was accelerated and at the same time exports of manufactures declined, thereby contributing to a partial restoration of the pre-war pattern of exports.

TABLE 24. PROPORTION OF MINERAL EXPORTS TO TOTAL EXPORTS IN EIGHT LATIN-AMERICAN COUNTRIES

Percentages

	Argentina	*Bolivia*	*Chile*	*Colombia*	*Cuba*	*Mexico*	*Peru*	*Venezuela*[a]
1937	0.7	86.6	74.4	23.1	3.9	61.1	57.5	90.0
1938	1.2	88.9	78.2	25.8	3.8	69.4	65.0	95.0
1939	1.2	91.9	79.8	23.5	3.2	68.4	59.6	95.6
1940	1.5	92.5	83.0	31.8	4.8	66.8	60.5	96.1
1941	2.2	94.4	82.2	30.4	4.8	50.2	50.5	97.5
1942	1.8	94.2	83.2	8.4	4.2	51.5	52.4	91.6
1943	2.0	92.4	78.1	9.2	3.4	35.9	55.9	91.3
1944	1.1	91.3	74.6	16.5	5.6	31.8	45.7	94.7
1945	0.8	88.4	70.7	15.8	7.2	28.7	34.7	93.7
1946	0.4	85.4	66.7	12.1	5.0	26.0	27.8	92.0
1947	0.2	90.5	79.6	16.0[b]	1.5	40.0	31.8	92.3[c]

Sources: Official statistical publications of the countries concerned.
[a]Petroleum and its derivatives and non-monetary gold only.
[b]Crude oil and platinum only.
[c]Estimate.

Mining and the growth of domestic metallurgy

A more permanent though somewhat insignificant factor that was responsible for the relative decline of mineral exports was the increased demand of the domestic metallurgic industries. In order to solve the war-time shortage of refined minerals and semi-finished metal products, and to avoid its recurrence, several Governments promoted construction of small smelting, refining and processing plants. Such a policy was followed particularly in Argentina, Bolivia, Brazil, Chile, Mexico and Peru, where smelting and refining plants for lead, tin, zinc, copper and other metals were built, even though their output usually covered only a small part of the domestic demand. Furthermore, owing to the small scale of the plants, production costs were higher than those prevailing abroad. Also of some significance for the decline of mineral exports was increased domestic consumption of petroleum derivatives. Thus, proceeds of domestic sales of Pemex, the petroleum agency of the Mexican Government, increased from 70 per cent of total sales in 1939 to 88 per cent in 1946.

Independent of this development, there is another designed to promote the processing of minerals within a country and thus to increase their value. Mexico, for instance, applies a differential export tax on its minerals. The export tax on silver amounts to 6 per cent of its value in the case of mineral ores, 5 per cent for concentrates, 4 per cent for impure ingots, or with mixtures, and 3 per cent for the refined metal. In Venezuela the Government has obliged the petroleum companies to refine a part of the crude oil produced in the country.

As a result of these factors and also because of greater extraction of non-metallic raw materials for manufacturing, an increasing part of the total value of over-all output was consumed in the producing countries (see table 25). It is possible, however, that the data exaggerate the trend

Table 25. Value of mineral production of three Latin-American countries and per cent domestically consumed, 1937-1946

In millions of national currencies, and percentages

	Chile		*Mexico*		*Peru*	
	Value	*Per cent*	*Value*	*Per cent*	*Value*	*Per cent*
1937	3,098	15.5	658	17.4	282	18.2
1938	2,878	21.7	750	22.5	298	25.4
1939	3,064	21.6	819	23.6	300	24.3
1940	3,235	27.6	862	25.5	328	25.7
1941	3,820	32.7	831	56.4	334	25.0
1942	4,069	26.7	1,020	45.5	377	31.0
1943	4,231	33.0	1,060	43.0	394	34.7
1944	4,271	30.7	950	46.0	393	36.8
1945	4,264	31.6	940	50.5	394	39.7
1946	4,702	34.6	950	49.7	407	33.8

Sources: Original data were obtained from official statistical publications of the countries concerned.

since they include building materials whose output increased to exceptional levels as a consequence of the building boom, and whose prices increased appreciably more than the prices of the export minerals.

The possibilities for iron and steel industries in Latin America

The chapter on manufacturing has shown the recent progress of the iron and steel industries in three countries as well as their relatively minor significance. There is a strong likelihood that for perhaps a considerable time to come the limitations of the small domestic market will result, even in the case of those countries where such industries are well established, in the continued exploitation of the iron ore resources principally for export purposes. It is for this reason that despite an appreciable increase in the iron and steel output in Brazil, Chile and Mexico, iron ore production, which depends upon the availability of shipping, declined considerably in two countries between 1942 and 1945 (see table 26). Production of Venezuelan iron ore began only recently.

Table 26. Iron ore production in Latin America, 1937-1947

In thousand metric tons of fine metal content

	Brazil	*Chile*	*Cuba*	*Mexico*	*Total*
1937	234	930	316	90	1,570
1938	393	980	98	100	1,582
1939	362	985	106	111	1,594
1940	385	1,050	102	70	1,607
1941	538	1,032	124	72	1,766
1942	457	248	85	103	893
1943	527	—	30	138	695
1944	500	14	17	187	718
1945	422	170	—	175	767
1946	382	708	91	171	1,352
1947	655[a]	1,056	..	226	..

Sources: Official statistical publications of the countries concerned except for Cuba, data for which relate to exports and were obtained from various issues of the *Minerals Yearbook*, United States Department of the Interior.

[a]United Nations *Monthly Bulletin of Statistics.*

The possibilities of increased iron ore production in Latin America seem to be considerable, since the region contains an important share of the world resources of prospected deposits.[1] Brazil is said to have some 20,000 million metric tons of estimated reserves, Cuba over 3,000 million, and Venezuela approximately 1,000 million. Proved iron ore reserves for Mexico are about 300 million tons, for Chile 80 million, and in Peru one well-known deposit has 20 million tons. Some deposits have been explored in Colombia and Ecuador, but transport costs have prevented their eco-

[1]The figures referring to coal and iron ore reserves are subject to great variations.

nomic exploitation. Argentine iron ore deposits on the eastern slopes of the Andes are practically unexploited and large-scale operation costs would be high, especially as there is no coal nearby. Until now only ores with more than 60 per cent metal content have been exploited; this practice, coupled with low production costs, compensates for the loading and transportation costs to the foreign consuming centres, mainly the United States and the United Kingdom.

In contrast to the abundant reserves of high-grade iron ores in Latin America, the scarcity of coal deposits in the countries having iron ore deposits generally constitutes an obstacle to the development of iron and steel industries with some exceptions indicated below.

Among the countries where a metallurgic industry has developed, only Mexico and Peru have readily-coking coal, and a considerable part of the fuel has been turned into coke to meet the needs of the smelters. In view of the importance of iron metallurgy, the coking properties of the coal produced in various countries, especially in Brazil and Chile, are being studied. Until now, however, very few countries have continued to make thorough explorations of their coal reserves because the use of petroleum as an industrial fuel has in part displaced coal consumption. The highest level of Mexican coal output was achieved before the First World War. Nevertheless, the progress of industrialization and transport, during the period under survey, led to an appreciable increase in coal mining in Latin America, as is shown by the example of five countries (see table 27). In the case of Brazil and Chile it was largely stimulated by the lack of imported petroleum.

The geographical proximity of Mexico's iron and coking coal deposits offers favourable possibilities for a further development of that

TABLE 27. COAL PRODUCTION IN LATIN AMERICA, 1937-1947

Thousand metric tons

	Brazil	*Chile*	*Colombia*	*Mexico*	*Peru*	*Total*
1937	763	1,990	338	1,242	99	4,432
1938	912	2,040	331	1,093	74	4,450
1939	1,044	1,848	349	877	108	4,226
1940	1,332	1,944	521	816	113	4,726
1941	1,404	2,064	403	856	116	4,843
1942	1,776	2,148	578	914	149	5,565
1943	2,076	2,268	483	1,054	186	6,067
1944	1,908	2,280	499	904	173	5,768
1945	2,076	2,077	534	915	200	5,802
1946	1,896	1,968	551	983	229	5,627
1947	1,992	2,076	505	1,040	200[a]	5,813

Sources: Monthly Bulletin of Statistics, United Nations, except for Colombia and Peru. Data for the former were obtained from *Mining and Manufacturing in Colombia—1945,* United States Tariff Commission; from the *Minerals Yearbook,* 1945, United States Department of the Interior, and from official sources. Data for Peru were obtained from the *Anuario de la Industria Minera en el Perú—1946,* Ministeria de Fomento.

[a]Estimated.

country's iron and steel industry, competitive at world market prices. A similar situation prevails in Peru, where both raw materials are near the coast, but the iron ore deposits at Marcona—estimated at 20 million tons—would hardly meet the requirements for large scale metallurgic production unless alternate sources became available. Brazilian coal has a high ash content and only a small part of it can be coked satisfactorily. Furthermore, the coal deposits are located at a considerable distance from the chief place of consumption, the Volta Redonda steel plant, which uses a mixture of Brazilian coal and high-grade coking coal from the United States. To further the consumption of Brazilian coal for steam purposes, the users have been obliged since the 1920's to mix imported coal with domestic coal in increasingly larger proportions. In Chile, as well, it will be necessary to mix imported coal with that produced in the Arauco area in the coking plant under construction at the nearby blast furnaces at Huachipato.

Another unfavourable factor from the standpoint of the usefulness of the coal deposits for a metallurgic industry is high production costs; they result in part from the geological structure and in part from the small degree of mechanization of mines. The average output of coal per man-day of work amounted to 585 kilogrammes in Chile (1946) and 990 kilogrammes in Mexico (1939), as compared to 4,528 kilogrammes in the United States (1945).

Because of the lack of sufficient data on iron ore and coal resources of Latin America, no definite conclusions as to the technical possibilities of the region as an iron and steel producer can be made at this time.

III. FACTORS AFFECTING PRODUCTION

Costs and demand

The chapter on foreign trade notes the secular tendency of prices of primary commodities to increase at a slower rate than those of manufactures. As indicated there, the long-range trend among primary commodities has been for prices of minerals to advance more slowly than those of agricultural products. The difference was not great in the 1920's, but increased appreciably in subsequent years. Thus, considering 1937 as a base, the prices of foodstuffs (excluding vegetable oils) imported into the United States reached an index number of 224 in 1947, those of vegetable oils went to 309, while minerals attained only 196. Since 1948, however, a tendency toward a partial closing of the gap prevailed, resulting in part from a decline of the agricultural prices and in part from an increase in mineral prices.

The difference in behaviour of prices of the various mineral products should also be taken into account (see table 28).

TABLE 28. PRICES OF SELECTED MINERALS AND METALS AT PRIMARY MARKETS IN THE UNITED STATES, 1937-1947

Index numbers, base: 1937=100

	Crude petroleum[a]	*Iron ore*[b]	*Copper*[c]	*Tin*[d]	*Lead*[e]	*Zinc*[f]	*Silver*[g]	*Gold*	*Nitrate*[h]
1937	100	100	100	100	100	100	100	100	100
1938	104	98	81	78	79	71	96	100	107
1939	95	107	86	93	84	79	87	100	107
1940	95	87	93	92	86	97	77	100	107
1941	106	90	98	96	96	115	77	100	107
1942	112	92	98	96	108	127	85	100	118
1943	112	94	98	96	108	127	100	100	118
1944	112	94	98	96	108	127	100	100	118
1945	112	97	98	96	108	127	116	100	118
1946	129	107	119	101	135	134	179	100	118
1947	169	..	194	129	221	178	160	100	146

Sources: Original data obtained from various issues of the *Minerals Yearbook,* United States Department of the Interior and from the *Oil and Gas Journal,* 3 January 1947.

[a]Gulf Coast B30°-30.9°.
[b]Average value per gross ton at mine.
[c]Average price per pound.
[d]Straits tin CIF New York.
[e]Average price per pound, New York.
[f]Price of western slab, St. Louis.
[g]Average price of silver in New York, other than newly mined domestic.
[h]Ex warehouse, New York.

Another unfavourable factor from the standpoint of the mineral-exporting countries resides in the fact that the price levels indicated in the table are New York quotations and therefore include, whenever applied, United States import taxes.

Thus taking 1937 as the base year, we see that the 1947 index number for minerals, f.o.b. Latin-American ports, ranged between 80 for petroleum derivatives and 150 for tin, as compared to an index number of 162 representing the average of the 22 chief mineral export commodities of Latin America. Between those two extremes were crude petroleum, copper, lead, nitrates and silver, in an ascending scale. Taking into account the general weighted average of all primary commodities, f.o.b. Latin-American ports, which reached an index number of 202 in 1947, the price indexes for minerals ranged between 129 for crude petroleum and 188 for tin.

An exact appraisal of the significance of this trend in prices could be made only in the light of more precise knowledge of the changes in productivity in mining as compared to agriculture, and of the price mechanism in these two sectors. On the basis of partial evidence it appears that the relatively slower increase in mineral prices, as compared to agricultural prices, has been more than compensated for by a greater increase in productivity. This was mainly due to a higher degree of mechanization and to the introduction of new processes. The former factor, for instance, accounted for the fact that in the Chilean copper industry, output per worker per year increased from 25.1 tons in 1929 to 28.4 tons in 1947, or by 13.6 per cent. Of capital importance among the new processes was the selective flotation of minerals introduced in the 1920's which permitted the exploitation of compound minerals (such as lead, zinc and tin) and low-grade ores. The low temperature crystallization of nitrate, adopted in the late 1920's in Chile, was mainly responsible for the increase in output per worker per year from 55.4 tons in 1929 to 75.0 tons in 1947, equivalent to 35 per cent. The third important advance among new processes is found in the continuing improvements in the cracking of petroleum, which gives constantly higher yields of gasoline and kerosene.

In comparison to the variable character of mining productivity, the nature of both demand and supply of minerals is more constant. In general, the markets are highly cartelized, and only a small number of buyers and sellers participate; and the mining concerns are in most cases subsidiaries of large foreign corporations engaged in the same type of activity. There is a greater measure of flexibility in only a small sector of the market, where marginal producers predominate, nearly always representing small- or medium-size enterprises.

In addition to the purely economic factors pertaining to the demand for minerals, other considerations may come into play in time of war or political insecurity. Also, the United States' policy of conservation of

natural resources may favourably affect the demand for petroleum, copper and iron ore in Latin America.

In view of the amount of fixed capital which mining requires and the high maintenance costs that would be incurred in the case of a temporary suspension of output, a drop in prices may result in financial losses rather than the abandonment of operations. This accounts for the marked rigidity in the supply of mineral products in the face of extremely sharp fluctuations of prices during cyclical movements.

Manpower and technical knowledge

On the whole there is no shortage of unskilled labour in Latin-American mining. Such shortages as are occasionally experienced are usually due to low wage rates resulting from the depressed prices of some metals. This is the present situation with regard to gold production, where fixed official prices have not permitted marginal producers to increase wages to meet those prevailing in competitive occupations.

Usually, average wages in mining are higher than those in agriculture and lower than those prevailing in several sectors of manufacturing. Thus in Chile, daily wages averaged 56.49 pesos in nitrates, 83.79 pesos in copper, and 52.55 pesos in coal in 1947, as compared to an average of 85.45 pesos in the more highly mechanized manufacturing groups which employed about 30,000 workers. This level of wages is explained largely by the fact that the bulk of the labour force in most types of mining consists of unskilled workers. The more conspicuous exception is represented by the extraction of petroleum which requires a high proportion of qualified workers and pays wages generally higher than those of almost any manufacturing group.

With comparable equipment and similar environmental circumstances, the productivity of the Latin-American miners is equivalent to that prevailing in the more developed countries. For example, in the highly mechanized iron ore mines of Bethlehem Steel in Chile, productivity is said to be the same as in the United States. On the other hand, the lower productivity in many mines in Peru, which is as little as 50 per cent of the United States figure, can be ascribed to the fact that operations are carried out at an altitude of over 10,000 feet, and that the unskilled workers—usually temporary labour from the Andean villages—are often undernourished.

There are very few Government-supported schools in Latin America designed to train skilled miners. The shortage of this type of labour is being remedied only in part by schools established and operated by the mining corporations themselves, where some degree of technical training is given to workers who are subsequently put to various tasks with little opportunity for thorough specialization in particular fields. These training activities assume greater proportions on the part of foreign mining

or petroleum corporations in those countries which require them to employ a high percentage of native labour.

In addition to the shortage of qualified labour, the majority of the Latin-American countries face a number of problems resulting from the shortage of mining engineers and other highly skilled personnel. There are very few countries with enough geologists to permit them to carry out even a superficial survey of their mining regions. During the war some Governments received the assistance of United States geologists and engineers, who co-operated with the domestic experts in carrying out such surveys. However, this effective arrangement was abandoned in most cases after the war.

The need for metallurgists in Latin America is even more serious than the shortage of geologists. The extraction of numerous minerals is hampered by lack of the highly specialized skills that are necessary in solving production problems. Whereas such difficulties do not exist in the case of large deposits that are, or can be, operated by foreign capital, they are general in the case of medium or small deposits which are usually exploited by domestic enterprise. The services of foreign metallurgists are usually too costly to be used by small firms. During the war the co-operation of the United States Government was extended in connexion with such activities; numerous technicians were sent to Latin America, and United States laboratories were made available to assist in their work. This co-operation, however, was almost completely terminated after the war.

Legal provisions and investment

In Latin-American mining there are three groups of investments: foreign corporations, domestic corporations or private *entrepreneurs* and joint corporations with Government participation. The first group of investors predominates in the great mining enterprises producing for export and it is likely that they represent over two-thirds of the total investment in Latin-American mining. During the past ten years investment by United States corporations has constituted nearly all of the new foreign investment made in mining.

The most notable characteristic of this flow is its concentration in the production of petroleum and to a smaller degree in iron and copper ores. In 1943, out of a total of $2,450 million in direct United States investments in Latin America, 23.2 per cent was furnished by petroleum companies and 16.5 per cent by other mining corporations. Approximately 60 per cent of the petroleum investment was concentrated in Venezuela, and in other types of mining 53 per cent was concentrated in Chile. The latter country, Mexico and Peru absorbed 87 per cent of the total United States investment in mining, other than petroleum, in Latin America. This tendency towards concentration continued after the war. For

instance, 70 per cent of the $407.9 million directly invested by United States citizens or corporations in 1947 was concentrated in mining. Of this total, 65 per cent was in petroleum and only 5 per cent in other mining activities.

Post-war British investments are also concentrated in Venezuelan petroleum, where, among other projects, a refinery with capacity of 10,000 cubic metres per day is being built at Puerto Cardón.

Domestic investment has been directed almost exclusively until now into small or medium-size mining enterprises, which often produce only for domestic consumption.

As indicated above, the relatively small participation of domestic capital in mining is largely due to the technological peculiarities of large-scale production. Great mining enterprises, particularly those with foundries and refining establishments, require investments of considerable magnitude. Furthermore, in the case of underground deposits, large initial outlays are necessary for ascertaining the reserves. These outlays include an appreciable element of risk in case the reserves are found to be small or if any other circumstance prevents their economic exploitation. These peculiarities, together with the fact that investment in mining is necessarily of a long-range character, generally discourage the participation of Latin-American capital in large-scale mining.

At the beginning of the war, numerous small- and medium-size mining establishments were operating with insufficient capital. Their high cost of production often did not enable them to accumulate sufficient reserves for the replacement of equipment when it became available. Their situation was aggravated by the greater increase in prices of equipment than obtained in the prices of most minerals. Moreover, many of the small mines do not make an estimate of the reserves in the deposits they are working; the result is that their requirements of equipment cannot be accurately estimated, and the credit that can be extended to them is also limited.

In addition to the effort made by various Latin-American Governments to increase the processing of metals within their own countries, it has been pointed out above that governmental investment in mining is usually concentrated in petroleum, which in some countries constitutes a government monopoly or semi-monopoly. In recent years and in different ways, government investment has also entered other mining activities. In Bolivia, Chile and Peru government-owned mining banks have been created to purchase minerals from small producers and concentrate or process them in government-owned plants. Similar action has been taken in Mexico, especially by *Nacional Financiera* and *Comisión de Fomento Minero.*

The credits extended to mining by the specialized banks that are sponsored by the various Governments and the credits available from the commercial banks in the region are not sufficiently adapted to the peculiar

needs of mining production. They generally require amortization payments to begin too early after the granting of the loan and such payments are not spaced over a sufficiently long period of time. Moreover, the financing of the small- and medium-size mining enterprises is usually handicapped by the fact that the resources of the governmental mining banks are too small to enable them to be truly effective.

In several instances the Governments have attempted to direct domestic capital on a large scale by creating joint mining enterprises sponsored by them. This is the case, for instance, with the Vale do Rio Doce Company, which exploits iron ore in Brazil. The credits granted by the Export-Import Bank during the war favoured such a policy.

In addition to purely economic considerations, the exploitation of the mineral resources of the various countries is affected by the legal framework governing mining, particularly that undertaken by foreign enterprises.[1] From the standpoint of the origin of mining investment, legislation varies between complete equality of domestic and foreign investments on the one hand, and governmental monopoly on the other.

Argentina, Bolivia, Brazil, Chile and Mexico have government-owned petroleum monopolies or other forms of legal differentiation between domestic and foreign enterprises. There is no legal differentiation in Peru but no new petroleum concessions have been granted to foreign corporations in recent years. The 1946 Constitution of Brazil does not include the principles of the Constitutions of 1934 and 1937 which excluded any new mining activities on the part of foreigners. This is one of several instances which indicate that the prevailing tendency of the 1930's toward unequal treatment has been attenuated since the war.

[1]A number of papers were submitted at the Pan-American Congress of Mining Engineers and Geologists held in Chile in 1942 and in Peru in 1945 in which suggestions were made regarding the modification of the mining laws in operation in the different countries which took part. These proposed modifications, which allowed for no differentiation between foreign and domestic interests, aimed at putting into effect uniform and up-to-date mining codes.

CHAPTER 4

AGRICULTURE

I. INTRODUCTION

Main trends

Although some of the countries in Latin America have entered a period of transition in their economies, the region as a whole continues to be essentially agricultural. It is evident, however, that agriculture is becoming relatively less important, not only because of a larger and more rapid development of other economic activities, but also because it has not been given the attention it deserves.

Nevertheless, agriculture is the most important single source of national income in most of the Latin-American countries. Only in Argentina, Brazil, Chile, Mexico and possibly Venezuela and Bolivia is it surpassed by other activities. At the same time, approximately 60 per cent of the gainfully-employed population in Latin America is employed in farming activities. These facts not only stress the preponderant role of agriculture in the economy of the region, but together with the low *per capita* incomes of the great majority of these countries, show at the same time its inefficiency and the low productivity of farm labour. The case of Mexico, where 65 per cent of the gainfully-employed population contributed in 1940 only 15 per cent of the national income, serves to illustrate the point, despite the possible margin of error of the estimate.

The volume of agricultural production has failed to keep pace with other economic and social activities. The rapid growth of population, amounting to 24 per cent between 1937 and 1947 in the seven countries that were analysed,[1] accompanied by a high level of employment, an increased urbanization and probably larger real incomes, generated a strong demand for foodstuffs. The latter, however, increased by only 20 per cent, leaving an unfavourable balance which had to be covered by the curtailment of exports and increased imports of foodstuffs. The supplies of foodstuffs available *per capita* in 1947 were thus somewhat improved in comparison with the pre-war period. For seven countries—Argentina, Brazil, Chile, Cuba, Mexico, Peru and Uruguay—they were 2 per cent higher. At the same time the composition of these supplies and their nutritive values had also undergone some improvement. Academic though it may seem to generalize on food-supply levels for countries with such varied

[1]Detailed analysis has been made for Argentina, Brazil, Chile, Cuba, Mexico, Peru and Uruguay, the only countries for which complete data were available. Together they account for 73 per cent of the total population of Latin America.

climatic conditions and varied characteristics in their agriculture (including many regions where subsistence farming is widespread), the level appears to have increased from about 2,200 calories to approximately 2,400 calories *per capita* per day in the region. In spite of these improvements, nutritional levels are generally quite inadequate and would still be well below standard requirements even if they were equitably distributed among the different sectors of the population.

Industry in Latin America depends largely on crop production and livestock for its basic supply of raw materials, since more than 50 per cent of the gross value of manufacturing production in nine countries is based on these raw materials.[1] Agriculture, however, does not seem to have kept pace with industry's demand, as in practically every country there are examples of deficiencies in basic raw materials. Among commodities in short supply are oilseeds in Chile, Colombia, Ecuador and others; cotton in Colombia and Bolivia; hides in Peru; wool in Mexico; wheat in almost every country, and so on. These and other countries still have to import an appreciable volume of raw materials or finished goods in order to meet their requirements. Further development of the processing industries has been somewhat retarded because large potential sources of raw materials are still unexploited.

Latin America continues to be largely dependent upon agriculture and livestock for the greater part of its export trade; in 1947 thirteen farm products constituted 52.3 per cent of the total value of exports, while in 1937 their share had been 52.9 per cent. In individual countries the importance of agricultural exports was even larger; in Uruguay, for example, they constituted as much as 96 per cent of the total, and in fifteen other countries (excluding Bolivia, Chile, Mexico and Venezuela) over 70 per cent.

The post-war volume of exports, however, decreased quite considerably in relation to 1937, principally as the result of greater internal demand for the thirteen farm products referred to above. The volume declined 38.2 per cent in 1946 and 18 per cent in 1947. The volume of the seven main export foodstuffs in 1947 was 29.6 per cent below the 1937 level. Despite this reduction the participation of Latin America in world exports increased somewhat. The volume of exports of foodstuffs in 1937 was 22 per cent of the world total and in 1947 it rose to 24 per cent; for fibres the increase was from 13 per cent to 24 per cent over the same period.

Internal economic expansion, together with the contraction of foreign sources of foodstuffs and raw materials and the curtailment of the export markets which resulted from the war, brought about strong pressure on both the supply and demand for essential commodities. The scarcities that followed induced several Governments to take measures to increase production of staple crops with quick yields. These measures took

[1]See table 34.

the form of subsidies to consumers, support prices, differential exchange rates etc. It is true that these policies resulted in a relatively small over-all increase in agricultural production; but more than that, they brought about large shifts in the composition of agricultural output, stimulating in numerous cases high-cost crops which constitute a burden on the consumer and on the Governments themselves.

For the year 1947 in relation to the pre-war period, rice production increased in almost all Latin-American countries; and a few of them, such as Chile and Ecuador, moved from an import to an export position. Wheat was given preferential attention in many of the countries that could produce it, by means of price-support policies and purchase guarantees. Potato output increased in all the main producing countries. Production of sugar-cane and sugar was also increased in Cuba, Brazil and Mexico. Oilseeds—especially sunflower, peanuts, linseed and sesame—were cultivated in increasing proportions in many countries.

The livestock industry was developed in the region as a whole and the numbers of cattle, sheep and hogs rose well above the pre-war level in practically every country; only the Dominican Republic and Uruguay experienced any significant decreases in cattle population. Cotton production increased in Mexico, Argentina, Colombia, El Salvador and Guatemala, but decreased significantly in Brazil, Peru and Haiti. Wool production was expanded in Argentina and Uruguay, while production of coarse fibres, such as henequen (sisal) in Mexico and jute in Brazil, also increased. Coffee experienced a general decline in all the producing countries except Colombia, Guatemala and Honduras. Brazil, the largest coffee-producer, was the country most affected by this decrease.

Typical examples of basic changes in the character of production are offered by Mexico and Argentina. Mexico through the intensification of irrigation and the addition of approximately 1.7 million hectares of new land to the cultivated area achieved a remarkable increase in crop production. Argentina, however, because of shifts in economic policies, price control and other regulatory measures, experienced the most marked changes in its agriculture. Reduction in the cultivation of wheat, maize, oats and linseed freed more than five million hectares of Argentine farm land. This area was in part utilized for the expansion of other crops which helped to diversify its agriculture, and in larger part for pasture grazing.

Among the important barriers to progress in agriculture are lack of investment and inadequate agricultural credit facilities, especially for small farmers. These deficiencies, together with the low level of technical knowledge and the absence of appropriate extension services, have prevented the use of better methods of cultivation, of better seed, a more efficient utilization of existing agricultural equipment, a higher degree of mechanization and a more intensive use of fertilizers and pesticides. This situation has been aggravated by the low productivity of labour and

a growing farm-to-town movement of the agricultural population which in many cases made labour scarce and expensive in comparison with previous years. Furthermore, a slow but constant erosion, accompanied by the progressive impoverishment of soils due to poor methods of cultivation, has contributed to higher costs of production. Inefficient marketing systems, high transportation costs, and lack of storage facilities have also tended to discourage increases in production. Unfavourable climatic conditions and erratic weather in some of the agricultural areas indicate the need of expanding irrigation.

These factors—closely inter-related and dependent upon each other—have combined in varying degrees to retard a more rapid increase in production.

Pessimistic assertions that Latin America will not be able to feed its own population within the relatively near future fail to take into account the very considerable possibilities for increased production through the development of modern techniques and scientific agricultural methods.

Projects for bringing new areas into cultivation also offer possibilities for increased production, but they are complicated and made difficult by the fact that such undertakings would require large investments in road building, land clearing, sanitation, colonization etc.

If agriculture is to expand, however, it must be assured of a steady market which can only be obtained through higher purchasing power among the masses of the population and through a stable world demand.

Role of agriculture in national income

The importance of agriculture in the economic structure of a country may be assessed by its role in the composition of national income (see table 29). National product series indicate the relative weight of agriculture in Argentina, Chile, Mexico and the Dominican Republic, and trace its shifts throughout several years. The first three countries may be thought of as in a class by themselves, since they are in a transitional stage toward a higher degree of industrialization. Chile and Mexico showed practically no change in the relative importance of agriculture, but an appreciable decrease occurred in the case of Argentina. In the Dominican Republic, on the other hand, agriculture has maintained and even somewhat increased its traditional importance.

From the single percentages shown for Colombia and Peru and from complementary information available, it appears that agriculture is still the most important single activity in both countries.

Role of agriculture in employment

Another measurement of the role of agriculture may be obtained by considering the number of persons gainfully engaged therein in relation

TABLE 29. AGRICULTURE AS A PERCENTAGE OF NATIONAL INCOME IN SIX LATIN-AMERICAN COUNTRIES, 1938-1946

Percentages

	Argentina	*Chile*	*Colombia*	*Dominican Republic*	*Mexico*	*Peru*
1938	27	..	..	..	17	..
1939	27	..	..	..	17	..
1940	26	17	31	39	15	..
1941	27	16	..	42	15	..
1942	28	16	..	42	16	33
1943	26	16	..	42	16	..
1944	26	..	..	43	17	..
1945	24	..	..	41	17	..
1946	..	..	..	41	17	..

Note: The percentages measure the relationship between value added by agriculture and current net national product at factor cost except in the case of Argentina where the data relate to current domestic gross national product at market prices, i.e. net national product at factor cost plus indirect taxes, allowances for depreciation and maintenance minus subsidies.

Sources: The percentages shown in the above table, except in the case of Colombia, have been derived from the data in *National Income Statistics of Various Countries 1938-1947,* Statistical Office of the United Nations, 1948. The data for Colombia were obtained from "National Income Estimates of Latin-American Countries," by Loreto M. Domínguez in *Studies in Income and Wealth,* vol. 10, National Bureau of Economic Research, New York, 1947.

to the total gainfully employed population of a given country (see table 30). The data assembled in tables 29 and 30 indicate the predominantly agricultural character of Latin America, since 62 per cent of the total gainfully employed population (a figure that may be considered as fairly representative of the whole region) is engaged in agriculture. The next largest occupational group for the same countries, manufacturing, constituted only 11.4 per cent of the total. In Chile, the country showing the smallest percentage of the group, agriculture employed 620,000 persons out of a total of 1,741,000, or 36 per cent. Industry employed 298,000 persons or 17 per cent.

Not only do the above data show the predominance of agriculture in most of Latin America but they also highlight the inefficiency and low productivity both of farming methods and farm labour. In Colombia, for example, 71 per cent of the gainfully employed population is engaged in agriculture but contributed only 31 per cent to the net national product. In other typically agricultural countries where an even greater part of the gainfully employed population contributes a larger proportion to the net national product, *per capita* income is considerably smaller than in those countries where mining, manufacturing and services are of greater significance. The low productivity of farming activities which this implies, together with the low *per capita* incomes of the agricultural population, and consequent low purchasing power (a sizable percentage of the agri-

TABLE 30. PERSONS ENGAGED IN AGRICULTURE COMPARED WITH THE TOTAL GAINFULLY EMPLOYED POPULATION IN TEN LATIN-AMERICAN COUNTRIES[a]

		Persons engaged in agriculture	
	Years	*Thousands*	*Per cent of employed population*
Argentina	1947	2,045	36
Brazil	1940	9,453	67
Chile	1940	620	36
Colombia	1938	3,320	74
Cuba	1943	630	41
Mexico	1940	3,831	65
Nicaragua	1940	258	73
Panama	1940	109	52
Peru	1940	1,546	62
Venezuela	1941	636	51

Sources: Yearbook of Labour Statistics 1945-46 (ninth edition), International Labour Office, except for Mexico, data for which were obtained from *Compendio Estadístico, 1947, Dirección General de Estadística* and for Argentina, for which data on employment in agriculture are reported in the *Mensaje Presidencial,* 1948. For Argentina the number of persons engaged in agriculture, expressed as a per cent of the total employed population, has been estimated by the United Nations Economic Commission for Latin America.
[a]Including employment in forestry and fishing.

cultural population, particularly in those countries where Indian elements predominate, is engaged in subsistence farming only) indicate the backwardness of the larger part of Latin-American agriculture. This situation suggests the necessity and at the same time the difficulties of raising the level of production, not only in order to improve the nutritional standard of each nation, but also to increase the real purchasing power of the farming population and thus create an internal market for industrial products.

II. FOOD CONSUMPTION

POPULATION AND FOOD CONSUMPTION

Omitting foreign trade considerations, a significant criterion for an evaluation of agricultural production is the relationship between changes in food consumption levels and real income. It is not yet possible to conclude that increases of *per capita* consumption have kept pace with increases in *per capita* real income, or that consumption has lagged behind owing to supply shortages. Similarly, where *per capita* consumption has declined, it cannot be ascertained whether it has been due to a decline in *per capita* income or to supply limitations. Nevertheless, the greater increase in food prices as compared with other items in the cost of living suggests that food supplies may not have kept pace with incomes in a num-

ber of countries. It is important to keep such measurements in mind for future studies when enough detailed data on incomes, consumption and expenditures are available. At present it will be possible to determine only whether production and supplies are increasing at the same rate as population.

While total food production in Latin America in 1946 probably increased by about 13 or 14 per cent and in 1947 by 19 or 20 per cent over the pre-war period, the region's population increased by 22.3 per cent between 1937 and 1947. Consequently, food production does not seem to have kept pace with the growth of the population.

A detailed analysis of seven countries may illustrate the situation in the region as a whole (see table 31.) It should be noted, moreover, that the population of these seven countries, totalling 107 million inhabitants in 1947, accounted for 73 per cent of Latin America.

TABLE 31. PRODUCTION OF ALL AGRICULTURAL COMMODITIES AND FOODSTUFFS, AND NET AVAILABLE FOOD SUPPLY IN 1947

Index numbers, base: 1935-1939=100

	Production		*Net available food supply*	Per capita *production*		Per capita *net available food supply*
	All commodities	*Food*		*All commodities*	*Food*	
Argentina	112	115	139	96	98	119
Brazil	111	115	115	87	90	90
Chile	122	121	128	100	99	105
Cuba	151	150	117	127	126	98
Mexico	141	139	142	110	109	111
Peru	111	118	122	90	95	98
Uruguay	97	87	113	87	78	101
Average of above countries	117	120	126	94	96	102

Sources: All agricultural commodities and food indexes have been calculated by the Food and Agriculture Organization of the United Nations from aggregates of total food production. Available supplies indexes have been calculated by the Food and Agriculture Organization of the United Nations from food balance sheets.

In addition to these data for total agricultural production and food production, indexes for net available supplies have been calculated from the value of gross production of foodstuffs with pre-war price weights, less the part corresponding to feeds, seeds, waste and exports, and the net balance of the international movement of foodstuffs. These indexes, when adjusted by population indexes, show the *per capita* production and the *per capita* net available food supply.

Table 31 shows that in five out of the seven countries the *per capita* production of foodstuffs was lower in 1947 than in the pre-war period; Uruguay, Brazil and Peru were lowest, with reductions of 22 per cent, 10 per cent and 5 per cent, respectively, while Cuba and Mexico showed

appreciable increases of 26 per cent and 9 per cent. In the case of Argentina and Mexico the indexes show an appreciable improvement in the *per capita* available supplies.

In Argentina the greatly expanded domestic demand in the face of decreased imports was satisfied in part by a greater volume of production (particularly in 1947) and in part by a reduction of exports; hence the larger index of *per capita* available food supplies as compared with that of food production. Mexico's improvement was mainly due to a large increase in production and an even larger increase in imports of foodstuffs (285 per cent greater than in the pre-war period).[1]

It should be noted here that the purpose of the index of available food supplies is to permit a comparison of supplies available in 1947 with those of the pre-war period and that at no time does it indicate adequate availability.

Of the seven countries, Brazil presents the least encouraging picture, with food production lagging considerably behind the increase of population. While the former showed in 1947 an increase of 15 per cent with relation to the pre-war period, population increased 27 per cent. The situation of available food supplies in the same year improved somewhat because of a reduction of 8.5 per cent in exports and an increase of 8 per cent in imports with relation to the pre-war period. It should be noted that coffee has not been included in the index of food production.

Food production in Chile in comparison with the pre-war period increased practically in the same proportion as population. The relatively lower production in 1947 was compensated by a 35 per cent reduction in exports and a 36 per cent increase in imports. The index of *per capita* available food supplies improved in comparison with the pre-war period.

The *per capita* available food supply index for Cuba is 98, whereas the *per capita* food production index is 126, the difference being ascribable to the fact that the high sugar exports of the post-war period are excluded from the first figure and included in the second. The *per capita* food supply index from domestic sources, after exports, was 24 per cent lower than in the pre-war period but the *per capita* available supplies index improved as a result of a 136 per cent increase in the imports of foodstuffs.

Peru has not been able to increase production of foodstuffs to keep pace with the increase in population. The *per capita* food production is only 95 per cent of pre-war. With an increase of 12 per cent in imports and a decrease of 16 per cent in exports, *per capita* available food supplies were practically brought up to pre-war levels, i.e., to 98 per cent.

[1]1947 as compared to the 1934-1938 average. (*Source:* Food and Agriculture Organization).

Uruguay, as a result of drought conditions, shows an even lower *per capita* production. Due to a drastic reduction of 64 per cent in exports, and an increase of 116 per cent in imports, it managed to keep the *per capita* available supplies at pre-war levels.

No specific information can be given for the other countries, but estimates similar to those of table 31 present an approximate view of the situation. The relatively lower agricultural development of some countries, and the mono-productive characteristics of others which prevent a more diversified agriculture, lead to the assumption that most of them are in a situation similar to that of Brazil, Peru and Uruguay.

Levels of consumption

The foregoing analysis of food production levels and of available supplies as related to increases in population should be completed by an evaluation of the basic levels of food consumption. An appraisal has been made by the Food and Agriculture Organization of the United Nations, using official data or partial estimates showing the *per capita* supply of the major foodstuffs available for human consumption for eight countries and the caloric, protein and fat contents of these supplies (see table 32). But even in these cases, the information should be regarded as approximate and taken only as a guide, since subsistence farming is important in many areas, but especially so where Indian populations live, and there are no complete studies to measure this production and consumption. At the same time, lack of information on the proportion of certain products destined for feed, the accumulation of stocks, etc., could widen the margins of error. Finally, it must also be borne in mind that within countries as extensive and of such varied climatic and topographic conditions as those of Latin America, contrasting situations are likely to be found as regards food consumption, nutritive values and customs. It is logical, therefore, to expect great variations from country to country and even within a country.

In any case tables 32 and 33 will give an approximate notion of the consumption levels of the eight countries shown; and since the populations of these countries comprise 81 per cent of the total inhabitants of Latin America and there is a certain resemblance in the customs of these and the other countries, these data may also be considered as showing the trend in the remaining twelve countries.

An examination of table 32 reveals that there has been a slight improvement in the nutritive value of available foodstuffs between pre-war and post-war periods. It is assumed here that these data are practically equal to consumption figures. The daily *per capita* supply of calories increased in all countries, and that of proteins in six out of eight countries. Cereals and tubers furnished lower percentages of calories, but only four countries showed an improvement in the relation of animal

TABLE 32. NUTRITIVE VALUE OF FOOD SUPPLIES IN SELECTED LATIN-AMERICAN COUNTRIES, PRE-WAR, 1946 AND 1947

	Calories		*Protein*			*Fat*
	Daily supply per capita	*Percentage from cereals and tubers*	*Daily supply* per capita		*Animal protein relative to total protein*	*Daily supply* per capita
			Total	*Animal*		
	(*Number*)	(*Per cent*)	(*Grammes*)		(*Per cent*)	(*Grammes*)
Argentina						
1935-39	2,777	50	99.7	62.0	62	92.9
1946	3,087	50	103.4	60.6	59	102.0
1947	3,162	43	108.9	66.0	61	109.0
Brazil						
1935-39	2,173	48	67.6	30.4	45	51.7
1946	2,291	50	61.3	25.3	41	47.0
1947	2,299	50	63.7	26.2	41	48.4
Chile						
1935-39	2,322	61	70.5	22.1	31	42.9
1946	2,327	61	70.6	26.2	37	43.7
1947	2,393	61	73.5	24.7	34	43.0
Colombia						
1935-39	2,004	37	46.0	20.7	45	42.9
1946	2,324	39	52.0	22.5	43	45.3
Cuba						
1934-38	2,626	49	62.1	23.3	37	48.6
1946	2,708	47	65.1	25.6	39	57.1
1947	2,772	47	67.1	26.5	39	60.9
Mexico						
1934-38	1,855	55	56.2	19.8	35	42.9
1946	2,122	55	61.0	18.8	31	44.6
1947	2,206	55	61.2	17.4	28	46.2
Peru						
1935-39	1,835	63	54.6	13.0	24	39.1
1946	1,813	62	49.2	13.0	26	37.1
1947	1,891	64	50.9	13.0	26	37.0
Uruguay						
1935-39	2,426	45	88.7	28.7	32	94.7
1946	2,445	41	83.3	30.2	36	86.3
1947	2,499	42	88.6	31.0	35	86.3

Source: The State of Food and Agriculture 1948, Food and Agriculture Organization of the United Nations.

protein to total protein. Mexico, Argentina, Brazil and Colombia seem to have had smaller supplies of animal protein after the war than they had before the war.

Different climatic conditions, the less advanced stage of agriculture and other qualitative information for the other twelve countries suggest that the available calories and proteins in most of them would be about the same as, if not lower than, those for Peru and Mexico.

TABLE 33. PER CAPITA SUPPLIES OF MAJOR FOODSTUFFS IN EIGHT LATIN-AMERICAN COUNTRIES, PREWAR, 1946 AND 1947

Kilogrammes per capita *per year at the retail level*

	Cereals and cereal products[a]	*Roots, tubers and other starchy foods*	*Sugars and syrups*[b]	*Pulses and nuts*	*Fruits*	*Vegetables*	*Fats and oils*[c]	*Meat*[d]	*Milk and cheese*	*Eggs*	*Fish and shellfish*
Argentina 1935-39	108.1	70.6	27.2	2.5	47.2	24.5	9.8	107.6	140.4	7.1	4.5
1946	117.3	95.5	34.2	3.0	66.6	39.0	14.3	107.7	109.2	7.3	3.6
1947	118.7	77.8	34.9	3.4	61.1	39.2	15.7	118.9	114.6	7.3	3.8
Brazil 1935-39	80.3	45.7	24.7	22.8	68.0	20.0	5.1	52.5	75.2	2.6	1.4
1946	81.6	55.0	32.2	21.0	74.3	23.7	5.9	40.2	75.2	2.6	2.8
1947	83.6	54.1	31.0	21.6	75.6	23.9	5.9	42.2	73.4	2.6	2.9
Chile 1935-39	129.3	72.4	25.6	10.8	34.1	18.0	4.5	35.0	62.8	1.7	7.2
1946	123.9	93.3	25.2	5.1	35.3	21.0	5.0	38.7	80.5	1.8	11.3
1947	132.2	80.7	25.1	9.6	35.8	21.0	4.4	35.2	80.0	1.8	11.2
Colombia 1935-39	51.9	82.1	59.7	7.0	137.1	10.3	3.7	27.9	69.0	5.7	0.6
1946	63.6	99.6	78.0	7.8	114.3	11.9	3.1	27.3	91.3	4.8	0.5
Cuba 1934-38	104.0	98.8	40.0	12.5	148.1	15.6	8.8	33.5	70.6	4.4	4.2
1946-47	103.9	86.9	43.0	13.3	142.0	14.3	11.9	37.5	67.7	3.4	5.5
1947-48	107.3	91.5	41.8	14.3	124.6	14.1	13.5	38.2	75.5	3.1	5.9
Mexico 1934-38	101.9	4.7	23.1	14.4	54.8	16.5	4.9	26.3	79.9	2.0	3.6
1946-47	119.0	7.4	31.4	15.5	55.1	22.0	5.5	26.0	68.6	2.2	5.0
1947-48	122.3	7.3	32.9	17.7	58.6	21.6	6.0	24.5	68.5	2.0	5.0
Peru 1935-39	98.2	88.9	13.6	15.6	42.4	13.6	3.7	24.0	27.7	3.2	0.9
1946	96.8	87.2	21.2	8.4	43.8	14.3	3.9	22.3	25.8	3.2	1.3
1947	102.6	100.2	22.4	6.9	42.6	14.0	3.6	22.6	26.1	3.3	1.3
Uruguay 1935-39	85.2	41.3	24.0	2.5	29.3	9.8	13.6	103.7	148.5	7.4	1.9
1946	92.9	31.1	29.8	1.8	39.1	12.3	11.6	86.3	160.0	8.3	2.2
1947	92.5	49.5	30.0	2.0	39.5	13.9	10.3	95.6	161.6	8.3	2.3

Source: The State of Food and Agriculture 1948, Food and Agriculture Organization of the United Nations.

[a]Milled basis.

[b]Including panela, papelon, and piloncillo.

[c]Includes vegetable oils, butter, and other animal fats; pure fat basis.

[d]Including poultry, game, and offal.

It can be seen, for instance, that the *per capita* calories available in Latin America, averaging around 2,400 in 1947, were fewer than were available in Europe in the pre-war period, amounting to about 2,900, and not much higher than the average available in Africa and Asia of approximately 2,200. They compare very unfavourably with the available calorie figures for the higher-income countries such as the United States, Canada and Australia, which averaged above 3,200 in 1947-1948.[1]

As regards the consumption of proteins, Latin America is in a more unfavourable position than Europe, since the former consumed an average of 68 grammes, the latter 74 grammes *per capita* per day in 1947.

Considerable differences can also be noticed between the countries shown in table 32. While Argentina has sufficient food to provide its people with a good diet, 3,100 calories and 108 grammes of proteins per day, Peru and Mexico have inadequate supplies, 1,900 calories and only 51 grammes of proteins in the former, 2,200 calories and 61 grammes of proteins in the latter in the same year.

Table 33 indicates that the diets in six out of eight countries consist mainly of cereals and that there is a relatively small consumption of protective foods such as milk, cheese, eggs and vegetables. Only in Argentina and Uruguay are there sufficient available supplies of animal products to provide abundant proteins of good quality.

Comparing *per capita* available supplies of major foodstuffs over a period of time, it can be noted that only Cuba and Argentina have increased their supplies of meat; the former rose from 33.5 kilogrammes in the period 1934–38 to 38.2 in 1947, and the latter from 107.8 to 118.9 kilogrammes, respectively. Meat consumption declined in Mexico, Brazil, Peru and Uruguay, reaching the lowest levels in Brazil (24.5 kilogrammes) and Peru (22.6 kilogrammes).

Consumption of milk and cheese developed more favourably than consumption of meat, with Cuba, Chile, Colombia and Uruguay increasing their consumption considerably. In Cuba it rose from 70.6 kilogrammes pre-war to 75.5 post-war; in Chile from 62.8 to 80 kilogrammes; in Colombia from 69 kilogrammes to 91.3 kilogrammes; and in Uruguay from 148.5 to 161.6 kilogrammes. Consumption declined in Mexico, Brazil and Peru though only by a few kilos in each case. In Argentina, however, consumption of milk and cheese decreased from 140.4 kilogrammes to 114.6 kilogrammes. Six of the eight countries shown in the table consume only small quantities of milk and it is possible that most of the other countries in Latin America consume even less. These low figures show the disadvantageous position of the region when compared with the dairy supplies available for the United States, Canada, or New Zealand, which are 197, 227 and 196 kilogrammes, respectively. It should be mentioned further that milk and dairy products are consumed in many Latin-American countries mainly by the higher-income groups.

[1] *The State of Food and Agriculture 1948*, Food and Agriculture Organization.

The available supplies of eggs are totally inadequate in all countries and the same can be said of vegetables.

In Latin America, as in the rest of the world, the influence of food consumption habits must be taken into account when considering the possibility of improving food consumption levels. The importance of maize in the diets of Mexico, the Central American countries, Colombia, Venezuela and certain regions of Peru, Ecuador and Bolivia is well known. The same applies to beans in Mexico and Chile, rice in Cuba, quinoa and barley in the high plateaux of Bolivia, Peru and Ecuador, and meat in Argentina and Uruguay. It would be difficult to change, in a relatively short time, the food habits in these countries; it is a procedure which requires time, and furthermore it is intimately connected with the increase of the purchasing power of consumers.

It should be noted that because of different methods of construction and different end-uses the indexes on net available supplies, the data on calorie levels and the material on nutritional patterns are not directly comparable.

III. AGRICULTURAL RAW MATERIALS

Over-all significance

The composition of manufacturing production in Latin America in the years for which data are available shows that on the whole it depends more on agriculture and livestock for the supply of its raw materials than on other sources.

If one considers the gross value of total manufacturing production of nine countries for the years concerned (table 34), it can be seen that

TABLE 34. PER CENT OF GROSS VALUE OF PRODUCTION AND PER CENT EMPLOYED IN LATIN-AMERICAN INDUSTRIES USING AGRICULTURAL AND ANIMAL RAW MATERIALS[a]

	Year	*Value of production*	*Numbers employed*
		Per cent	
Argentina	1943	62.9	45.0
Bolivia	1942	87.6	68.7
Brazil	1940	65.6	61.4
Chile	1945	66.4	53.4
Colombia	1945	74.9	67.8
Guatemala	1946	79.8	65.4
Mexico	1941	65.0	63.6
Uruguay	1936	76.1	62.7
Venezuela	1936	74.8	81.5

Source: Official statistical publications of the countries concerned.
[a]The data have been adjusted to exclude mining, public utilities and construction.

the industries using agricultural and animal raw materials account for about 75 per cent of the total value, ranging between Bolivia with 87.6 per cent and Argentina with 62.9 per cent. Taking into account the number of persons employed by manufacturing establishments using agricultural and animal raw materials, it can be seen that from 45 per cent (Argentina) to 81 per cent (Venezuela) of the labour force are in this group. The growth of industry in Argentina, Chile, Brazil and Mexico during the last few years has probably lowered the percentages in these countries; but on the other hand, information available for other countries shows that industries using agricultural and animal raw materials have increased considerably. It is safe to assume, therefore, that farming continues to supply Latin-American industry with the greater part of its raw materials.

Despite the limited character of the information available for the processing of cotton, edible oil seeds and wheat, comparisons will next be made between the increases in the production of agricultural raw materials and the production of manufactures and processed foodstuffs using these raw materials, in order to ascertain whether agricultural development has kept pace with that of industry.

Cotton

The index for cotton textile production in seven countries shows appreciable increases in the post-war over the pre-war years.

Four of the seven countries listed in table 35 increased their production uninterruptedly; in 1947 Cuba was producing 280 per cent more than in the pre-war period, Argentina 157 per cent, Peru 94 per cent and Chile 86 per cent. Brazil reached a peak in 1944 and Mexico in 1944 and 1945, but production has declined considerably since, especially in Brazil. Bolivia attained its maximum production in 1946, followed by an appreciable decline in 1947. In all three cases the 1947 production was still far above 1937.

Production of raw cotton increased in 1947 only in Argentina (30 per cent above the pre-war period), and Mexico (48 per cent above). Brazil and Peru reduced their production by 33 per cent and 23 per cent, respectively. These four are surplus-producing countries, but while on the one hand Argentina and Peru have reduced their exports to be able to satisfy the increasing demand of their textile industries for raw cotton, Mexico and Brazil, on the other hand, have increased their exports above the pre-war level. Bolivia and Cuba have possibilities of producing cotton; in the former, however, little attention has been given to its cultivation. In the case of Cuba, cotton was cultivated some years ago, but at present it is comparatively more advantageous to grow sugar. Climatic conditions in Chile are not suitable for its production. It has not been possible to obtain complete data on other countries, but judging

TABLE 35. COTTON TEXTILE AND FIBRE PRODUCTION AND RAW COTTON IMPORTS AND EXPORTS IN SEVEN LATIN-AMERICAN COUNTRIES

Index numbers

	Textile production			*Fibre production*			*Raw cotton imports*			*Raw cotton exports*		
	Base: 1937=100			*Base: 1934-38=100*			*Base: 1935-39=100*			*Base: 1937-39=100*		
	1945	*1946*	*1947*	*1945*	*1946*	*1947*	*1945*	*1946*	*1947*	*1945*	*1946*	*1947*
Argentina	248	250	257	103	115	130	248	374	585	47	131	36
Bolivia	208	254	219	..	..	..	205	178	..	—	—	—
Brazil	142	138	112	97	90	67	—	—	—	55	135	111
Chile	184	177	186	—	—	—	306[a]	284	234	—	—	—
Cuba	244	313	380	—	—	—	319[a]	417	458	—	—	—
Mexico	124	122	118	142	133	148	42[b]	74	62	32	261	376
Peru	175	182	196	85	78	77	—	—	—	77	158	74

Sources: *Monthly Bulletin of Statistics*, United Nations, and official statistical sources of the countries concerned.

[a]Base: 1937-39=100.

[b]Base: 1938-39=100.

from the available apparent consumption figures—production plus imports (there being no exports of raw cotton)—for Colombia, the cotton industry has increased appreciably, since production and imports were 12,700 tons in 1940 and 25,000 in 1946. Domestic production of raw cotton increased from an average of 4,500 tons in the pre-war period to 6,300 tons in 1947, but has not as yet permitted a reduction in imports of this raw material.

Wheat and flour

The increasingly higher prices of wheat and the difficulties of obtaining it in the international market in the years immediately following the war compelled many Governments to foster domestic production by various measures, such as price guarantees, distribution of seeds, technical advice, etc. As a result of such policies production of wheat has increased considerably and in many countries it has not only kept pace with a larger consumption but even replaced part of the imports.

Argentina, the only country in Latin America which produces a permanent surplus of wheat, had increased its production of flour by 26.6 per cent in 1947 as compared with 1939.[1]

Table 36 was calculated for six other countries on the basis of wheat and flour imports (flour in terms of wheat) and domestic wheat production.

The apparent consumption of wheat (production plus imports, stocks having been disregarded) in Brazil in 1947 had increased by 16 per cent over the pre-war period, in spite of the difficulties of its importation from Argentina. Domestic production increased steadily and contributed 24 per cent of the total wheat needs in 1947. The situation in Chile was somewhat different: it had been an importing country in 1937 and 1938 and then became an exporting country in 1947 and 1948. Production during the war years satisfied between 91 per cent and 99 per cent of the country's needs; but in 1947 and 1948, when official prices increased, larger areas were cultivated, which together with good yields favoured a surplus production, which was exported.

Mexico's wheat production reached a peak in 1942 and then declined until 1946; in 1947 production was again 8 per cent higher than in the pre-war period. During the present decade the domestic production of wheat practically satisfied the country's needs only in 1940; from then on, consumption rose at such a rapid pace that production lagged far behind. In 1944 with production at a higher level than in the pre-war period it provided only 44 per cent—the lowest point in the decade—of apparent consumption, which at the same time reached a peak 129

[1] *Síntesis Estadística Mensual de la República Argentina, Dirección General de Estadística y Censos.*

TABLE 36. WHEAT: APPARENT CONSUMPTION AND DOMESTIC PRODUCTION AS PERCENTAGE OF APPARENT CONSUMPTION[a]

Apparent consumption

	(*Thousands of metric tons*)	(*Index numbers, base: 1934-38=100*)							
	Pre-war[b]	*1940*	*1941*	*1942*	*1943*	*1944*	*1945*	*1946*	*1947*
Brazil	1,218	81	95	97	107	122	126	68	116
Chile	860	92	90	110	120	110	109	104	..
Colombia	122	124	132	98	89	89	126	123	111
Mexico	397	117	140	152	164	229	176	174	..
Peru	201	120	103	110	102	146	128	104	..
Uruguay	277	97	103	132	119	98	92	106	112

Domestic production as per cent of apparent consumption

		1940	*1941*	*1942*	*1943*	*1944*	*1945*	*1946*	*1947*
Brazil	—	10	20	18	17	12	15	30	24
Chile	—	99	100	91	97	96	99	99	..
Colombia	—	82	87	90	83	74	53	80	57
Mexico	—	100	78	81	56	44	53	53	..
Peru	—	42	49	46	44	29	34	43	..
Uruguay	—	100	67	102	102	111	71	73	59

Sources: Import and export figures were obtained from official statistical publications of the countries concerned; production data, except for Uruguay and Colombia, were obtained from the *Yearbook of Food and Agricultural Statistics—1948,* Food and Agriculture Organization of the United Nations. Data for Uruguay and Colombia were obtained from *Recapitulación de la Estadística Agrícola del Uruguay—1948, Ministerio de Ganadería y Agricultura* and from *Producción de Trigo en Colombia, 1948, Ministerio de Agricultura.*

[a]All flour data were converted to the wheat equivalent.

[b]Pre-war refers to 1934-38 for production and to 1938-39 for imports except in the case of Uruguay where it refers to 1937-39 for both production and imports.

per cent higher than the pre-war period. In 1947 and 1948 production supplied around 60 per cent of the total needs.

Though in Colombia there are no official wheat production data, a study made by the Division of Rural Economics of the Ministry of Agriculture shows that from 1939 until 1947 there has been a slightly decreasing trend; apparent consumption decreased until 1944, but rose again in 1945 to remain at a higher level than in the pre-war period. Consequently the share of domestic wheat used by the flour mills has decreased slowly, until in 1947—largely on account of a bad crop—it was down to 57 per cent of the apparent consumption.

In Peru production of wheat has also shown a decreasing trend in the present decade, although it is somewhat higher than in the pre-war years. In 1947 it returned to the 1940 level and was 25 per cent larger than in the pre-war period. Apparent consumption seems to have been erratic, ranging from 2 per cent above the pre-war average in 1943 to 46 per cent above in 1944. Wheat of domestic origin satisfied about 43 per cent of consumption, except in 1944 and 1945, when it was considerably less.

The situation in Uruguay was quite different; from being a wheat-exporting country it became an importing one, largely because of crop failures. In 1948 production appears to have returned to normal, allowing for a small export surplus. Previously, to make up for the production deficit, Uruguay had to import up to 41 per cent of its wheat consumption.

Oilseeds and edible oils

The available data for edible oil production in Latin America is incomplete, and in order to ascertain whether local production of oilseeds had kept pace with oil production and consumption it was necessary to consider imports and production of oilseeds as being equivalent to the consumption of raw materials by the edible oil industry. Argentina, Brazil and El Salvador are the three countries producing a surplus for export. Argentina exported most of its surplus in seed form until 1942, but subsequently it started processing increasing quantities, in order to export only oil, until in 1947 practically no oilseeds were exported. Brazil exported some oil nuts and some cottonseed oil, but at a decreasing rate on account of the large decline in cotton production. It should be noted, however, that the production of palm nuts in this country has great possibilities, both for oil processing and for export. El Salvador has made a beginning in the export of small quantities of industrial and edible fats and oils.

Chile and Uruguay increased their production of oilseeds to a large extent, especially that of sunflowers in Chile, and peanuts in Uruguay.

Chile still has to import about 20 per cent of its oil needs, but Uruguay has become practically self-sufficient.

In 1946 and 1947 Mexico was producing between 65 per cent and 70 per cent more oilseeds than in the pre-war periods, but there was a corresponding increase in consumption. Small amounts of oilseeds are still being imported, but at the same time some oil is exported.

The Dominican Republic has become practically self-sufficient in the supply of oilseeds for its edible oil industry. Peru and Ecuador have considerably improved their production of raw materials for the industry, but some fats and oils still have to be imported. Practically all the other countries are still far from satisfying their needs, but, in general, oilseed production has been increased in an effort to meet the scarcity in the world market.

Dairy products

Processed dairy products have also shown a large increment in many countries, but especially in Argentina, Chile and Uruguay. The supplying of milk to dairy plants in these three countries is no problem because of favourable economic and technical conditions. Other countries such as Brazil, Colombia, Peru, Mexico and Cuba have met with some difficulties in supplying milk to at least some of their existing plants; all of them have nevertheless increased their production of evaporated, condensed and powdered milk substantially.

Conclusion

From the above information it can be concluded that though in several instances agricultural production has kept pace with industrial production, it has lagged behind in the majority of cases. The capacity of existing plants is for the most part sufficient to provide for all the expected needs of internal consumption, but on account of the difficulties in obtaining raw materials additional amounts of processed foodstuffs and goods have to be imported. At the same time there are cases where agricultural production is being hampered or where it could be enlarged considerably if the necessary processing plant facilities were available. Such is the case with sugar-cane and oilseeds in Bolivia, canned fruits and vegetables in Mexico and Colombia, sugar-cane in Ecuador, and dairy products and meat in several other countries.

IV. AGRICULTURAL EXPORTS

Role in total exports

Latin America's traditional dependence on agriculture for the larger part of its export trade is indicated by the fact that in 1937 thirteen products of agricultural or livestock origin accounted for 52.9 per cent

of total exports, and ten years later, in 1947, their share was 52.3 per cent. Sugar, coffee and banana exports represented more than 70 per cent of total exports of five countries, 60 per cent of the exports for two other countries and, adding cotton to these three commodities, 50 per cent for Peru and Brazil (see chapter on foreign trade).

The relative importance of exports of agricultural and livestock origin for each country, in proportion to total exports, for 1947, ranged from 96.1 per cent for Uruguay to 4.6 per cent for Venezuela. By excluding the predominantly mining countries such as Bolivia, Chile, Mexico and Venezuela, the average ratio for the remaining fifteen countries amounted to over 70 per cent. Nicaragua and Peru, whose exports were almost equally divided between agricultural products and other commodities, were an exception to this high ratio.

Between 1937 and 1947, a trend towards an increased proportion of these products in the total exports of mining countries seems to have existed, except in the cases of Chile and Bolivia. Though this change was insignificant in the case of Venezuela, in 1947 agricultural and livestock exports reached 66 per cent in Peru and 27.1 per cent in Mexico, whereas in 1937 they accounted for only 40.8 per cent and 19 per cent, respectively.

In countries which have had traditionally large export surpluses of the commodities in question, their relative position has been significantly different. This is the case in Argentina and Brazil where these exports declined from 96 per cent to 93.5 per cent for the former country and from 93.8 per cent to 83 per cent for the latter country. Only Uruguay experienced a rise from 94.3 per cent in 1937 to 96.1 per cent in 1946.

In view of the limited statistical information available, it is difficult to ascertain whether the agricultural exports of the entire region in 1947 were greater than in 1937. Judging by the behaviour of the thirteen selected export items, it could be inferred that, in spite of a considerable rise in absolute value, a slight decline occurred (52.9 per cent in 1937 against 52.3 per cent in 1947).

On the other hand, the increase in the absolute value of the region's exports was not necessarily accompanied by an increase in physical volume. On the contrary, as shown in table 37, the volume of foodstuffs

TABLE 37. VOLUME OF LATIN-AMERICAN AGRICULTURAL EXPORTS

Index numbers, base: 1934-38=100

Years	*Foodstuffs*	*Fibres*
1946-47	88	126
1947-48	98	120

was much smaller in 1946 and a little less in 1947 than the average for 1934–38; the volume of fibres during those two years, however, was greater than in the base year.

The decrease in physical volume was greater in the case of the seven footstuffs which form part of the most important products of Latin-American trade. This may be deduced from the fact that in 1946 and 1947 the volume was respectively 38.5 per cent and 18 per cent lower than the corresponding figures for 1937. It should be pointed out, however, that such over-all decreases were largely affected by substantial reductions in the exports of the two most important agricultural products—wheat and maize—which in 1937 represented 60 per cent of the volume of the thirteen items mentioned above. In 1947 their share was only 30 per cent. Higher exports of some other food products, such as sugar, rice, barley and rye, helped to offset the shrinkage of cereal exports.

Despite the internal relationship pointed out in the preceding paragraphs, Latin America's share in the volume of world exports of food increased from an average of 22 per cent in the period 1934–1938 to 24 per cent in 1947–1948. Fibres increased from 5 to 13 per cent over the same period. Again, it should be emphasized that this relatively larger share did not mean an increase in volume, but was due principally to a reduction in the total volume of world exports, with Europe's share declining from 30 to 13 per cent and that of the Far East from 18 to 4 per cent.[1]

Although with a different and less adequate base period (1937 instead of the 1934-1938 average), table 38 shows the changes which have taken place in Latin-American and world agricultural exports and the ratio of the former to the latter. The most significant changes occurred in the case of wheat, maize and oats; wheat decreased from 23 to 9 per cent; maize from 70 to 42 per cent; and oats from 56 to 14 per cent. The share of sugar in the world sugar export rose from 28 per cent in 1937 to 64 per cent in 1947; that of rice from 1 to 13 per cent, of rye from 8 to 28 per cent and of barley from 12 to 31 per cent.

In contrast with the over-all decrease in the volume of agricultural exports there was a 45 per cent increase in the net volume of imports of foodstuffs in 1947 over 1937. Practically every country (with the exception of Argentina) increased its imports substantially. Similarly, the share of Latin America in world food imports rose from an average of 3 per cent in 1934–38 to 5 per cent in 1947–48.

Consumption and exports

Exports of foodstuffs in relation to production have fallen in most of the Latin-American countries. From the group of countries shown in table 39 it can be seen that with the exception of Cuba and Mexico, all have exported smaller percentages of their production of foodstuffs in 1947. In the pre-war period Argentina was exporting 36 per cent of

[1] *The State of Food and Agriculture,* Food and Agriculture Organization.

TABLE 38. EXPORTS OF AGRICULTURAL COMMODITIES FROM LATIN AMERICA IN RELATION TO WORLD EXPORTS

Commodities	Exports from Latin America		World exports		Ratio of Latin-American to world exports	
	(Thousand metric tons)				(Per cent)	
	1937	1947	1937	1947	1937	1947
Grains:						
Wheat (and flour)	3,925	2,284	17,144	24,066	23	9
Rye	92	257	1,110	910	8	28
Barley	301	606	2,487	1,497[a]	12	31
Maize	9,103	2,556	13,057	6,029[a]	70	42
Oats	464	83	833	592[a]	56	14
Meat[b]	966[c]	918	2,090[d]	2,015	48	45
Rice (milled)	76[d]	326	8,560[d]	2,560	1	13
Fats and oils[e] (oils equivalent)	150[d]	125	5,900[d]	3,500	25	36
Sugar[c]	3,418	6,236	11,952	9,791	28	64
Fibres[f]	588	744	4,528	3,548	13	21

Sources: Food and Agriculture Organization of the United Nations and Economic Commission for Latin America.
[a]Includes some products.
[b]Includes beef, veal, pork, mutton, lamb and goat (excludes live animals).
[c]1935-39 average.
[d]1934-38 average.
[e]Net exports of indigenous material, excluding re-exports (with or without processing).
[f]Includes total exports of cotton, silk, jute, abaca, sisal and henequen, but wool exports (actual weight) only from five chief exporting countries accounting for about 85 per cent of world wool exports.

TABLE 39. FOODSTUFFS: EXPORTS AS PER CENT OF PRODUCTION IN SEVEN LATIN-AMERICAN COUNTRIES

	Percentages								
	Food crops			Livestock food products[a]			Total		
	Pre-war	1946	1947	Pre-war	1946	1947	Pre-war	1946	1947
Argentina	48.8	30.1	26.6	24.4	21.8	22.4	36.3	25.1	24.4
Brazil[b]	10.7	9.0	9.0	3.8	3.8	2.0	6.4	6.2	5.1
Chile	9.5	7.1	5.3	4.9	3.9	2.8	7.8	5.8	4.2
Cuba[c]	66.0	58.9	85.0	—	—	—	48.7	48.1	67.9
Mexico	7.4	6.4	7.1	—	—	0.9	2.7	2.8	3.6
Peru	17.3	12.1	12.2	—	—	—	10.4	7.4	7.4
Uruguay	15.6	0.1	0.8	32.1	27.0	14.8	28.8	21.7	12.0

Note: Pre-war figures refer to 1934-38 for Cuba and Mexico, 1935-39 for Argentina, Chile, Peru and Uruguay.

Source: Food and Agriculture Organization of the United Nations.
[a]Excludes live animals.
[b]Excludes coffee.
[c]Includes sugar.

its production; in 1947 it exported only 24 per cent, as a result of greater internal consumption and a smaller production of maize and oats, two very important commodities in its volume of foreign trade. Uruguay presented a similar picture but the decrease was principally due to a smaller production in 1947: its production index for food in 1947 was only 97 in relation to the pre-war period. For the region as a whole it is of interest to note that this relative decline affected the agricultural products more than the livestock products.

Cuba's exports in 1947 were larger in relation to production than in the pre-war period; this was due exclusively to its large increase in the production of sugar, a commodity primarily destined for the export market. In the case of Mexico a small relative increase has taken place in exports, particularly of livestock food products.

The decrease in the indexes of *per capita* available food supply for Brazil, Cuba and Peru (see table 40), was the result of the fact that population increased at a higher rate than production, thereby creating a deficit which was not compensated for by a proportionate decrease in exports or an increase in imports. Only in Argentina was expanded consumer demand met by domestic production; imports decreased but, at the same time, exports went down significantly.

TABLE 40. PRODUCTION, PER CAPITA AVAILABLE SUPPLIES AND TRADE IN FOODSTUFFS IN SEVEN LATIN-AMERICAN COUNTRIES

	Index numbers, base: 1935-39=100							
	Production[a]		*Imports*		*Exports*		*Available supplies*	
	1946	*1947*	*1946*	*1947*	*1946*	*1947*	*1946*	*1947*
Argentina	101	114	34	38	70	77	102	118
Brazil[b]	114	115	61	108	107	92	89	90
Chile	124	121	102	136	91	65	110	108
Cuba[c]	158	150	135	237	156	209	103	98
Mexico	131	139	318	385	135	186	108	111
Peru	112	118	112	112	80	84	96	98
Uruguay	94	87	188	216	71	36	97	100

Source: Original data obtained from Food and Agriculture Organization of the United Nations. Preliminary data, subject to revision.
[a]Excludes feed.
[b]Excludes coffee.
[c]Includes sugar.

It is evident that for the region there is a tendency towards a higher domestic utilization of exportable surpluses both of foodstuffs and of raw materials. This tendency, which was primarily due to a higher level of economic activities, has to some extent favoured a progressive diversification of farming activities. Other factors that influenced this trend more directly were higher consumer incomes and fewer possibilities

for importing certain specific crops during the war, either because of transport difficulties or the elimination of alternative sources of supply. In connexion with the first factor it may be pointed out that an increase, in real terms, of low incomes, as well as an increase in the number of the gainfully-employed population, is followed by a greater demand for foodstuffs rather than by a greater demand for other consumer goods.

V. PRODUCTION

General trend

It has already been shown that agricultural production has hardly kept pace with the growth of population and the expanded demand for food and raw materials. Nevertheless there have been substantial increases which should be examined in detail. Higher prices resulting from shortages, in both world and domestic markets, together with an expanded demand, favoured the intensification of agricultural and livestock production and caused a number of shifts in the composition of these outputs. This was particularly true where Governments protected and subsidized the production of specific crops which could no longer be imported in sufficient quantities, and which in some cases and under specific conditions were profitable, not only for home consumption but also as a source of foreign exchange.

Table 41 shows the indexes of total agricultural production and food production for seven countries which may be considered as indicating the developments in the region as a whole. For the seven countries, total agricultural production in 1946 increased only 12 per cent over the pre-war period of 1935–1939, but in 1947 it increased to 17 per cent. The food production index, which excludes coffee, shows an increase of 14 per cent for 1946 and of 20 per cent for 1947. The larger production in the latter year was due to several favourable factors, but principally to better climatic conditions throughout the continent.

A second and partial index (not shown in table 41) calculated for seven other countries with the inclusion of coffee and the exclusion of livestock food products for three of them, shows an increase of only 15 per cent in 1947 over the pre-war period.

Considering the first and second indexes of food production, it would be safe to assume that food and over-all agricultural production in the region, as a whole, is possibly lower than in the seven countries considered, since the latter have doubtless reached a higher degree of agricultural development, giving them an advantage over those countries which are less advanced.

Considering the countries individually, only Uruguay showed an appreciable decrease in its production, which in 1947 was 13 per cent

TABLE 41. CHANGES IN THE VOLUME OF AGRICULTURAL PRODUCTION IN SEVEN LATIN-AMERICAN COUNTRIES

	Index numbers, base: 1935-1939=100			
	All commodities		*Food*	
	1946	*1947*	*1946*	*1947*
Argentina	102	112	101	115
Brazil	108	111	114	115
Chile	125	122	124	121
Cuba	157	151	158	150
Mexico	133	141	131	139
Peru	106	111	113	118
Uruguay	104	97	94	87
TOTAL of above countries	112	117	114	120

Note: The index numbers in the above table represent the physical gross volume of farm production weighted by average prices in the period 1935-1939. In order to avoid double counting of feeds, first as crops and then again as meat, milk and other livestock products, feeds were deducted from gross production. The "total index" relates to the gross volume of agricultural production in seven countries, which together accounted for 80 per cent of the population of Latin America.

Source: Food and Agriculture Organization of the United Nations.

smaller than in the pre-war period (production recovered considerably in 1948). Cuba and Mexico experienced the largest increases, 50 per cent and 39 per cent, respectively.

CHANGES IN OUTPUT OF PRINCIPAL COMMODITIES

In connexion with over-all changes in the volume of production it is worth while to examine in detail the changes experienced by each of the principal components of the index.

The following discussion is based on tables 42 to 45, and deals principally with those countries which showed significant changes from pre-war up to 1947. No mention is made of countries whose production remained unchanged. The description, however, includes some crops and products which are not shown in the tables, but which registered important changes.

WHEAT (SEE TABLE 42)

The scarcity of this cereal and the high price levels it reached in the international market prompted Governments to intervene in the domestic market by setting prices and extending purchase guarantees, also to introduce or increase extension service aids (technical help, distribution of appropriate seeds, etc.) in order to increase production. Owing to low yields and technical difficulties, several countries which could have produced this cereal did not do so until the middle of the 1940's when supplies became scarce and prices had risen to such levels

in the international market that they decided to favour its production by all possible means. Some, such as Bolivia, Brazil, Chile, Colombia, Guatemala and Uruguay, have guaranteed prices at levels similar to those of import markets, and have at the same time given the farmers a guarantee to purchase their total production. In addition, through their agricultural experimental stations, most of these countries have distributed seeds better suited to the different climates and regions. With such encouragement, production of wheat in Latin America rose from around 8.6 million tons in the pre-war years to approximately 9.1 million tons in 1947, an increase of 6 per cent.

All the wheat-producing countries, with the exception of Colombia, have increased or maintained their production in 1947 with respect to pre-war. (The Bolivian production figure shows an appreciable decrease, but the figure for the base year included a considerable upward margin of error.) Brazil reached the greatest relative increase by practically doubling its production. Chile, Peru and Venezuela also showed sizable increases. Uruguay, after the drought of 1943, improved its production to 16 per cent over that of pre-war years, thanks to a vigorous campaign and a support price policy which increased prices from 5.00 to 18.00 Uruguayan pesos per metric quintal.

Most of the increases in production were generally due to larger cultivated areas, for yields remained more or less unchanged. Brazil and Mexico experienced slight drops in their average yields per hectare, while on the other hand Argentina in 1947 registered the highest yield in the last fifteen years with 14.1 metric quintals per hectare of harvested area. It was only because of this reason that it was able to maintain its pre-war level of production, as the harvested area was 30 per cent smaller than in the base year. Chile also registered a high increase in yield, from 10.6 metric quintals to 15 metric quintals per hectare. The number of years for which data are available are too few to establish yield trends in the post-war period. It is difficult to determine, therefore, whether increases in yields are due to technical improvements, or simply to better climatic conditions; and whether decreases are due to controllable or uncontrollable factors. In any case, it is apparent that increases in production in those countries that are not traditionally high producers were caused principally by the high artificial prices that made its cultivation economical. It remains to be seen, however, whether production will maintain its 1947 level should prices decline. Available information from non-official sources seems to indicate that as soon as Government price supports are eliminated, production will tend to decrease.

MAIZE (SEE TABLE 42)

The cultivation of maize, the main food crop in Latin America, seems to have gained importance in the majority of the countries,

TABLE 42. CHANGES IN THE VOLUME OF PRODUCTION OF CERTAIN CROPS IN LATIN AMERICA, 1934-1938, 1946 AND 1947

Thousand metric tons; index numbers, base: 1934-1938=100

	Unit	Wheat			Maize			Rice			Potatoes			Barley		
		1934-38	*1946*	*1947*	*1934-38*	*1946*	*1947*	*1934-38*	*1946*	*1947*	*1934-38*	*1946*	*1947*	*1934-38*	*1946*	*1947*
Argentina	000 m. t.	6634	5615	6664	7892	5815	6500*	51	140	112	663	814	1063	503	1171	834
	Index	*100*	*85*	*100*	*100*	*74*	*82*	*100*	*274*	*220*	*100*	*123*	*160*	*100*	*233*	*166*
Bolivia	000 m. t.	33[a]	..	14	81[a]	..	150	8[a]	..	15	92[a]	82*	..	28[a]	54	..
	Index	*100*	..	*42*	*100*	..	*185*	*100*	..	*187*	*100*	*89*	..	*100*	*193*	..
Brazil	000 m. t.	144	248	287	5677	5412	..	1365	2710	2065	380	384	..	12	11	12
	Index	*100*	*172*	*199*	*100*	*95*	..	*100*	*198*	*151*	*100*	*101*	..	*100*	*92*	*100*
Chile	000 m. t.	851	903	1071	62	68	74	11	87	89	435	569	557	112	99	107
	Index	*100*	*106*	*126*	*100*	*110*	*119*	*100*	*791*	*809*	*100*	*130*	*128*	*100*	*88*	*96*
Colombia	000 m. t.	110	120	78	496[b]	620	570	78[b]	118	131	242	460	499	..	24	26
	Index	*100*	*109*	*71*	*100*	*125*	*115*	*100*	*151*	*168*	*100*	*190*	*206*	..	..	..
Costa Rica	000 m. t.	—	—	—	14[b]	..	22	11[c]	23*	14	7	..	..	—	—	—
	Index	—	—	—	*100*	..	*157*	*100*	*209*	*127*	*100*	..	..	—	—	—
Cuba	000 m. t.	—	—	—	..	216	223	20[d]	..	70	50[b]	73*	60	—	—	—
	Index	—	—	—	*100*	*97*	*100*	*100*	..	*350*	*100*	*146*	*120*	—	—	—
Dominican Republic	000 m. t.	—	—	—	136[b]	75	73	35	52	40	2[c]	2	2	—	—	—
	Index	—	—	—	*100*	*55*	*54*	*100*	*148*	*114*	*100*	*100*	*100*	—	—	—
Ecuador	000 m. t.	19[a]	..	..	..	..	..	66	173	152*	64*	114*	114*	..	..	..
	Index	..	..	..	..	..	..	*100*	*262*	*230*	*100*	*178*	*178*	..	..	..
El Salvador	000 m. t.	—	—	—	147	118	118	13	16	18	..	1*	1	—	—	—
	Index	—	—	—	*100*	*80*	*80*	*100*	*123*	*138*	..	..	..	—	—	—

Guatemala	000 m. t.	10	13	..	237	294	..	8	9	..	8	5	..	..	..	..
	Index	*100*	*130*	..	*100*	*124*	..	*100*	*112*	..	*100*	*62*	..	..	..	..
Honduras	000 m. t.	..	4	3	174[c]	163	195	6	17	16	11	3	4	..	..	..
	Index	..	..	..	*100*	*94*	*112*	*100*	*283*	*267*	*100*	*27*	*36*	..	..	..
Mexico	000 m. t.	374	340	405	1665	2383	2518	76	139	138	67	124	128	81	119	126
	Index	*100*	*91*	*108*	*100*	*143*	*151*	*100*	*183*	*182*	*100*	*185*	*191*	*100*	*147*	*156*
Nicaragua	000 m. t.	..	..	..	35	..	75	3	6	9	..	..	2	..	..	..
	Index	..	..	..	*100*	..	*214*	*100*	*200*	*300*	..	..	..	..	..	..
Paraguay	000 m. t.	..	1	3	61	..	..	8	8*	11	..	1*	1*	..	..	..
	Index	..	..	..	*100*	..	..	*100*	*100*	*138*	..	..	..	..	..	..
Peru	000 m. t.	76	90	95*	452[d]	386	400	86	179	230	820[e]	660*	660	118[b]	..	143
	Index	*100*	*118*	*125*	*100*	*85*	*88*	*100*	*208*	*267*	*100*	*80*	*80*	*100*	..	*121*
Uruguay	000 m. t.	365	182	424	139	115	163	17	35	44	29	30	..	13	12	15
	Index	*100*	*50*	*116*	*100*	*83*	*117*	*100*	*206*	*259*	*100*	*103*	..	*100*	*92*	*115*
Venezuela	000 m. t.	6[b]	..	7	361*	..	300	13*	15	10	11[f]	..	15	..	..	..
	Index	*100*	..	*117*	*100*	..	*83*	*100*	*115*	*77*	*100*	..	*136*	..	..	..

Note: The crop years for Argentina, Bolivia, Brazil, Chile, Ecuador, Paraguay, Peru and Uruguay, refer to the years in which the crop was seeded. Thus, for example, production shown for Argentina in 1947 was mainly harvested in the first months of 1948. The crop years for the other countries shown in this table correspond to the calendar years shown.

Production shown in the column "1934-38" refers to the average annual output during this period. Where it was not possible to obtain data for the entire five years an average of the annual output for one or more years in this period is shown in this column.

Haiti and Panama are not shown owing to the absence of data.

Source: Original data from the *Yearbook of Food and Agricultural Statistics—1948,* Food and Agriculture Organization of the United Nations.

Wheat: [a]Year 1938. [b]Year 1937.
Maize: [a]Year 1938/39. [b]Average 1936/38. [c]Year 1930. [d]Year 1928/29. [e]Year 1936.
Rice: [a]Year 1938/39. [b]Average of four years. [c]Average of two years. [d]Average 1935/40. [e]Year 1936/37.
Potatoes: [a]Year 1938/39. [b]Average 1935/36. [c]Year 1938. [d]Year 1931. [e]Year 1928. [f]Year 1936.
Barley: [a]Year 1938/39. [b]Year 1928/29.

*Unofficial figures.

although total production for the region remained practically at its pre-war level on account of the influence exercised on this total by the large producers such as Argentina, Brazil and Mexico.

Nicaragua is the country which has most increased its maize production, which in 1947 was 117 per cent above the pre-war period. Costa Rica and Mexico showed increases of 57 per cent and 53 per cent respectively. All the other countries, except Argentina, the Dominican Republic, El Salvador and Venezuela, also showed increases in production, but on a smaller scale.

The increases registered by Nicaragua and Mexico seem to be due partly to increases in cultivated area and partly to better yields. Costa Rica's increase was due exclusively to larger yields, which rose from 5.7 metric quintals per hectare in the pre-war period to 14.8 quintals in 1947.

Again in the case of maize, it is difficult to determine the causes of better yields. It is known that many countries are developing hybrid seeds and that in several instances these have already been distributed among the farmers. It is difficult to say, however, whether such distribution has been wide enough to influence production. It cannot be denied, on the other hand, that scientific work and technical help are already improving conditions and yields in many countries.

In spite of a reduction of 39 per cent in the cultivated area, the total production of Argentina declined only 18 per cent because yields improved from 18 to 24 quintals per hectare. The decreases experienced by the Dominican Republic and Venezuela should be attributed principally to poorer yield and, to a lesser extent, to reductions in cultivated area. El Salvador, in spite of having increased the area under maize by 8 per cent, registered a decline of 20 per cent in volume of production, because of poor yields.

RICE (SEE TABLE 42)

Production of rice has experienced the largest relative increase in Latin America: from a total average production of approximately 1.9 million metric tons in the period 1934–1938 it rose to around 3.2 million tons in 1947, an increase of 69 per cent. Seven of the twenty countries more than doubled their production. Chile increased its production 709 per cent (from 11,000 to 89,000 tons), Uruguay 159 per cent, Ecuador 130 per cent and Peru 167 per cent. Venezuela was the only country in the region which experienced a decrease, amounting to 23 per cent, in its rice production.

Yield figures show that rice production per unit of land has on the whole remained fairly stable, with the exception of Peru where it increased from 20 to 37 quintals per hectare. This expansion also appears to be attributable to an increase of the area under cultivation. It would be of considerable importance to ascertain whether the additional area

under rice is newly-developed land or whether rice has replaced other crops. Lack of information does not permit a detailed study of this subject at present.

It is evident that the chief causes of the great increases in the production of rice were mainly two: the loss of the Far East as a source of supply during the war and the accompanying rise in prices in both home and world markets. These circumstances not only favoured production for internal consumption, but induced some Governments, for instance those of Peru, Ecuador and Brazil, to regard rice as an export commodity and a source of convertible foreign exchange.

The cultivation of this crop has been found to be economical and efficient in many countries and one may expect its production to constitute a permanent part of their agricultural economy.

POTATOES (SEE TABLE 42)

The over-all picture of this crop shows a relative production increase in all countries except Honduras and Guatemala. It must be pointed out, however, that nearly all the tropical countries show a decline in yields, which is offset by an increase in the area under cultivation. At the same time it should be noted that this commodity is of only relative importance in these countries.

Colombia, Mexico and Eucador show the greatest increases in production. In 1947 Colombia was producing 106 per cent more than in the pre-war period, Mexico 91 per cent more, and Ecuador 78 per cent.

Honduras produced 64 per cent less than pre-war and Guatemala 38 per cent less. Table 42 shows potato output in Peru as having decreased sharply in comparison with the 1928 base year. However, unofficial information indicates that production has increased in relation to the pre-war period.

BARLEY, RYE AND OATS

Barley production in Latin America increased 48 per cent in 1947 over the pre-war period. Of the eight countries where this crop is of any importance, only Chile showed a slight reduction in volume and a larger reduction in cultivated area; the others increased their production substantially, with the exception of Brazil where it remained unchanged.

Oat production increased in Argentina and Mexico, but decreased in Brazil, Chile and Uruguay. The volume for the region as a whole in 1947 was only 4 per cent larger than in the pre-war period.

The production of rye rose from 273 thousand metric tons in the pre-war period to 537 thousand tons in the post-war period, an increase of 97 per cent. Argentina contributed largely to this volume of output by more than doubling its production to 521 thousand tons.

TABLE 43. CHANGES IN THE VOLUME OF PRODUCTION OF DRY BEANS IN ELEVEN LATIN-AMERICAN COUNTRIES

	Volume (thousand metric tons)	*Index numbers, base: 1934-38=100*	
	1934-1938	*1946*	*1947*
Argentina	18.8[a]	206	178
Brazil	822.7	124	122
Chile	73.9	108	102
Colombia	36.1[b]	166	166
Costa Rica	9.9[c]	..	166
Dominican Republic	28.4[d]	68	67
El Salvador	17.3	..	64
Guatemala	26.6[c]	85	..
Honduras	11.5	144	150
Mexico	112.0	124	177
Uruguay	3.8	34	..

Source: Original data obtained from *Yearbook of Food and Agricultural Statistics—1948,* Food and Agriculture Organization of the United Nations.
[a]Year 1936. [b]Average 1937-1938. [c]Average of two years. [d]Year 1938.

DRY BEANS (SEE TABLE 43)

Mexico and most of the South American countries increased their production of dry beans considerably. Brazil appears as the largest producer, with a total of 1,006 thousand tons in 1946, representing an increase of 22 per cent over the pre-war period. Mexico is second with a production of 198.9 thousand tons and an increase of 77 per cent in 1947. Chile, the third largest producer, maintained its volume at the same level. Argentina, Colombia, Honduras and Paraguay also showed appreciable increases. The Dominican Republic, El Salvador, Guatemala and Uruguay showed decreased production.

Argentina, Brazil, Costa Rica, Colombia, Mexico and Honduras are the only countries which utilized larger areas for the cultivation of this crop. Yields have generally declined except for Argentina, Chile, Guatemala, El Salvador and Mexico.

SUGAR-CANE, COFFEE AND CACAO

The economies of several Latin-American countries depend largely on the production of one or more of these three export products.

The largest relative increase among the sugar-cane producing countries was in Mexico, where production rose from an average of 3,775 thousand tons in 1934-1938 to 9,700 thousand tons in 1947, an increase of 159 per cent (see table 44). Cuba produced the largest total with 49,100 thousand tons in 1947, which was 87 per cent greater than that

of the pre-war period. Brazil increased its production by 63 per cent, to a total of 28,444 thousand tons in 1947. There is not sufficient official data for the other countries, but several estimates show that practically all of them have tried to increase production to a large extent. Most of the increases in sugar production have been due to larger cultivated area, as yields underwent little change since the late 1930's. Only Cuba and Mexico show any significant increases in yields.

In the case of coffee there was until 1947 an almost general decline in all the producing countries, except in Colombia, Cuba and Honduras where relatively small increases in production took place. It is evident that the smaller demand in the world market and the consequent drop in exports during the war have contributed to lower production. As was to be expected, Brazil was the country most affected, its production decreasing 38 per cent; from a pre-war average of 1,446,000 tons, production fell to only 903,000 tons in 1947. The general situation of the coffee market has improved considerably since 1947. Prices rose mainly as a result of the elimination of controls in the United States. The greater demand in that country stimulated coffee production, although it seems that the pre-war level has not yet been attained.

Cacao production increased in the Dominican Republic, Ecuador, Haiti, Mexico, Nicaragua and Venezuela, but decreased in Brazil, Colombia, Costa Rica and Panama.

COTTON, WOOL AND OTHER FIBRES

The production of fibres is not as important in Latin America as that of foodstuffs, and apart from cotton in Brazil, Mexico, Peru and Argentina, wool in Argentina, Uruguay, Brazil and Chile, henequen in Mexico, and jute in Brazil, the other countries produce relatively small quantities of fibres, either vegetable or animal.

It should be pointed out, however, that there has been a general tendency to increase the production of vegetable fibres, especially cotton (see table 45). Argentina increased production by 30 per cent and Mexico by 47 per cent above the pre-war period. On the other hand, Brazil showed a fall of 10 per cent and Peru of 23 per cent. Among the smaller producers, Colombia, Paraguay, El Salvador, Guatemala and Venezuela showed increases in production, whereas in Ecuador, Haiti and Nicaragua there has been a considerable decrease. As regards yields, there seems to have been a decline, since the majority of the countries show yields equal to or smaller than those of the pre-war period; only in Guatemala, Mexico, Haiti and Peru has there been a slight improvement. It is therefore evident that the increase in production was due chiefly to a larger area under cultivation. Brazil, Mexico and Peru are the main cotton-exporting countries.

TABLE 44. CHANGES IN THE VOLUME OF PRODUCTION OF SUGAR-CANE, COFFEE AND CACAO FOR SIXTEEN LATIN-AMERICAN COUNTRIES, 1934-1938, 1946 AND 1947

Thousand metric tons; index numbers, base: 1934-1938=100

	Unit	Sugar-cane			Coffee			Cacao		
		1934-38	*1946*	*1947*	*1934-38*	*1946*	*1947*	*1934-38*	*1946*	*1947*
Argentina	000 m. t.	5934[a]	7445	..	—	—	—	—	—	—
	Index	*100*	*126*	..	—	—	—	—	—	—
Brazil	000 m. t.	17442	28444	..	1446	920	903	130	119	..
	Index	*100*	*163*	..	*100*	*64*	*62*	*100*	*92*	..
Colombia	000 m. t.	..	6400	..	251	370	296	10[a]	11	8
	Index	..	..	..	*100*	*147*	*118*	*100*	*109*	*79*
Costa Rica	000 m. t.	440[b]	..	..	23	18	27*	7	4	5*
	Index	..	..	..	*100*	*78*	*116*	*100*	*63*	*71*
Cuba	000 m. t.	26176	47703	49138	32	35	36*	3[b]	3*	3*
	Index	*100*	*182*	*188*	*100*	*111*	*113*	*100*	*84*	*100*
Dominican Republic	000 m. t.	..	..	..	21	17	18	23[c]	26	28
	Index	..	..	..	*100*	*80*	*83*	*100*	*112*	*121*
Ecuador	000 m. t.	328	..	..	14	7	9	19[d]	20[f]	..
	Index	..	..	..	*100*	*53*	*66*	*100*	*106*	..
El Salvador	000 m. t.	..	..	..	64	62	62	..	..	..
	Index	..	..	..	*100*	*97*	*97*	..	..	..
Guatemala	000 m. t.	..	..	..	69	70	..	—	..	..
	Index	..	..	..	*100*	*101*	..	..	..	..
Haiti	000 m. t.	..	..	..	27[a]	25[a]	22[a]*	2[e]	2*	2*
	Index	..	..	..	*100*	*92*	*81*	*100*	*120*	*133*

Honduras	000 m. t.	..	..	..	11	13	13	..	..	..
	Index	..	..	..	*100*	*114*	*112*	..	..	..
Mexico	000 m. t.	3775	8412	9792	56	57	55	1	3	7
	Index	*100*	*223*	*259*	*100*	*102*	*99*	*100*	*245*	*636*
Nicaragua	000 m. t.	..	..	..	16[b]	11[b]	12[b]	—	—	—
	Index	..	..	..	*100*	*68*	*76*	*100*	..	*125*
Panama	000 m. t.	..	187[c]	..	1*	2[c]*	..	5[b]	3	3
	Index	..	..	..	*100*	*183*	..	*100*	*60*	*62*
Peru	000 m. t.	3224	3292[c]	..	..	5	5	2[g]	..	..
	Index	*100*	*102*	..	..	..	..	..	..	..
Venezuela	000 m. t.	..	..	..	58	44	31	17[d]	18*	18*
	Index	..	..	..	*100*	*76*	*53*	*100*	*108*	*108*

Note: The crop years for Argentina, Brazil, Ecuador and Peru refer to the years in which the crop was seeded. Thus, for example, production shown for Argentina in 1947 was mainly harvested in the first months of 1948. The crop years for the other countries shown in this table correspond to the calendar years shown.

Production shown in the column "1934-1938" refers to the average annual output during this period. Where it was not possible to obtain data for the entire five years an average of the annual output for one or more years in this period is shown in this column.

Source: Original data from the *Yearbook of Food and Agricultural Statistics—1948,* Food and Agriculture Organization of the United Nations.

Sugar-cane: [a]Years 1938/1939. [b]Average of two years. [c]Refers to 1945.

Coffee: [a]Average of two years. [b]Refers to 1945. [c]Exported in 1947.

Cacao: [a]Average 1935/36-1937/38. [b]Average of four years. [c]Average 1936/38. [d]Exports, average 1935/39. [e]Exports during commercial year 1 October to 30 September. [f]Exports which relate to the following calendar year: thus the figure for 1946 represents exports in the calendar year 1947. [g]Years 1929/30.

*Unofficial figures.

TABLE 45. CHANGES IN THE VOLUME OF COTTON PRODUCTION IN LATIN-AMERICA, 1934-1938, 1946 AND 1947

Thousand metric tons

	1934-38	*1946*	*1947*
Argentina	59.7	68.8	78.0
Brazil	383.8	345.6	254.8*
Colombia	4.5	4.8	6.3
Ecuador	2.6	2.2	1.1*
El Salvador	1.0	4.1	4.3
Haiti	5.2*	1.5*	2.1*
Mexico	68.6	91.1	101.3
Paraguay	10.0	11.9	..
Peru	83.7	65.1	64.4
Venezuela	2.3	2.4	3.3*
TOTAL above countries	621.4	597.5	..

Note: The crop years for Argentina, Brazil, Ecuador, Paraguay and Peru refer to the years in which the crop was seeded. Thus, for example, production shown for Argentina in 1947 was mainly harvested in the first months of 1948. The crop years for the other countries shown in this table correspond to the calendar years shown. Production shown in the column "1934-1938" refers to the average annual output during this period. Where it was not possible to obtain data for the entire five years an average of the annual output for one or more years in this period is shown in this column.

Source: Original data from the *Yearbook of Food and Agriculture Statistics—1948,* Food and Agriculture Organization of the United Nations.

*Unofficial figures.

Statistics of wool production are available only for Argentina, Uruguay, Brazil and Chile. The first two showed considerable increase for the period under consideration—from 170,000 to 225,000 tons in Argentina, and from 30,000 to 75,000 tons in Uruguay. The production of the last two remained almost unchanged, amounting to 18,000 tons in Brazil and 15,000 tons in Chile. The greater part of the production of Argentina and Uruguay is destined for export.

The other fibres are of less importance, as only a few countries devote any appreciable area to their cultivation. There is, however, a marked tendency to increase production, principally with the aim of providing raw materials for the manufacture of sacks and rope. On account of the war the supply of jute had been discontinued, and there was therefore a large market ready to absorb all available production of coarse fibres.

The most important of these fibres is henequen. Mexico was the largest producer with 108,000 tons in 1946 and an export of 55,000 tons. Cuba was second with approximately 15,000 tons, most of which was consumed internally.

Jute is gaining importance in Brazil as "according to the ecological conditions, the production of clean fibre there obtained varies from

1,200 to 2,000 kilogrammes per hectare which, on the average, is larger than the yield obtained in India".[1] In 1947 the production of this fibre was 27,760 tons while in 1941 it was only 8,704.

Other fibres such as abacá, flax and hemp are only produced in limited quantities but are gaining in importance in the region. The Central American countries, especially Panama and Costa Rica, produce abacá, and in 1947 the combined production of these countries was estimated at 16,800 tons. Chile and Argentina produced some hemp, and Chile and Peru produced a very small amount of flax.

OILSEEDS

As a general rule, oilseed production has followed the same upward trend as that of agricultural products which became scarce during the war. There have been, however, some changes in the orientation of production which are worth noting. Argentina, the world's largest producer of linseed, drastically reduced its production in the post-war years. From an average of 1,702,000 tons in 1934-1938 production declined to only 800,000 tons in 1947, a reduction of 47 per cent. The main cause of this change was the increased production of linseed in numerous importing countries which found it profitable either to expand the area under linseed or to introduce this crop, as a result of higher prices in the world market. This led to a contraction in world demand which, together with the control exercised by the Argentine Government on the price of oilseed, made the cultivation of other products whose prices had risen to relatively higher levels, more attractive to farmers.

As mentioned above, linseed production increased considerably in all the Latin-American countries which had favourable conditions for its cultivation. Output in Chile, which had been negligible in the pre-war period, rose to 4,200 tons in 1947; in Mexico it increased from 2,400 to 22,900 tons, and in Uruguay from 89,200 to 103,800 tons.

The production of sunflower seed also increased considerably wherever it could be produced. The largest increase took place in Argentina, where production rose from 154,200 tons, pre-war, to 988,100 tons in 1947, an increase of 541 per cent. Chile and Uruguay, countries of insignificant production in the period before the war, increased their output of this oilseed considerably. Chile became almost self-sufficient and Uruguay began to export.

As regards other oilseeds, the greatest interest was shown in peanuts and ajonjolí, although castor beans and cotton also showed some increases. Mexico's ajonjolí production in 1946 stood at 64,700 tons. Cotton seed production increased in Argentina, Mexico, Guatemala and El Salvador but decreased in Peru and Brazil.

[1] *Conjuntura Econômica*, Fundação Getúlio Vargas, Rio de Janeiro, April 1949.

OTHER PRODUCTS

There are many other agricultural and animal foodstuffs and raw materials produced in Latin America which are important from the point of view of nutrition and trade, such as dairy products, mandioc, bananas, fruits and vegetables, quinoa, coca, etc. Unfortunately, statistical information is so scarce and inadequate that it is difficult to estimate changes in production.

The most noteworthy of these foodstuffs is milk, not only on account of its nutritive value, but also because of the increase in its production and consumption. All the countries which have production statistics for this commodity show a considerable increase, the most marked being in Chile. In 1935-1936 total milk production was 235,000 tons and by 1947 it had risen to 598,000 tons, an increase of 158 per cent. Argentina had an average production of 2,633,000 tons in 1934-1938 and in 1947 output was 4,168,000 tons, an increase of 58 per cent. Practically all the other countries had similar or smaller increases.

Production of cheese and butter has also risen considerably, especially in Argentina, Chile and Brazil.

The production of fruits and vegetables is increasing in the majority of countries and especially in those of higher economic and industrial development, such as Argentina and Mexico. Fruits in the former country rose from a pre-war average of 482,000 tons to 907,000 tons in 1947, while the latter showed an almost identical increase for the same period. As regards vegetables, Mexico reached a high level with 324,000 tons, which constitutes an increase of 120 per cent, while Argentina experienced an increase of 98 per cent.

Mandioc, one of the main foodstuffs in tropical regions, has shown small increases in Brazil, Colombia, Ecuador and most of the Central American countries, and a slight reduction in the Dominican Republic, Peru and Bolivia.

Bananas, one of the chief exports of some Central American countries, underwent a sharp decline in production during the war period due to lack of shipping facilities. Both production and exports have resumed their previous level with the termination of the war, and in some cases have surpassed it. Honduras is still the largest producer, having nearly doubled the number of bunches exported, with 8,400,000 in 1937 and 16,000,000 in 1946. In 1946-1947 Guatemala's production was similar to that of the pre-war period with 14,900,000 bunches. The Dominican Republic and Haiti also showed an appreciable increase, since the former exported 909,000 bunches in 1947 as against 128,000 in 1937, and the latter expanded its exports from 1,327,000 to 7,300,000 bunches. Nicaragua, Ecuador and Colombia reduced their production considerably.

CHANGES IN LIVESTOCK NUMBERS

Cattle breeding presents two different aspects in Latin America. There are the typical cattle-raising countries such as Argentina, Brazil and Colombia which show a tendency to increase their stocks continually; and there are others where this activity appears to have reached a peak between the years 1942 and 1945 and then to have declined in subsequent years. It is difficult to evaluate the causes of these phenomena as they may have been different in each country, but the most probable is that home-bred stock increased in numbers when it was practicable to satisfy demand with imported meat; when these imports were reduced by foreign exchange shortages, high cattle prices and the scarcity of meat in the world markets, it became necessary to slaughter domestic cattle, as a result of which their numbers fell.

Argentina showed a considerable drop in the number of cattle from 1938 to 1941, but from then on it recovered progressively until in 1947 it reached 41,268,000 head, an increase of 24 per cent over 1938 (see table 46.) Beef production in 1947 was only 14 per cent higher than in 1938, however (see table 47.) In Brazil the number of cattle increased steadily, reaching 46,358,000 head in 1946, or an increase of 13 per cent in relation to 1940. For the same years, production of meat fell by 4 per cent and the *per capita* consumption of meat decreased from slightly over 50 kilogrammes to about 40 kilogrammes. The reduction in the production of meat and the decrease in the *per capita* consumption of beef were due principally to the following reasons. As a consequence of higher demand and higher prices for beef in the world market during the war, cattle prices also rose. Difficulties in the transportation of cattle from the breeding regions contributed to a marked increase in prices. In order to redress this situation the Government was forced to introduce price ceilings and to ration the distribution of meat in the large urban centres. All these factors, in turn, tended to reduce *per capita* consumption. In Colombia the number of cattle rose steadily from 1938 to 1947, when, with a total of 13,169,000 head, the increase amounted to 47 per cent. Beef production increased by 23 per cent during the same period which, despite the increase in population, was sufficient to maintain the *per capita* consumption at practically the same level as pre-war. For Argentina, Brazil and Colombia the rate of increase in slaughter was smaller than the rate of increase in the number of cattle.

In the case of Uruguay, essentially a cattle-raising country, the drought of 1943 and an excessive rate of slaughter which had been brought about by high prices and the large foreign demand, caused a drastic reduction in the number of cattle, which affected even the breeding stock. This loss was so great that in 1946 the number of cattle was still 18 per cent below pre-war. (Non-official information indicates that the herds have increased considerably since that year.)

TABLE 46. CHANGES IN THE NUMBERS OF LIVESTOCK IN THIRTEEN LATIN-AMERICAN COUNTRIES, PRE-WAR, 1945, 1946 AND 1947

Thousand head; index numbers, base: pre-war=100

	Unit	Cattle				Pigs				Sheep			
		Pre-war	*1945*	*1946*	*1947*	*Pre-war*	*1945*	*1946*	*1947*	*Pre-war*	*1945*	*1946*	*1947*
Argentina	000	33,207	..	..	41,268	3,381	8,010	..	2,981*	45,917	56,182	..	50,857
	Index	*100*	..	..	*124*	*100*	*237*	..	*88*	*100*	*122*	..	*111*
Brazil	000	40,744	44,613	46,358*	..	21,763	..	24,344	..	10,745	..	13,283	..
	Index	*100*	*100*	*114*	..	*100*	..	*112*	..	*100*	..	*124*	..
Chile	000	2,356	2,348	2,397	2,338	572	..	..	..	5,749	6,000*	5,900*	5,700*
	Index	*100*	*100*	*102*	*99*	*100*	..	..	..	*100*	*104*	*103*	*99*
Colombia	000	9,018	12,334*	12,570	13,169	1,622	..	..	1,679	872	..	..	1,168
	Index	*100*	*137*	*139*	*146*	*100*	..	..	*104*	*100*	..	..	*132*
Cuba	000	4,900	3,884	4,136	..	952	..	1,338	..	164	..	154	..
	Index	*100*	*79*	*84*	..	*100*	..	*140*	..	*100*	..	*94*	..
Dominican Republic	000	818	622	597	..	783	552	547	..	37	..	..	..
	Index	*100*	*76*	*73*	..	*100*	*70*	*70*	..	*100*	..	..	..
El Salvador	000	451	660	650	686	248	382	342	283	6	..	7	6
	Index	*100*	*146*	*144*	*152*	*100*	*154*	*138*	*114*	*100*	..	*117*	*100*

Guatemala	000	605	..	..	..	155	..	..	..	378	..	..	..
	Index	*100*	..	..	..	*100*	..	..	..	*100*	..	..	..
Honduras	000	517	..	849	918	298	..	318	323	13	..	16	13
	Index	*100*	..	*164*	*178*	*100*	..	*107*	*108*	*100*	..	*123*	*100*
Mexico	000	17,158	..	..	..	3,698	..	5,314	..	6,203	..	4,742	..
	Index	*100*	..	..	..	*100*	..	*144*	..	*100*	..	*76*	..
Paraguay	000	3,219	3,187	3,453	3,004	35	..	..	65	146	145	..	110
	Index	*100*	*99*	*107*	*93*	*100*	..	..	*186*	*100*	*99*	..	*75*
Peru	000	1,843	2,909	2,662	..	689	863	..	..	11,198	..	17,288	..
	Index	*100*	*158*	*144*	..	*100*	*125*	..	..	*100*	..	*154*	..
Uruguay	000	8,297	..	6,834	..	346	..	..	..	17,931	..	19,567	..
	Index	*100*	..	*82*	..	*100*	..	..	..	*100*	..	*109*	..

Note: The prewar figures refer to:

Argentina: 1938, except for cattle—1937
Brazil : 1939
Chile : 1936, except for cattle—1939
Colombia : 1938, except for pigs—1934
Cuba : 1934, except for cattle—1939
Dominican Republic: 1939
El Salvador : 1939
Guatemala : 1939, except for pigs—1938
Honduras : 1930
Mexico : 1939, except for pigs—1930
Paraguay: 1936
Peru : 1929
Uruguay: 1937

Source: Original data from the *Yearbook of Food and Agricultural Statistics—1948,* Food and Agriculture Organization of the United Nations.

Pigs: *First census figures since 1937. Intervening estimates probably subject to adjustments.

*Unofficial figures.

TABLE 47. ESTIMATES OF TOTAL MEAT PRODUCTION IN EIGHT LATIN-AMERICAN COUNTRIES, 1935-1939, 1946 AND 1947

Thousand metric tons

	Argentina	*Brazil*	*Chile*	*Colombia*	*Cuba*	*Mexico*	*Peru*	*Uruguay*
Total								
1935-1939	2,122	1,814	168	203	117	418	128	348
1946	2,302	1,677	229	224	167	440	138	305
1947	2,577	1,753	206	..	165	507	146	265
Beef								
1935-1939	1,803	1,275	108	180	90	277	54	267
1946	1,742	1,131	149	223	140	245	59	200
1947	2,067	1,262	138	..	136	304	60	165
Pork								
1935-1939	144	491	18	21	26	123	38	17
1946	225	496	25	19	26	172	32	20
1947	157	438	23	..	28	180	36	18
Lamb and mutton								
1935-1939	175	48	42	2	1	18	36	64
1946	335	50	55	2	1	23	47	85
1947	353	53	45	..	1	23	48	82

Note: Data refer to calendar years.
Source: Food and Agriculture Organization of the United Nations.

Chile, in view of the curtailed imports of live cattle from Argentina during recent years, has been forced to utilize some of its reserves of home-bred cattle in order to supply its domestic market with beef. By 1947, however, the number of cattle was practically the same as in 1938.

Cattle in Cuba have decreased by 16 per cent since pre-war, probably due to a high rate of slaughter and wartime exports (sales to the Allied armed forces). Beef production in 1947, on the other hand, was 41 per cent greater than in 1935-1939 and the *per capita* consumption had also increased noticeably.

Among the Central American countries which have statistical information, El Salvador and Honduras showed rather large increases in cattle numbers while the Dominican Republic and Guatemala experienced decreases of 27 per cent and 33 per cent, respectively.

The only available information for Mexico is taken from the 1930 and 1940 censuses; the figure for 1940 shows an increase of 15 per cent over 1930. Cattle exports also increased from an average of 341,000 head in 1937-1939 to 447,000 in 1946.

Paraguay, another important cattle-raising country, showed a 7 per cent reduction in the total.

Changes in sheep numbers have been relatively smaller. Bolivia, Colombia and Argentina showed the largest increases, 53, 32 and 10 per cent, respectively, for 1947.

Hogs increased considerably in Paraguay, Mexico and Cuba. Argentina, the Dominican Republic and Guatemala showed the most

important decline in hog population. Changes in rates of hog production, however, are not as significant as those of cattle and sheep since the reproduction cycle of hogs is much shorter and they can be replaced more rapidly.

VI. CHANGES IN THE CHARACTER OF PRODUCTION

Principal causes

From the preceding section it can be seen that Latin-American countries have altered their trends in production to adapt themselves to the different economic situations arising during the last decade. In general most of them have attempted to increase the production of specific crops and to diversify their agriculture. Three distinct general causes have brought about these changes: first, the constantly increasing population with presumably higher incomes resulting from a higher level of economic activity; secondly, certain world food shortages which led to higher prices and difficulties in importing food and agricultural raw materials; thirdly, a greater demand in the international markets which permitted an increase in exports and foreign exchange receipts.

Many countries made an effort to become self-sufficient in the production of wheat, oilseeds, rice, sugar and cotton. Others intensified production to such an extent that they became exporters, as in the case of rice in Ecuador, wheat in Chile, and some oilseeds in other countries. Dairy products also received preferential attention in several countries. These changes will be subsequently shown at a country level.

Argentina

It is evident that the composition of production in this country has changed considerably and that it is adjusting itself to a changing economic situation. Greater price incentive, the availability of markets, etc., seem to have had considerable influence in bringing about such changes.

A marked reduction in the area under wheat, oats and maize has taken place in the last few years. The wheat area harvested declined 31 per cent, maize decreased 39 per cent, and the oats area 16 per cent. However, wheat still continued to occupy 50 per cent and maize 28 per cent of the area under cereals.

Linseed underwent a similar reduction, declining from an average cultivated area of three million hectares in 1937-1939 to an average of only 1.8 million hectares in 1946-1948.[1] On the other hand, there was a

[1] *Síntesis Estadística Mensual de la República Argentina, Dirección General de Estadística y Censos,* January 1948.

considerable increase in the cultivated area of barley, rye, sunflowers, peanuts, fruits, vegetables and alfalfa. However, all of these crops together did not occupy the five million hectares left vacant by linseed, wheat, maize and oats. The remainder was devoted to cultivated and natural pastures for livestock raising. This change accounts for the 24 per cent increase in the cattle population. It should also be pointed out that the higher domestic demand for foodstuffs and agricultural raw materials has played an important part in the change in and diversification of agricultural production. Largely accounting for the changes in output are increases of 10 per cent in the consumption of meat, 60 per cent in vegetables, 60 per cent in edible fats and oils, 87 per cent in fruits[1] as well as a considerable increase in cotton consumption.

Brazil

This country has increased its area under cultivation by more than two million hectares with a view to increasing the production of such commodities as wheat, rice, sugar-cane, fruits, vegetables and pulses. Several reasons have led to the increase in area, the main ones being the growing difficulty Brazil is finding in maintaining the soil fertility of many of its agricultural regions, the relative poverty of the readily accessible new lands now being brought under cultivation, the difficulty of obtaining agricultural machinery and fuel (an obstacle which became less acute after the war) and the relatively small utilization of fertilizers. All these factors, and especially the first one, tend to lower agricultural yields. As regards production itself, the main increase amounted to 99 per cent for wheat, 63 per cent for rice, 63 per cent for sugar, 27 per cent for fruits and 22 per cent for beans, over the pre-war period. Output of the majority of the other products remained unchanged or declined slightly. As already stated the crop which had the greatest production decrease was coffee, amounting to 38 per cent.

The Government encouraged cattle breeding by granting large credit facilities. Private farmers also found a sufficient incentive in the high export prices of meat.

Chile

Agricultural production in this country is marked by considerable increase in rice, potatoes, wheat, sunflower seeds, fruits and milk, and a smaller increase in maize. Other products such as oats, barley, rye, dry peas and lentils decreased noticeably. The increase in wheat was due primarily to much better yields since the harvested area increased only 2 per cent over the pre-war average. Rice, a cereal which gained consider-

[1]Food and Agriculture Organizations.

able importance during the war, was grown partly for foreign markets; 35,600 of the 89,000 tons produced were exported. The area used for the cultivation of this product was partly that left by other grains; but mainly it was land with impermeable sub-soil used until then for natural grazing because it was considered unfit for other exploitation. The intensification of other production was mainly intended to cover and better satisfy internal demand and, as in the case of sunflower seeds and wheat, to save imports.

Colombia

As was the case with the countries mentioned above, Colombia increased its production in general but particularly that of potatoes, rice and cotton. The 1947 potato crop was 106 per cent larger than pre-war, rice increased by 68 per cent and cotton by 40 per cent. Sugar-cane production also increased considerably, but no specific data are available. Practically all efforts to increase wheat production failed on account of climatic conditions, and the area under wheat was greatly reduced in 1947. In the pre-war period it occupied 22 per cent of the total area under cereals, but in 1947 this percentage declined to only 14. On the other hand, the area cultivated for rice rose from 6.8 to 13.6 per cent of the total. Cattle, both for beef and dairy, also showed considerable improvement.

Mexico

In Latin America, Mexico is doubtless the country which has increased its production most and with the highest degree of diversification. In 1947 all main crops showed increases varying between 8 per cent for wheat and 620 per cent for oats. Sugar, rice, and potatoes increased 159, 96 and 91 per cent respectively; dry bean production rose 77 per cent, barley 55 per cent, maize 53 per cent and cotton 47 per cent. Vegetables and oilseeds, especially ajonjolí, also showed increases of 113 and 96 per cent, respectively. The most important crops as regards volume and cultivated area continued to be maize, wheat, sugar and cotton. The yields of most of these crops remained unchanged or rose slightly.

The chief reasons for the substantial increase in production have been the new land brought under cultivation and additional areas under irrigation. The area cultivated in 1947 was 30 per cent larger than pre-war, which signifies that an increase of around 1.7 million hectares of new land were brought into cultivation in the last decade.

Peru

In this country there has been a considerable increase in the production of rice, wheat and barley and, to a lesser extent, of sugar-cane.

The rice crop of 1947 was 167 per cent larger than that of the pre-war period, the wheat crop increased 25 per cent and the barley crop 21 per cent. The production of vegetables and fruits was intensified, since the 1947 crop was 25 per cent larger in the aggregate. Most of the other products experienced a reduction in their output, the most noteworthy being cotton, which declined by 23 per cent on account of a reduction in cultivated area by the same percentage.

Uruguay

Government-support prices for wheat and other crops induced farmers to cultivate some of the land formerly used for natural pastures. With 60,000 additional hectares under cultivation in 1947 as compared with 1937, production of rice increased 159 per cent, wheat 25 per cent, oats 17 per cent and barley 15 per cent. Oilseeds, especially sunflower and peanuts, gained in importance in Uruguayan agriculture, rising from a negligible production in the pre-war period (1,100 tons for peanuts and 2,900 for sunflower seeds) to sizable amounts (16,200 and 55,200 tons, respectively). Linseed production also increased. Thus the country became practically self-sufficient in oilseeds and oils.

Livestock-raising, one of the most important activities of the country, suffered a setback with the drought of 1943. As a result of this and of an intensive rate of slaughtering to satisfy a larger internal and foreign demand, the numbers of livestock in 1946 were still 18 per cent below the pre-war level. Between 1937 and 1944 a decrease by 679,000 hectares in the area used for natural pastures took place.[1]

Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica and Panama

All the countries in Central America without exception have paid larger attention to rice production, and in varying degrees to maize. Nicaragua and Honduras increased their rice production by 200 and 160 per cent, respectively, over the pre-war period. Costa Rica and Guatemala reduced their cultivated area of maize, but thanks to better yields, increased their production by 57 and 24 per cent, respectively. The production of coffee in most countries, with the exception of Honduras, was slightly lower than in the pre-war period but has a strong tendency to return to its former predominant position in the export trade of the area, owing to the comparatively higher prices it continues to obtain in the United States market. The output of oilseeds has increased quite considerably, especially cotton and ajonjolí, with El Salvador the most important producer of both oilseeds and oil. Production of essential oils

[1] *Recopilación de la Estadística Agrícola del Uruguay, 1948, Ministerio de Ganadería y Agricultura,* Montevideo.

was substantially expanded in Guatemala where in 1946 it was 236 per cent larger than pre-war. Fruits and vegetables have also gained in importance, especially in Honduras, Costa Rica and Guatemala, countries in which bananas alone have accounted for sizable exports. Tobacco production increased considerably in all these countries.

Cuba

Cuba's main crop, sugar-cane, continued to gain importance in the island's agriculture; production in 1947 increased 87 per cent in relation to pre-war and the area devoted to its cultivation was 70 per cent larger. Rice production expanded by 250 per cent and potatoes by 20 per cent. The output of maize was also expanded. Production of tobacco in 1946 had increased by around 65 per cent over pre-war as the result of improved yields, for the area under this crop remained practically stationary. Production of pineapples was more than double but that of citrus fruit declined.

Dominican Republic and Haiti

Sugar-cane production increased steadily in the two countries to a peak in 1947. There has also been an appreciable increase in the production of rice in Haiti, amounting in 1947 to 400 per cent of pre-war. The Dominican Republic, through its plan of agricultural development, has been able to supply most of its needs, with the exception of wheat and other products of temperate climates.

The lack of adequate statistical data makes it impossible to estimate the changes which occurred in the remaining countries of Latin America.

VII. TRANSPORTATION AND MARKETING

Distribution costs

The significance of remunerative prices as a factor leading to increased production has been pointed out, as well as the stimulating effect of low prices upon demand. However, out of the money unit spent by the consumer, the farmer receives only a part, the rest representing payment for the various marketing services such as transport, storage and distribution. These services, especially when they are not well organized, help to widen the gap between consumer and producer, by increasing the price paid by the former and lowering the profit of the latter, with correspondingly discouraging effects on both sides. Factors of a different nature, such as the changing habits of consumers who require greater

variety and a better quality of foodstuffs; the continually increasing distances between centres of production aggravated by transport inadequacies, the difficulties of distribution in larger population centres; the lack of market facilities, and of organization and control, etc.—all contribute to increased costs and enhance the bargaining power of the middleman. A brief examination of some aspects of the problem has been made below.

Transportation

The chapter on transportation of this report shows its crucial role in the development of agriculture and highlights the inadequacies of the present transportation systems in most Latin-American countries. There are large potentially productive regions with deficient communication facilities. In other areas transportation difficulties make agricultural production almost completely uneconomical. This is because for numerous crops an appreciable part of the costs in the marketing scheme is chargeable to transportation. However, inadequate as transportation may be, there are encouraging possibilities in certain areas for its short-term improvement by means of an efficient system of trucking. Though few studies have been made on this subject, it is clear that under existing road conditions, costs and losses of agricultural products could be lowered by the co-ordinated action of producers and transporters (especially in relation to opportunity of transportation), the use of adequate vehicles, including refrigerated cars, better packing and better handling of both perishable and non-perishable foodstuffs.

Storage

Practically throughout Latin America the marketing process suffers from seasonal and other fluctuations which act as a brake on both production and consumption. Due to lack of adequate storage facilities, food products reach the market in very large quantities during the harvest period or shortly thereafter, not only overloading the existing transportation facilities, but causing considerable drop in prices and a large proportion of spoilage. A few examples of the seasonal variation in prices show the gravity of the problem. In Bogotá, Colombia, the price for a cargo (125 kilogrammes) of potatoes reached its lowest level of 20 pesos immediately after the harvest period in 1947, but rose a few months later to 50 pesos, an increase of 150 per cent.[1] In 1944 the price of potatoes in Santiago, Chile, attained its lowest level in May, increased 176 per cent by October, fell again in December and continued declining to practically the same price level as the year before. Prices of large

[1]*Source: Instituto Nacional de Abastecimientos.*

onions in the same market increased 216 per cent from April to October.[1] In Mexico monthly price averages for the last five years show increases of around 95 per cent for potatoes from January to May, around 180 per cent for tomatoes from January to October, about 130 per cent for oranges between January and May; and other semi-perishable products show similar seasonal changes.[2] Farmers who want to offset these variations and keep their products until prices increase suffer losses which are not usually compensated by the differences in price. Pests, rodents and other factors account for such losses when there are no adequate storage facilities.

In this way, the physical losses experienced, especially in the tropical regions, both by private individuals and by Governments, amount to millions of dollars. The chapter on warehousing of the ECLA-FAO Working Party Report, shows that millions of dollars are lost yearly in Honduras, Nicaragua, Guatemala, El Salvador, Costa Rica, Venezuela, Colombia and other countries. For instance: "During 1947 the Venezuelan economy, due to bad storage conditions, has suffered damages amounting to 18 million dollars in maize, beans, rice, coffee and ajonjolí; 82 per cent of the damage was due to the action of insects, 15 per cent to that of rodents and the remaining 3 per cent to fungi."

The inadequacies of both warehousing and credit facilities usually place the farmer in a difficult situation after each harvest period. His immediate need for money to pay harvest expenses and prepare for his next crop, force him to dispose of his crops as early as possible. This situation favours the activities of middlemen and merchants, and could be alleviated by the establishment of a system of general warehousing, provided with all necessary facilities for the preservation and processing of products. Special warehouse receipt credits might be granted which would allow the farmer to obtain the sums he needs without having to dispose of his products, thus placing him in a favourable position to bargain for better prices. Seasonal fluctuations in both supply and prices would thus be partially reduced.

The marketing system

Few countries in Latin America have an organized system of marketing, and where such organizations exist, they are usually limited to export commodities.

A large variety of marketing practices exists in the different countries, ranging from the barter activities common amongst the Indians of some of the agricultural regions in South and Central America, to the grain, coffee and other exchanges in large production centres. On the

[1] *Comercio Interior y Comunicaciones*, 1944.
[2] *Boletín Mensual de la Dirección de la Economía Rural*, No. 265, June 1948.

whole, however, the two most common types of markets are those of small villages and small consuming centres, where the farmer, and especially the small producer, takes his products to the market-place and sells them himself, and those of larger towns and cities where the producer is not in a position to sell his products directly and usually has to do so through wholesalers and middlemen. In many places these middlemen also own trucks or other means of transport and purchase the products on the farm.

In large production centres, exchanges like the *Bolsa de Granos* and the *Mercado de Algodón* (Cotton Exchange) in Argentina, the *Bolsa de Café* (Coffee Exchange) in Brazil, and *Bolsa de Mercaderías de Rio Grande do Sul* (Rio Grande do Sul Commodities Exchange) strengthen the bargaining position of the farmer by means of the publication of quotations or the actual sale of products through brokers. Of late, several Governments, either with the intention of fixing and controlling selling prices or with the desire to foster production through minimum or guarantee prices, have initiated a policy of direct purchasing. Co-operative marketing of agricultural products has not made much progress in Latin America and relatively few distribution co-operatives are in operation. A few countries such as Argentina, Brazil and Mexico have some institutions of this kind, especially for the distribution of dairy products and fruits.

VIII. THE FINANCING OF AGRICULTURE

The over-all problem

The expansion of agricultural production requires a greater volume of investment than has been available until now, and in most countries of Latin America it necessitates a change in the distributive mechanism of credit facilities. This seems to be of cardinal importance if a greater volume of agricultural output, a diversification of production and a higher standard of living for the farming population are to be achieved.

Some of the characteristics of saving and investment in Latin America have been outlined in the chapter on manufacturing. The financial problems of agricultural production are generally more acute than those of any other productive activity, due to the technological and institutional peculiarities of agriculture in Latin America.

The technology of agricultural production in Latin America has a direct bearing upon its credit needs. With the partial exception of Argentina and Uruguay, agricultural technology, particularly from the standpoint of equipment, varies considerably in the sector producing primarily for export, as compared to those sectors producing for domestic consumption. The export sector, comprising, for instance, sugar production in Cuba; coffee in Central America, Colombia and Brazil; cotton in Peru; bananas in the Caribbean region; meats and wool in the River

Plate countries; and wheat in Argentina, is characterized by a relatively high amount of capital per worker, and is usually more able to satisfy its investment and credit requirements than the sectors producing primarily for the domestic market.

An important institutional factor affecting agricultural credit is the present organization of the market for agricultural products. Their loose network, the role of middlemen and the lack of agricultural cooperatives have been pointed out, along with other characteristics, in the present chapter.

Of similar significance is the land tenure system of the various countries. On the basis of commercial considerations large landholders will be considered better risks and will have fewer difficulties in satisfying their credit requirements than small farmers. The problem is further aggravated by the fact that in many parts of Latin America land titles are not always clear from a legal standpoint. Also, transportation difficulties, to the extent that they prevent easy marketing of agricultural products and hamper the farmers' access to town or that of inspectors to his farm, present an obstacle to agricultural credit. Moreover, the prevailing low educational level of the farming population may contribute to the fact that farmers are not always thoroughly informed about the sources and terms of credit available, other than those of the local merchant. Finally, their lack of technical knowledge often prevents them from making the best use of the credit they obtain and from estimating more accurately their possibilities of repayment.

In contrast to those countries where agriculture is more productive or where land is distributed more evenly, the possibilities of self-financing are extremely limited and often non-existent for the small producers. As a result of his low income, the small farmer seldom has any savings.

As an illustration of the effect of technological structure, marketing facilities and size of holdings upon the availability of credit facilities, the distribution of credit for agricultural purposes of the Bank of Brazil may be considered. In the period 1938-1946, an average of 68 per cent of the total was granted for the production and marketing of coffee and cotton, which constitute the two most important export commodities of the country; 27 per cent was destined for other agricultural products which enter the export trade on a smaller scale; and only 5 per cent financed commodities which are consumed almost entirely within the country.[1]

Middlemen's credit

In a number of Latin-American countries the larger part of agricultural credit is still being channelled through middlemen who in most cases are at the same time buyers of agricultural products and sellers of

[1]Based upon data contained in the *Relatorio do Banço do Brasil—1946.*

farm requisites and household needs. In some areas large producers of sugar or coffee, who own processing establishments, also grant advances to the small farmers from whom they purchase their crops. Even in Mexico where an extensive network of specialized agricultural credit institutions exists, it is estimated that 75 per cent of the credit needs of the farmers are handled by private merchants or individuals.[1] In Argentina they supply between 20 and 40 per cent of farm credit.

This type of credit offers several advantages as compared to those types available from banks or specialized credit institutions. Chief among them are accessibility, speed, flexibility of terms of repayment, as well as few restrictions as to the purpose for which credit is required. In several countries and in many areas, moreover, middlemen's credit is the only one available to farmers. In all other respects middlemen's credit frequently constitutes an obstacle to agricultural production. The rate of interest is very high and sometimes exorbitant. In Haiti it is said to range from 10 to 20 per cent per month. Lower rates of interest sometimes conceal other forms of payment, either direct or indirect. Thus, credit may be granted on condition that the farmer sell his crop to the creditor below market price.

Commercial bank credit

In nearly all countries, agricultural credit has little attraction for commercial banks, particularly when these institutions consider profits which can be derived from financing trade activities or the security that real estate offers. Moreover, credit to agriculture is more difficult to control, usually involving higher risks and relatively larger expenses in handling and supervising. Above all, commercial bank credit, usually limited to 90 or 180 days—although longer terms are permitted by banking laws—is useful to agriculture in special cases only. As a result, commercial banks usually confine their loans to middlemen or large agricultural producers.

In Mexico, which represents a rather favourable example, less than 25 per cent of the production credit of the commercial and savings banks in 1947 was destined for agriculture, including stock-raising; in turn, production credit represented 51 per cent of the total credit extended by them during the year.

In addition to the fact that the terms of repayment are not sufficiently flexible from the standpoint of the requirements of agriculture, the rates of interest charged by commercial banks are usually high. Sometimes they are limited by law to those charged by the public credit institutions, but often they are higher owing to commissions and special charges. With sufficient security, short-term credit may be renewed several times, but the charges connected with each extension make it a medium-term credit which is too costly and uncertain for agriculture.

[1]Statement of the Secretary of Finance, September 1948.

Another factor which considerably diminishes the usefulness of commercial bank credit for agriculture is the high degree of geographic concentration of the commercial banks in most countries.

SPECIALIZED BANK CREDIT

In recent years most of the countries have made an effort to assist agricultural development by establishing, under government auspices, specialized credit institutions. They are intended to grant credit at lower rates of interest and on terms which better meet the requirements of agricultural production than are otherwise available. Moreover, such credit will reach a larger number of farmers and include a greater proportion of developmental credit as compared to production credit. By offering an alternate source of credit it is also intended to reduce the interest rates charged by middlemen and commercial banks.

Government-sponsored agricultural credit institutions exist in nearly all countries of Latin America with the exception of Cuba, Honduras and Haiti. In Cuba, however, the creation of a specialized agricultural credit system is contemplated for the near future.

In contrast to the institutional structure which has been created, the present role and potentialities of the specialized agricultural credit systems are still very limited in most countries. For instance, despite an early development, the National Agricultural Bank and the National Bank for Ejidal Credit[1] in Mexico supply only 10 per cent of agricultural credit in that country. Greater progress seems to have been achieved in Argentina where the *Banco de la Nación Argentina* supplies 30 to 40 per cent of the country's total agricultural credit.

Most of the specialized agricultural banks are limited by a shortage of capital. Data available for the majority of these institutions indicate that less than 20 per cent of the loan applications can be satisfied. For example, the Rural Credit offices in El Salvador are reported to have suspended operations because of lack of funds. For the same reason Nicaragua's *Banco Hipotecario* is now able to operate only on a very limited scale. A similar situation prevails in the Dominican Republic, Ecuador and Bolivia. Among the countries with better developed systems of agricultural credit but where operations are limited by a shortage of available funds, may be included Mexico, Chile and Colombia. On the other hand, in Argentina, Uruguay and Brazil, the operations of the specialized agricultural credit institutions are not impeded by shortages of funds available for loans.

Nevertheless, in these and other countries, one or several of the following reasons limit the usefulness of the specialized credit institutions

[1]The *Banco Nacional de Crédito Ejidal* specializes in accommodating the credit requirements of its members who are associated with agricultural co-operatives called *ejidos*.

or prevent a fuller application of their availabilities. Most of them place too great an emphasis on the security of each loan. The *Crédito Hipotecario Nacional* in Guatemala requires all loans, including production credit, to be made on a mortgage basis. A more flexible system prevails in Chile where the *Instituto de Economía Agrícola* grants commodity credits against warrants similar to the method used by the Farm Credit Administration in the United States. On the other hand, lack of sufficient guarantee was probably the main reason that in Mexico the losses suffered by the Agricultural Bank amounted to 48.2 million pesos, and those of the *Banco Ejidal* to 19.4 million, in the period 1935-1946.[1] As a result, such losses have to be made up by government subsidies if these institutions are to continue in operation. In view of the limited subsidies, the *Banco Ejidal* had to restrict its operations to more reliable borrowers, reducing the number of its clients from 450,000 to 250,000 of the *ejidatarios,* who number over two million.

The specialized credit institutions in many countries do not have sufficient branches for nation-wide extension of their facilities. Argentina, Mexico, Costa Rica and Chile are exceptions, however.

Few among the specialized credit institutions appear to have an integrated credit policy. This is partly the result of the commercial banking outlook of their management, and partly of insufficient control over the utilization of credit.

Consequently loans are sometimes granted indiscriminately without due consideration of the purpose for which credit is sought: whether it is destined for increasing the production of crops in short supply in the domestic market, the development of particular areas, etc.

In Mexico the Agricultural Bank has recently been favouring the financing of crops for domestic consumption, such as corn, sugar-cane, rice and wheat, in line with the Government's policy. On the whole, however, few specialized credit institutions in Latin America have co-ordinated their action with over-all agricultural requirements; nor have most of these countries established a sufficiently definite credit policy. Even fewer have a direct credit policy aimed at the solving of specific problems of production. A series of studies with the object of determining the manner in which the farms can be used to the best advantage according to their size, would appear to be necessary in order to establish sound agricultural policies. Such investigations would presumably have to be co-ordinated with governmental technical agencies, in order to be provided with the necessary research facilities, education and practical advice.

With the limitations indicated above, the policy of the specialized credit institutions is directed primarily to an expansion of production, but it is still restrictive in the case of agricultural investment loans. The

[1] *Weekly Letter,* Mexican Bankers' Association, 1948; *Annual Report, Banco Nacional de Crédito Ejidal,* Mexico, D.F., 1947.

Corporación de Fomento in Chile is an exception; this institution specializes in investment credit, with particular regard to agricultural machinery, building and small irrigation works. Moreover, in Chile and Brazil, as well as in some of the other countries, the investment requirements of farmers are being reduced because tractors are being made available for hire by governmental agencies.

A broad field of investment, of general interest to agriculture, is beyond the scope of the specialized credit institutions, which have, however, in some cases financed the construction of small processing plants and storage facilities. The development of irrigation, transportation and electric power, which have a direct bearing upon agricultural production, is in the hands either of public authorities or of private enterprise.

The development of adequate agricultural credit facilities can be considered only as a part of the strengthening of the banking structure in each country and of domestic financial policy in general. Furthermore, it must be borne in mind that a sudden expansion of credit in any field may have dangerous inflationary consequences. "In any far-reaching scheme for national development, unless the introduction and establishment of a wise system of internal finance to cover taxation, borrowing, and credit distribution is recognized as an essential and preliminary part of the development process itself, the brightest hopes must be doomed to disappointment."[1]

[1]*Report of the FAO Preparatory Commission on World Food Proposals,* Washington, D. C., February 1947.

PART TWO

OTHER ECONOMIC ASPECTS

CHAPTER 5

POPULATION CHARACTERISTICS

I. TOTAL POPULATION

It is impossible to present an adequately true picture of the population of Latin-American countries. In some countries censuses have been taken within a relatively recent period,[2] but in others no census has been taken for many years.[3] Ecuador has never had a census. Moreover, even among the countries with a relatively recent census, there is not one that has a long series of periodical censuses. Consequently, the only way of determining the population of the whole of Latin America at one particular date is to resort to estimates. The reliability of such estimates is variable from country to country. They are highly questionable for Bolivia, Uruguay, and Haiti, which have very old and inaccurate censuses, and they have very little value for Ecuador, the population history of which is unknown. Even for countries with a relatively long history of occasional censuses and with recent population count, the completeness of enumeration may vary from one census date to the next, and current estimates may be misleading.

For these reasons the estimates provided by the Statistical Office of the United Nations show only the approximate size of the population in Latin America and a rough indication of its distribution among the various areas. Table 48 gives these estimates, as of mid-year 1947, for each country. All the figures are official.

These figures show that the population of Latin America amounts to nearly 150,000,000. Slightly less than one-half of this population is in the "A.B.C. area" (Argentina, Brazil, Chile, Uruguay and Paraguay). Western South America accounts for some 30 million, or one-fifth of the total; Central America, including Mexico, has about 33,000,000, or nearly one-fourth of the total; and the Caribbean, Major Antilles area has about 11,000,000, amounting to about 7 per cent of the total.

Almost 60 per cent of the total population of Latin America is located in three countries: Brazil (32 per cent); Mexico (16 per cent); and Argentina (11 per cent).

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[1]This chapter has been prepared by the Population Division of the United Nations Department of Social Affairs. The grouping of countries into four sub-regions as in tables 48 and 49 has been adopted by the Population Division.

[2]Argentina (1947), Brazil, Chile, Guatemala, Mexico, Nicaragua, Panama, Peru (1940), Colombia (1938), Costa Rica (1927), Cuba (1943), Dominican Republic (1935), El Salvador (1930), Honduras (1945), Paraguay (1936), Venezuela (1941).

[3]Bolivia (1900), Haiti (1918-1919), Uruguay (1908).

TABLE 48. DISTRIBUTION OF POPULATION IN LATIN-AMERICAN COUNTRIES, 1947

		Population (in thousands)	*Per cent*
	Latin America	146,631	100.0
I.	A.B.C. area	72,710	49.6
	Argentina	16,109[a]	11.0
	Brazil	47,550[b]	32.4
	Chile	5,526[a]	3.8
	Paraguay	1,225[b]	0.8
	Uruguay	2,300[b]	1.6
II.	Western South America	30,119	20.5
	Bolivia	3,854[a]	2.6
	Colombia	10,545[a]	7.2
	Ecuador[c]	3,400[b]	2.3
	Peru[d]	7,922[e]	5.4
	Venezuela[f]	4,398[a]	3.0
III.	Central America, including Mexico	33,010	22.5
	Costa Rica	782[a]	0.5
	El Salvador	2,047[a]	1.4
	Guatemala	3,642[a]	2.5
	Honduras	1,240[b]	0.8
	Mexico	23,434[a]	16.0
	Nicaragua	1,136[a]	0.8
	Panama	729[a]	0.5
IV.	Caribbean, Major Antilles, excluding Puerto Rico and Jamaica	10,792	7.4
	Cuba	5,091[e]	3.5
	Dominican Republic	2,151[a]	1.5
	Haiti	3,550[b]	2.4

Source: United Nations Statistical Office, *Demographic Yearbook, 1948.* Population figures refer to "present-in-area" population.

[a]Official figures from official sources in each country.

[b]Official figures. Estimated by the United Nations and approved by the country.

[c]Including Galapagos Islands.

[d]Includes 465,000 estimated for omissions at the census and 350,000 for jungle inhabitants.

[e]Official—Mean of official end-of-year estimates.

[f]Excludes tribal Indians estimated at 100,600 in 1941.

Assuming that the world population in 1947 was roughly 2,300 million,[1] the share of the Latin-American countries amounts to about 6 per cent.

II. POPULATION DENSITY

The Latin-American countries have a total area of 20,028,000 square kilometres, which corresponds to about 16 per cent of the world's inhabitable area.

This huge territory, where only about 6 per cent of the world's population lives, has thus a very low average density of only 7 inhabitants per square kilometre. Among the major regions of the world only Africa and Australia have a lower density than Latin America. Asia (excluding the USSR), with a population of almost 1,200 million, has an average density nearly seven times that of Latin America.

[1]United Nations Statistical Office, 1947 mid-year world total population estimate.

But, although the density of population in Latin America as a whole is very low, the same is not true for all its zones, and some countries present a strikingly high density.

The A.B.C. area, which comprises 63 per cent of the total area of Latin America, has an average density of about 6 inhabitants per square kilometre (see table 49). Western South America with 23 per cent of the total area has a somewhat higher density. Central America, including Mexico, comprises 13 per cent of the territory and has an average density of about 13 inhabitants per square kilometre. The Caribbean, Major Antilles, excluding Puerto Rico and Jamaica, extends over 1 per cent of the total area and has an average density of about 56 persons per square kilometre.

With the exception of some parts of the United States, the Caribbean is the most densely settled part of the Western Hemisphere. Of the

TABLE 49. AREA AND POPULATION DENSITY OF LATIN-AMERICAN COUNTRIES, 1947

	Area in thousands of square kilometres	*Population per square kilometre*
Latin America	20,028	7.3
I. A.B.C. area	12,646	5.7
Argentina	2,794	5.8
Brazil	8,516	5.6
Chile	742	7.4
Paraguay	407[a]	3.0
Uruguay	187	12.3
II. Western South America	4,651	6.5
Bolivia	1,076	3.6
Colombia	1,139	9.3
Ecuador	275	12.4
Peru	1,249	6.3
Venezuela	912	4.8
III. Central America, including Mexico	2,538	13.0
Costa Rica	51	15.4
El Salvador	34	60.2
Guatemala	109	33.4
Honduras	153	8.1
Mexico	1,969	11.9
Nicaragua	148	7.7
Panama	74	9.9
IV. Caribbean, Major Antilles, excluding Puerto Rico and Jamaica	193	55.9
Cuba	115	44.3
Dominican Republic	50	43.0
Haiti	28	126.8

Source: Demographic Yearbook, 1948. The figures for population density in some countries are not exactly the same as those published in the *Demographic Yearbook.* Small variations are due to the rounding off of figures by the Population Division. The area refers to 1 July 1947 boundaries. Figures correspond to the total areas, i.e., land and water areas.

[a]Including the Chaco (246,925 square kilometres) awarded to Paraguay by arbitration in 1938.

countries included in the Caribbean zone, Haiti has the highest average density; the estimates indicate more than 120 persons per square kilometre. Cuba and the Dominican Republic are next with average densities of about 44.

The population density in Haiti, compared to that of Asian and Far Eastern countries, appears even higher than that of India or Korea (105 and 125 inhabitants per square kilometre, respectively). It is only lower than that of Japan (204).[1] The Caribbean area as a whole has a population density higher than that of China (48), and a little lower than that of the Philippines (66).

Contrasting with the Caribbean, the other parts of Latin America present a very low density, especially the A.B.C. and the western South America areas. Only a few large regions in the world, such as the Union of South Africa (9.5), Australia (1.0) and Canada (1.3),[2] present a comparable or lower density. It is interesting to note that the Latin-American countries with the lowest population density, Bolivia and Paraguay, with 3.6 and 3.0 inhabitants per square kilometre, respectively, are inland countries.

The crude density seems to suggest a very sparse settlement in the three main areas of Latin America. However, in countries still essentially agricultural, a much better measure of settlement is given by the ratio of persons dependent on agriculture to the cultivable land area. While the agricultural density in most of Latin America is not known, estimates for Mexico, Chile and Argentina are given below along with a figure for the United States, for comparison.

	Persons dependent on agriculture per square kilometre of arable land
Mexico[a]	26
Chile[b]	31
Argentina[b]	12
United States[b]	14

[a]Official figure, according to the 1940 census.
[b]Kingsley Davis, "Population Trends and Policies in Latin America," in Texas University, Institute of Latin American Studies, *Some Economic Aspects of Postwar Inter-American Relations,* 1946. Dates of estimates are not specified.

These estimates suggest that the agricultural density in western South America and in Central America is much higher, in relation to that in other parts of the world, than the over-all ratio of population to total area. The explanation may be found in the mountainous terrains of these parts of America, and in the inaccessibility of their large hinterland areas, which renders cultivation impracticable under existing conditions. In the case of Chile, for example, the arid regions of the Cordillera and

[1]See the chapter on Population in *The Economic Survey of Asia and the Far East 1948,* United Nations Economic Commission for Asia and the Far East.
[2] Including Yukon and North-West Territories.

the great deserts of the north constitute about 72 per cent of the territory. Forests cover about 4 per cent of the land. Only 24 per cent of the country is left for cattle raising and agriculture.[1]

The agricultural density in the Caribbean Islands must be very high. Puerto Rico (excluded from this study), which has demographic and physical characteristics broadly similar to those of other Caribbean areas, presents an agricultural density of 209 persons per square kilometre, surprisingly higher than even that for India, which is about 160.[2]

Although the ratio of population to usable land resources is already a serious problem in the Caribbean zone (which, however, covers only 1 per cent of the total territory of Latin America), and although this ratio has also reached a rather high level in some other countries of Latin America, some areas, especially in South America, are in a much more favourable situation from this point of view. In large parts of South America there are only isolated clusters of population, generally bordering the edge of the continent, and leaving tremendous expanses of territory almost completely uninhabited. Huge and practically empty areas exist in the Amazon Valley, on the plains of Argentina, in southern Chile and in the highlands of Venezuela.

Of course, utilization of the potential opportunity for settlement in such areas involves difficult problems of sanitation, development of transportation and communication facilities, etc.

III. AGE DISTRIBUTION

The distribution of the population by age groups in selected Latin-American countries is given in table 50.

The main characteristic of the Latin-American populations, in regard to the structure by age, is its extreme youthfulness as shown by the high percentage of children (15 years and below) and the low percentage of aged persons. This is a consequence both of the high birth rate and of the high mortality.

The extreme youthfulness of the Latin-American populations can be evidenced by a comparison between the age distribution in Latin-American countries, in the United States and Europe including the USSR. Whereas in the United States and in the European countries the age group under 15 constitutes respectively 25 and 30 per cent of the total population, in the Latin-American countries it represents about 40 per cent. The group 60 years and over, representing respectively 10.5 and 9.9 per cent of the population in the United States and European countries, represents less than 5 per cent in Latin America.

[1]Herman Romero and Octavio Cabello, "Ordeals of Public Health," *The Journal of the American Medical Association,* vol. 139, (1 January 1949), pages 21-27.

[2]Kingsley Davis, *op. cit.*

TABLE 50. PERCENTAGES OF CHILDREN, "ACTIVE" POPULATION AND AGED PERSONS, IN SELECTED LATIN-AMERICAN COUNTRIES, THE UNITED STATES AND EUROPE

	Year	*Under 15*	*15 to 59*	*60 and over*	*Ratio of "dependent" to "productive" population*
Brazil	1940	42.5	53.3	4.1	.87
Chile	1940	37.1	57.0	5.9	.75
Colombia	1938	41.9	53.0	5.0	.89
Cuba	1943	36.4	58.0	5.6	.72
Dominican Republic	1935	46.5	49.0	4.5	1.04
El Salvador	1930	40.3	55.4	4.3	.81
Guatemala	1940	43.6	51.6	4.7	.94
Honduras	1945	41.7	53.6	4.7	.87
Mexico	1940	41.1	53.9	5.0	.86
Nicaragua	1940	42.9	52.4	4.6	.91
Panama	1940	39.3	56.0	4.7	.79
Peru	1940	42.0	51.6	6.4	.94
Venezuela	1941	40.9	54.6	4.3	.83
United States	1940	25.0	64.5	10.5	.55
Europe, including USSR[a]	1940	25.0	64.5	9.9	.65

Source: Demographic Yearbook, 1948, unless otherwise specified.

[a]G. F. W. Notestein and others, *The Future Population of Europe and the Soviet Union,* League of Nations, Geneva, 1944.

The percentages of the central group, 15-59, in Latin-American countries are smaller than in the United States. The significance of this difference can be shown by considering the combined numbers of persons in the age ranges under 15, and 60 and over (which may be called the "dependent" age groups) in relation to the number of persons in the "productive" group, 15-59, as shown in the last column of table 50. The ratio of the dependent to the productive groups ranges from 0.72 in Cuba to 1.04 in the Dominican Republic, as compared with 0.55 in the United States, and 0.65 in Europe. The relatively high ratio of "dependent" to "productive" ages has an important bearing on the problem of improving the level of living in every one of the Latin-American countries.

A comparison of the statistics on ages of the population from recent censuses with those for earlier years, which is shown in table 51 for some of the countries, suggests that in Latin America as a whole the general form of the age structure of the population has not changed very much during the last three or four decades. The heavy economic burden represented by the high ratio of dependents to persons of working age is a chronic problem of the region.

Because of the high rates of mortality prevalent in Latin America the life expectation is still low, as can be seen from table 52. The calculations of life expectancy based on official mortality figures, which are presented here, probably overstate the actual expectancy in some of the areas, because the registration of deaths is incomplete. Also, in those

TABLE 51. PER CENT OF THE ENUMERATED POPULATION IN SELECTED AGE GROUPS AT SPECIFIED CENSUS DATES FOR FOUR LATIN-AMERICAN COUNTRIES AND THE UNITED STATES

		Age group			
	Year	*Under 20 years*	*20-39 years*	*40-59 years*	*60 years and over*
Brazil	1940	53.3	29.3	13.2	4.1
	1920	54.6	28.8	12.6	4.0
	1900	55.1	29.3	12.3	3.2
Chile	1940	47.3	31.0	15.8	5.9
	1930	48.1	31.2	15.0	5.7
	1920	48.5	30.9	14.7	5.9
Colombia	1938	52.2	29.6	13.1	5.0
	1918	49.6	30.7	13.9	5.7
Venezuela	1941	51.4	30.2	13.9	4.3
	1936	50.8	30.8	14.0	4.4
	1926	48.6	32.6	14.4	4.4
United States	1940	34.4	32.2	22.9	10.5
	1920	40.8	32.4	19.3	7.5
	1900	44.4	32.2	17.0	6.4

Sources: Official data of the countries concerned.

TABLE 52. EXPECTATION OF LIFE AT BIRTH IN SELECTED COUNTRIES OF LATIN AMERICA, EUROPE AND THE UNITED STATES

	Period	*Expectation of years of life at birth*
Argentina (Buenos Aires)	1914	46.4
Brazil (Federal District)	1939-1940	43.0
Brazil (São Paulo)	1939-1940	50.1
Chile	1939-1942	41.8
Colombia (7 departments)	1939-1941	46.3
Costa Rica	1927	40.7
Mexico	1929-1933	37.2
Peru (Lima)	1933-1935	39.0
Venezuela (Caracas)	1937-1939	44.2
England and Wales	1937	62.3
France	1933-1938	58.8
Germany	1932-1934	61.3
United States	1939-1941	63.6

Sources: Official data of the countries concerned.

countries where data are available only for certain large cities, it is likely that the figures for these cities are too favourable to be representative of the whole country.

The increase of the life expectation in Latin-American countries is mainly a question of preventive medicine. It has been pointed out that American populations pay a very heavy toll to infectious diseases, which arise either from geographical conditions (malaria, Chaga's disease, hookworm etc.) or from human convergence (syphilis, tuberculosis, typhus, other enteric infections, etc.).

On the other hand, the lowering of infant mortality and mortality rates for infectious diseases has led to a rapid increase in the life expectancy. For instance, in Chile between 1920 and 1940, life expectancy

at birth went up from 31.5 to 41.8 years, according to the calculations based on official figures which are shown below:

Period	*Expectation of years of life at birth*
1919-1922	31.5
1929-1932	40.6
1939-1942	41.8

It may be that, as the empty areas are settled and industry develops, a trend toward an ageing population will develop and the ratio of youthful population will decrease. As to the extension of the "productive" period of life, it depends, naturally, on the improvement of medical care, adequate housing facilities, etc.

IV. POPULATION GROWTH

An adequate analysis of population dynamics requires a minimum amount of basic data on population size, with some essential characteristics such as sex and age, and in addition, annual statistics of births, deaths and migration. Although countries constituting at least two-thirds of the population of each sub-region of Latin America have reasonably accurate population census data for recent years, only twelve countries have published birth and death data, and these statistics cover less than half of the total population in Latin America. Moreover, not all of the published vital statistics are reliable. Data on migration are likewise very incomplete. With the limited amount of data described above, and with some knowledge of the migration history and of the general social and economic background of this region, the aspects of population growth of this part of the world can be sketched only in very broad terms.

The total population of Latin America in about 1920 was estimated at roughly 89 million. It appears to have grown to about 147 million in 1947,[1] at an average rate of increase of about 1.8 per cent per year. This is the highest rate of increase in any of the major regions of the world during the same period. It is about two and a half times as great as that of Europe, and one and a half times that of Oceania or North America.[2] The estimated rate for Latin America may be exaggerated because of the possibility that the more recent censuses have had better coverage than the earlier ones, but in any case it is evident that population growth in this region has been very rapid.

Before 1815 the volume of migration to the Americas was small. Great waves of immigration occurred subsequently, particularly in the

[1]These two figures are somewhat lower than those shown in some other instances because of different coverage. For a list of countries included in Latin America for this survey see table 48. Data are given from official sources of Latin-America countries, the United Nations *Demographic Yearbook*, and various releases on Latin-American populations, prepared by the United States Bureau of the Census in co-operation with the Office of the Coordinator of Inter-American Affairs.

[2]See United Nations, *World Economic Report*, 1948, page 220.

second half of the nineteenth century, but the majority of immigrants went to North America. Even in this period of heavy immigration, Latin America did not, relatively speaking, receive a great number of immigrants. It has been estimated that a total of 53.8 million immigrants came to the Americas during the period 1821-1932, and of these North America absorbed 39.4 million, or 73 per cent.[1] During the economic depression of the 1930's and the period of the Second World War, immigration to Latin America suffered a prolonged slump.[2] It is evident that immigration has played only a relatively minor role in the recent growth of population in Latin America, and that the main factor has been a rapid natural increase.

Owing to the uncertain reliability of the population data of some countries, a comparison of the growth rates of various countries may be misleading. Therefore, statistics for individual countries are not presented here. On the other hand, since countries forming the majority of the population of each sub-region have reasonably reliable data, the approximate rate of growth for each sub-region can be roughly determined, as shown below.

	Average annual per cent increase 1920-1947
Total Latin America	1.85
A.B.C. area	1.75
Western South America	1.77
Central America (including Mexico)	1.96
Caribbean, Major Antilles (excluding Puerto Rico and Jamaica)	2.46

An outstanding aspect of the rates of growth in all sub-regions is their high level. Especially noteworthy is the very high annual rate of growth indicated for the Caribbean, Major Antilles (2½ per cent). This is the very area in the region where the density of population is highest in relation to available resources. The high rate of growth in this area has been maintained in spite of some net emigration.

V. FERTILITY AND MORTALITY

Latin America appears to have some of the world's highest birth rates, though it is difficult to measure their actual level because of the inadequacy of birth registration in much of the area. The available recorded birth rates for various countries from 1921 to 1947 are shown in table 53, but in many instances these rates are known to be substantially below the truth. The estimated birth rate for Brazil for the

[1]Carr-Saunders, *World Population*, Oxford, Clarendon Press, 1936, pages 46-49.

[2]Kingsley Davis, *Population Trends and Policies in Latin America, op. cit.*, page 44; also "Future Migration into Latin America," in *Milbank Memorial Fund Quarterly*, vol. 25, No. 1 (January 1947), page 52.

TABLE 53. RECORDED BIRTH AND DEATH RATES FOR SELECTED LATIN-AMERICAN COUNTRIES, 1921-1947

	Argentina[a]		*Chile*		*Costa Rica*		*El Salvador*		*Mexico*		*Peru*[b]		*Venezuela*[b]	
	Birth rate	*Death rate*	*Birth rate*	*Death rate*	*Birth rate*	*Death rate*	*Birth rate*	*Death rate*	*Birth rate*	*Death rate*	*Birth rate*	*Death rate*	*Birth rate*	*Death rate*
1921-1925	32.4	14.4	39.4	30.3	41.9	23.1	45.3	23.9	31.9[c]	25.5[c]	..	..	28.1	19.1
1926-1930	30.1	13.3	41.6	25.8	44.6	21.1	45.1	23.7	36.7	25.6	..	..	30.1	18.9
1931-1935	26.4	12.1	33.6	24.4	42.8	20.6	41.0	23.0	43.1	24.8	..	..	27.9	17.6
1936	24.4	11.8	33.5	24.4	43.0	20.0	41.7	20.3	43.0	23.5	..	..	31.9	17.4
1937	24.0	11.9	32.3	23.1	42.8	18.4	39.8	19.5	44.1	24.4	..	..	33.7	18.1
1938	24.1	12.3	32.1	23.5	43.6	16.9	41.3	18.1	43.5	22.9	..	..	33.7	18.3
1939	24.0	11.2	33.3	23.3	42.8	18.5	41.6	18.3	44.6	23.0	..	..	35.9	18.7
1940	24.1	11.2	33.4	21.6	43.2	17.3	42.2	17.7	44.3	23.2	26.7	14.2	36.0	16.6
1941	23.9	10.8	32.6	19.8	43.4	17.2	40.0	16.8	43.5	22.1	25.2	14.5	35.3	16.4
1942	23.1	10.7	33.2	20.3	41.6	19.9	38.6	20.7	45.5	22.8	27.0	14.4	35.7	16.3
1943	24.4	10.5	33.1	19.9	43.7	16.8	38.1	20.4	45.5	22.4	27.6	14.8	36.3	16.0
1944	..	..	33.2	19.5	41.8	15.8	37.9	17.7	44.2	20.6	28.5	13.7	35.9	17.2
1945	..	..	33.3	20.0	44.2	14.6	38.1	16.2	44.9	19.5	28.4	13.4	36.8	15.3
1946	..	..	32.4	17.2	42.4	13.1	36.1	15.5	43.7	19.4	27.9	12.6	38.4	15.0
1947	..	..	33.8	16.7	53.6	14.0	41.2	15.0	45.1	16.3	27.4	11.2	39.5	13.9

Note: As a result of differences in rounding off, the rates shown in the table may not be in exact agreement with those appearing in official publications of the countries concerned.

Sources: Statistical Office of the United Nations, *Monthly Bulletin of Statistics,* vol. 3, nos. 1-2, Jan.-Feb. 1949, pages 20-22. *Statistical Yearbook,* League of Nations, 1942/44, Geneva 1945, pages 40-42.

[a]Registration area.
[b]Excluding jungle population.
[c]1922-1925.

period 1920-1940 based on adjusted census data was 43.5 per 1,000 population.[1] It has been estimated that the average birth rate for the entire region in 1930 might have been within the range of 40 to 50 per 1,000 population.[2]

Judging by the more or less constant registered birth rates shown for the period after 1930 for countries where statistics are available, it does not seem likely that the current average birth rate for the region as a whole has been significantly reduced from the level of 1930. The post-depression years and the boom during and immediately after the Second World War may have postponed somewhat the expected decline of fertility, of which there have been indications in some countries such as Argentina, Brazil,[3] Chile and Cuba.[4]

The birth rates of Latin America appear to be far above the death rates, though the width of the margin cannot, in many instances, be determined accurately from the figures in table 53. The statistics of deaths, as well as those of births, are subject to substantial understatement.[5] As indicated above, it is evident that there must be a wide margin between these two rates, accounting for the rapid growth of the population of Latin America. A substantial decline in the death rates has been taking place in all the countries for which data are available—a downward trend that is likely to continue. In all likelihood this decline will outpace whatever fall in fertility may occur in some countries in the near future, so that the current rate of population increase for the region as a whole is not likely to be abated in the short run.

[1]Giorgio Mortara, *Estudos Brasileiros de Demografia, Monografia No. 3,* Fundação Getulio Vargas, Rio de Janeiro, Livraria Kosmos Editora, 1947, page 90.

[2]Estimated by Kingsley Davis and associates, based upon estimates for individual countries by various techniques according to the amount of available data. See Kingsley Davis, *op. cit.,* page 35.

[3]Estimated birth rates for Brazil based on adjusted census data:

Period	*Estimated birth rate*
1 Jan. 1891—31 Dec. 1900	46.0
1 Jan. 1901—31 Aug. 1920	45.0
1 Sept. 1920—31 Aug. 1940	43.5

(See Giorgio Mortara, *op. cit.,* page 90).

[4]Number of children 0-4 per 1,000 women 15-49 in Cuba:

1907	673
1919	660
1931	564
1943	535

(See Kingsley Davis, *op. cit.,* page 41).

[5]That the death rate is so affected can be seen, *inter alia,* from the example of Brazil, where the estimated death rates based on adjusted census data—26.3 (1901-1920) and 24.8 (1920-1940)—were considerably higher than the recorded rates for other Latin-American countries, although in the latter general health conditions are known to be less satisfactory (See Giorgio Mortara, *op. cit.,* page 90).

TABLE 54. RECORDED INFANT MORTALITY RATES FOR SELECTED LATIN-AMERICAN COUNTRIES, 1921-1947

	Argentina	*Chile*	*Costa Rica*	*El Salvador*	*Mexico*	*Peru*[a]	*Venezuela*[a]
1921-1925	116	265	234	—	223[b]	..	—
1926-1930	113	229	172	140	173	..	—
1931-1935	97	248	159	140	134	..	149
1936	97	252	153	120	131	..	135
1937	95	241	142	133	131	..	135
1938	105[c]	236	122	117	128	..	139
1939	92[c]	225	140	116	123	..	132
1940	92[d]	217	132	121	126	128	122
1941	85[d]	200	123	105	123	131	121
1942	86[e]	195	157	117	118	115	115
1943	80[e]	194	117	110	117	126	109
1944	81	181	125	118	113	115	117
1945	82	184	110	108	108	109	99
1946	..	160	102	113	111	114	102
1947	..	161	..	96	97	..	100

Note: As a result of differences in rounding, the rates may not be in exact agreement with those appearing in official publications of the countries concerned.

Sources: Statistical Office of the United Nations, *Monthly Bulletin of Statistics,* vol. 3, nos. 1-2, Jan.-Feb. 1949, pages 25-26. *Statistical Yearbook,* League of Nations, 1942/44; Geneva 1945, page 44.

[a]Excluding jungle population.
[b]1922-1925.
[c]Excluding the Province of Santa Fé.
[d]Excluding the Province of Santa Fé and Corrientes.
[e]Excluding the Province of Corrientes.

INFANT MORTALITY

Infant mortality rates (the deaths of children under one year per 1,000 live births) are regarded usually as a more sensitive index of health conditions than general death rates. They are highly responsive to the adequacy of medical care, sanitation and nutrition. Few countries in the region have adequate infant mortality statistics. The under-registration of births and deaths which characterizes most Latin-American countries is especially damaging to the reliability of measures of infant mortality computed from the registration figures. In general, it is likely that the proportion of infant deaths which remain unregistered is higher than the corresponding proportion among births, since infants who die soon after birth are particularly likely to escape registration.[1] Therefore, infant mortality rates, representing the ratio of registered infant deaths to births in a given year, in many areas may be much lower than the true rates. Furthermore, infant mortality rates, because of the way they are computed, are influenced by sudden changes in the number of births registered in any year.[2] In the Federal District of Brazil, where an infant mortality rate of 138 per 1,000 was recorded in 1939-1941, it has been estimated that the true rate may have been 160 per 1,000.[3] The deficiencies in registration vary from country to country. It may be noted that in countries where registration is known to have been relatively efficient, as in Chile and Mexico, the registered rates are generally higher than in some of the other countries.[4]

The recorded infant mortality rates for the last twenty years are presented in table 54. It will be observed that over the period covered by the table, the recorded rates show a general downward trend. Since registration on the whole has a tendency to become gradually more complete, this decline presumably reflects a real decline in infant mortality. The present level of infant mortality as shown by the recorded rates is, however, still very high. This evidence, which is consistent with the high crude death rates characterizing the region, indicates perhaps as well as any other fact that there is ample room for further betterment of economic and social conditions in Latin America.

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[1]Deaths of very young infants may also be registered as still births; there are also other deficiencies in the registration systems.

[2]Since deaths of children under one year old (some of whom may have been born in the preceding calendar year) are related to total live births during the calendar year in which the deaths occur, sudden changes in the number of births registered in any year will influence the infant mortality rate.

[3]Brasil, *Instituto Brasileiro de Geografia e Estatistia, Tábuas de Mortalidade e Sobrevivência Brasileiras—Distrito Federal e Município de São Paulo,* Rio de Janeiro, 1946, page 73.

[4]See Halbert D. Dunn, Hope T. Eldridge and Nora P. Powell, "Demographic Status of South America", *The Annals of the American Academy of Political and Social Science,* vol. 237 (Jan. 1945), pages 22-23; also Federal Security Agency, U. S. Public Health Service, National Office of Vital Statistics, *Summary of International Vital Statistics, 1937-44,* U. S. Government Printing Office, Washington, 1947, pages 32-34.

TABLE 55. RURAL-URBAN DISTRIBUTION OF POPULATION IN LATIN-AMERICAN COUNTRIES

	Census year	*Total population*	*Urban population*		*Rural population*	
		Thousands	*Thousands*	*Per cent*	*Thousands*	*Per cent*
I. A.B.C. area						
Argentina[a]	1947	16,109	9,895	61.4	6,214	38.6
Brazil	1940	41,236	12,880	31.2	28,356	68.8
Chile	1940	5,024	2,633	52.4	2,390	47.6
II. Western South America						
Bolivia	1900	1,634	439	26.9	1,195	73.1
Colombia	1938	8,702	2,534	29.1	6,168	70.9
Peru[b]	1940	6,208	2,197	35.4	4,011	64.6
Venezuela[c]	1941	3,851	1,166	30.3	2,685	69.7
III. Central America, including Mexico						
El Salvador	1930	1,434	549	38.3	886	61.7
Guatemala	1940	3,283	878	26.7	2,405	73.3
Honduras	1945	1,201	348	29.0	852	71.0
Mexico[c]	1940	19,654	6,897	35.1	12,757	64.9
Panama[d]	1940	567	211	37.2	356	62.8
IV. Caribbean, Major Antilles, excluding Puerto Rico and Jamaica						
Dominican Republic	1935	1,479	267	18.0	1,213	82.0

Sources: Statistical Office of the United Nations except for the *Resúmen del Censo General de Población, 1945,* for Honduras.

[a]Centres of 2,000 or more inhabitants.
[b]Centres of 2,100 or more inhabitants.
[c]Centres of 2,500 or more inhabitants.
[d]Centres of 1,500 or more inhabitants.

VI. RURAL-URBAN DISTRIBUTION

In Latin America as a whole, the great majority of the people live in rural areas since agriculture is by far the most important source of livelihood. Only rough comparisons of the degree of urbanization in various parts of the region can be made because of the variations in definitions of urban areas. Most Latin-American countries consider as urban the clusters of population which exceed an arbitrarily established minimum number of inhabitants, varying from country to country. In Brazil, for instance, the present definition of an urban population is based on a political function, the central core of every seat of a *município* being classified as *cidade* and urban, regardless of its size. Thus a comparison of the rural-urban distribution for individual countries in Latin America is significant only between certain limits. With this reservation in mind, the rural-urban distribution of the population in Latin-American countries may be studied from table 55.

Argentina and Chile are the only Latin-American countries where a majority of the population lives in areas classified as urban. In most of the other countries, the urban percentage ranges from about 26 to 37 per cent. In general, it may be said that these percentages are rather high by comparison with the ones observed in most countries in other parts of the world where manufacturing industries are no more highly developed than in Latin America.

Table 55 gives a static picture of the rural-urban distribution of population and does not, therefore, reflect an extremely important fact in the demographic development of Latin-American countries, namely, the very rapid progress of urbanization.

The concentration of population in a few large cities is an especially significant characteristic of Latin-American population development. According to figures for 1940, there are in Latin America twenty cities of more than 200,000 inhabitants, nearly all of which are located either on the coast or on navigable waterways. It has been pointed out that "they tend to face outward toward other countries—even toward other continents—rather than inward toward their own hinterlands".[1] Throughout the twentieth century, the tendency has been for the population of urban areas to grow at a rate far superior to that of rural areas. Growing demand, in Europe and other continents, for the products of the Latin-American hinterland provided a strong stimulus for the expansion of all important commercial and shipping centres. The building of port and storage facilities, railroads and public utilities and the promising debut of certain industries created numerous employment opportunities. These have acted like a magnet attracting people from all parts. While, in earlier times, immigrants to the United States tended to move west and

[1]Kingsley Davis and Ana Casis, "Urbanization in Latin America", *The Milbank Memorial Fund Quarterly*, April and July, 1946, p. 191.

settle down on the land as long as free land was available, no such development on a large scale has been observed in Latin America. The majority of immigrants to this part of the New World have tended, from the outset, to settle in the cities.

VII. MIGRATION

Migration statistics must be considered as being among the most unsatisfactory of all population data.[1] Those for most Latin-American countries give a very incomplete picture of immigration and must be interpreted, therefore, with much caution.

The collection of statistics, generally, is based upon the counting of passengers disembarking (or embarking) at ports. The definition of migrants, i.e., the method of distinguishing immigrants and emigrants from other travellers, is often based upon the class of accommodation aboard ship in which they travel (or are about to travel); persons travelling second and third class are considered immigrants (or emigrants), while those travelling first class are excluded from the immigration (or emigration) statistics.

Where statistics are compiled by this method, usually no record is kept of the number of immigrants who enter (or depart from) the country of immigration more than once. It has been estimated, for instance, that 60 per cent of the Portuguese immigrants in Brazil "make at least one visit to Portugal, returning third class, and therefore being registered a second time as immigrants".[2] A few countries do not distinguish at all between various types of travellers and merely publish figures of total arrivals and departures. The distinction according to nationality, even as between nationals of the country and aliens, is not made by all countries. In some cases, while passenger arrivals are classified according to class travelled and nationality, no corresponding record of departures is made. These various deficiencies make it impossible, for a number of countries at least, to obtain accurate net immigration figures.

Under Spanish and Portuguese rule, the immigration of nationals of countries other than the ruling one was prohibited. Even after the attainment of independence, revolutions and wars had for some time a deterring effect on large-scale immigration. The newly independent nations, however, were aware of the need for immigration and opened their doors to all immigrants. With the beginning of the third decade of the

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[1]See report of the third session of the Population Commission, United Nations document E/805, page 7; and report of the fourth session of the Population Commission, document E/1313, annex 3.

[2]Walter F. Wilcox, ed., *International Migrations*, vol. 2: Interpretations, New York, National Bureau of Economic Research, 1931, p. 167. No actual records exist of the emigration of former immigrants, as no statistics of departures are compiled in Brazil.

nineteenth century, immigration into Latin America increased and the first statistics thereof were compiled.[1]

Although reliable and continuous series of immigration statistics for a number of Latin-American countries are lacking, consideration of the available evidence makes it obvious that the great majority of immigrants have been absorbed by Argentina and Brazil, particularly during the last 50 years.[2]

Immigration into Argentina

Statistics of alien passengers arriving in, or departing from, Argentina directly by sea have been recorded since 1857.[3] For immigration prior to 1857, no precise records can be found, and it is assumed that the volume was small.[4]

Table 56 gives a summary of recorded immigration for the period 1857 to 1948. These figures add up to 6,780,000, while emigration during the same period amounted to 3,150,000. Net immigration accordingly totals 3,630,000, i.e., 53.5 per cent of total gross immigration.

Table 56. Gross immigration into Argentina, 1857-1948

Period	*Total immigrants*
1857-1860	20,000
1861-1870	159,520
1871-1880	260,885
1881-1890	841,131
1891-1900	648,326
1901-1910	1,764,103
1911-1920	1,204,919
1921-1930	1,397,415
1931-1940	310,012
1941-1948	175,000[a]

Sources: International Migrations, op. cit., vol. 1: Statistics; International Labour Office, *Migration Movements 1925-1927*; Studies and Reports, Series O (Migration) No. 4, Geneva, 1929; International Labour Office, *Yearbook of Labour Statistics,* ten issues, Geneva and Montreal.

[a]Partly estimated.

The figures show that the number of immigrants arriving in Argentina rose steadily until the decade 1911-1920 which includes the period of the First World War. The 1901-1910 figures were never equalled, but a considerable revival was experienced after 1920, culminating in the

[1]For a study of the increase of population in Latin America attributable to immigration, see Giorgio Mortara, *Pesquisas Sôbre Populações Americanas, Estudos Brasileiros de Demografia, Monografia No. 3,* vol. 1, July 1947.

[2]See Imre Ferenczi, "A Historical Study of Migration Statistics", *International Labour Review,* vol. 20, No. 3 (September 1929), table I, page 374.

[3]For a history and critique of Argentine migration statistics, as well as a brief summary of the history of immigration into Argentina until 1926, see *International Migrations, op. cit.,* vol. 2: Interpretations, pages 143-160.

[4]Mention of immigration from France in 1825 and from Germany in 1835 is made in Imre Ferenczi, "A Historical Study of Migration Statistics", *op. cit.,* pages 366 and 368.

immigration of 195,000 persons in 1923. A sharp drop occurred at the time of the world economic crisis, and figures fell to below 50,000 during the years after 1931. While the last war reduced the flow of immigrants to negligible proportion, a steady rise has been observed subsequently.

The largest number of immigrants into Argentina of any one nationality were the Italians, who account for little less than one-half of the total immigration. Second in order of importance were Spanish immigrants, who constituted approximately one-third of total immigration. No other single nationality accounted for any sizable proportion of immigration during the period, although during the decades 1871-1880 and 1881-1890 French immigrants formed over 10 per cent of the total volume and German immigrants over five per cent during the years 1923 and 1924.[1]

Immigration into Brazil

The statistics of immigration into Brazil for the period between 1820 and 1883 are incomplete and of a low degree of accuracy.[2] A summary of recorded immigration from 1821 to 1945 into Brazil is given in table 57.

Table 57. Immigration into Brazil, 1821-1945

Period	*Total immigrants*
1821-1830	7,423
1831-1840	2,838
1841-1850	6,795
1851-1860	121,747
1861-1870	97,571
1871-1880	219,128
1881-1890	530,906
1891-1900	1,129,315
1901-1910	671,351
1911-1920	797,744
1921-1930	840,215
1931-1940	288,607
1941-1945	18,432

Sources: International Migrations, op. cit., vol. 1: Statistics; *Annuario Estatistico do Brasil,* Ano VIII, 1947.

From these figures it can be seen that total immigration for the period under consideration was 4,732,000. However, the lack of any emigration figures makes it extremely difficult to estimate even approximately the amount of net immigration. Estimates for various periods have been made, the accuracy of which is difficult to gauge. In a recent study[3] made by the Brazilian Census Service, net immigration was estimated to have been 80 per cent of total immigration for the period 1872-1900, 65 per cent for 1901-1920 and 75 per cent for 1921-1940. This would mean a net

[1]See *International Migrations, op. cit.,* vol. I, Statistics.

[2]See Germano Jardim, "Immigration and Population Growth in Brazil" in *Papers presented by Special Guests of the Population Association of America* at its meetings, October 1946, New York, page 3.

[3]Quoted in Germano Jardim, *op. cit.,* page 8.

immigration for the period 1872-1940 of about 3,300,000, or 74 per cent of total immigration during the period. This percentage is considerably greater than the one found for Argentina for a roughly similar period. An estimate[1] covering the period of 1908-1935 produced the following percentages of net immigration (i.e. percentages remaining in the country) by nationality:

Spanish	51.1	Estonians, Latvians, Lithuanians	over 80.0
Portuguese	41.6	Japanese	93.2
Italians	12.9		
Poles	55.5		
Romanians	69.9		
Yugoslavs	75.9		

It appears from the figures in table 57 that the flow of immigration into Brazil reached its peak in the decade 1891-1900, somewhat earlier than in Argentina. The volume continued, however, to be considerable until 1930, after which year immigration was drastically reduced. While it appears that a revival on a major scale of immigration has taken place since the end of the Second World War, no figures have been published since 1945.

The composition by nationality has undergone a number of changes. Until the end of the decade 1871-1880, Portuguese immigrants predominated strongly.[2] In the three decades from 1881 to 1910 Italian immigration overshadowed that from all other countries, constituting over 60 per cent in the peak decade, 1891 to 1900. Over the entire period 1821-1945, the numbers of Portuguese and Italian immigrants were almost equal, however, reaching about 1,500,000 in both cases. Spanish immigration stands in third place, accounting for somewhat over one-third of the Portuguese or Italian share.

Immigration into other countries of Latin America

Table 58 gives the available statistics of alien immigration and emigration for a few other Latin-American countries for the years 1920 to 1947.

Immigration from Asia

Particular interest attaches to the immigration into Latin America from Asia. The volume of this movement cannot be determined from the existing statistics. In very rough terms, however, it appears that the total number of immigrants who have come from Asia to Latin America during the nineteenth and twentieth centuries is probably of the order of one million; it thus exceeds migration from Asia to any other continent. The

[1] *International Labour Review*, vol. 35, No. 2 (February 1937), pages 217-218. The percentage given for the net immigration of Italians seems rather low, and does not agree with estimates made by other observers.

[2] German immigrants occupied second place until 1870.

TABLE 58. ALIEN IMMIGRATION INTO AND EMIGRATION FROM CERTAIN COUNTRIES OF LATIN AMERICA, 1920-1947

	Colombia		*Mexico*		*Nicaragua*		*Uruguay*	
	Intercontinental and continental		*Intercontinental*		*Intercontinental and continental*		*Intercontinental*	
	Immigrants	*Emigrants*	*Immigrants*	*Emigrants*	*Immigrants*	*Emigrants*	*Immigrants*	*Emigrants*
1920	..	..	12,399	7,135	..	..	1,409	449
1921	..	..	19,763	9,991	..	..	4,403	2,822
1922	..	..	15,956	10,480	..	..		
1923	..	..	19,827	13,277	..	..	40,998	14,344
1924	..	..	18,421	11,452	..	..		
1925	..	..	11,986	7,450	..	..	10,006	4,088
1926	7,401	4,836	9,062	6,809	..	..	12,454	4,679
1927	..	..	6,811	5,875	..	..	11,641[a]	4,698[a]
1928	..	..	7,357	4,603	..	..	15,310[a]	5,071[a]
1929	..	..	5,473	4,435	..	..	11,608[a]	4,983[a]
1930	12,623[a]	17,869[a]	5,268	4,425	..	..	12,107[a]	5,165[a]
1931	19,987[a]	22,582[a]	3,246	5,296	..	..	9,917[a]	4,817[a]
1932	20,990[a]	20,102[a]	2,339	4,446	..	..	4,664[a]	4,001[a]
1933	21,473[a]	18,657[a]	2,892	3,506	..	..	2,939[a]	3,716[a]
1934	26,766[a]	22,748[a]	2,309	2,223	..	..	3,687[a]	3,312[a]
1935	7,492	6,504	2,301	2,297	..	..	3,557[a]	1,971[a]
1936	7,609	6,553	2,220	1,999	..	..	4,848[a]	2,171[a]
1937	8,967	7,935	1,558	1,499	1,250	1,241	5,570[a]	2,544[a]
1938	10,723	7,822	1,380	1,501	2,155	2,158	8,720[a]	4,357[a]
1939	9,542	8,636	7,493	1,257	1,967	1,974	6,244[a]	3,950[a]
1940	7,989	7,615	2,269	530	2,054	2,146	2,386[a]	1,187[a]
1941	8,395	8,261	1,687	316	2,525	2,508	..	..
1942	7,616	8,011	2,516	89	2,796	2,563	..	..
1943	10,856	10,554	788	50	4,345	3,892	..	..
1944	12,144	11,518	1,049	144	2,876	3,360	..	..
1945	16,072	15,087	720	607	4,002	4,282	..	..
1946	27,832	23,769	2,749	1,496	10,254[a]	10,287[a]	..	..
1947	..	..	..	..	9,717[a]	9,621[a]	..	..

Sources: International Migrations, op. cit., vol. 1: Statistics; International Labour Office, *Migration Movements 1920-1924 and 1925-1927,* Studies and Reports, Series O (Migration) nos. 2 and 4; International Labour Office, *Yearbook of Labour Statistics,* ten issues, Geneva and Montreal; *Anuario Estadístico,* 1945, Nicaragua.

Passenger figures for other countries show the following total net inward balances: Chile (1929-1947) 33,497; Cuba (1920-1937) 368,089; El Salvador (1927-1947) 30,061; Venezuela (1925-1947) 32,458.

[a]Including nationals.

only other continent to which large numbers have emigrated from Asia during this period is Africa, which has absorbed less than a quarter of the number absorbed by Latin America.

While Chinese, Indians and Japanese are included in the migration statistics of several Latin-American countries, it appears likely that the actual numbers well exceed those recorded. It has been estimated that 400,000 persons born in Asia were resident in Latin America in 1946.[1] This implies, of course, a much larger total of immigrants from Asia during the whole period previous to 1946, since Chinese and Indian immigration began in the first half of the nineteenth century. It has been estimated that 550,000 Indians immigrated into Latin America between 1834 and 1937 of whom 400,000 remained in the countries of immigration.[2] An estimated 100,000 Chinese immigrants entered Peru between 1849 and 1874.[3]

Post-war interest in, and encouragement of, immigration

The general conclusion to be drawn from the available statistics is that immigration into most Latin-American countries during recent decades has been very small in proportion to the population of the countries. However, since the end of the last war a considerable number of Latin-American Governments have expressed a strong interest in receiving larger numbers of immigrants. This is visible from a number of immigration projects and legislative provisions for private and organized immigration, including the admission of displaced persons from Europe. As early as 1943 the President of Colombia pointed out that the lack of immigrants was prejudicial to the country's interest and expressed the need for a flow of new settlers.[4] In the same year a report of the Brazilian Immigration and Land Settlement Council foresaw the need for post-war immigration and the consequent desirability of easing restrictions applicable to immigration. The Immigration and Colonization Act of 1945 as well as the relevant provisions of the new Constitution of 1946 did, in fact, provide the relaxations of restrictions necessary to obtain considerable numbers of immigrants. In Argentina a Five-Year Plan was established in 1946 which has as its aim to bring in 250,000 selected immigrants, especially from Spain and Italy.[5] Chile in 1945 and 1946, Ecuador in 1946, Mexico in 1948, Peru in 1946 and 1947, and Venezuela

[1]Kingsley Davis, "Future Migration into Latin America". *Milbank Memorial Fund Quarterly,* vol. 25, No. 1 (January 1947), page 6.

[2]*Ibid.,* page 7. See also Radhakamal Mukerjee, *Migrant Asia,* Rome, 1936, where the following figures for Indian immigrants are given: to British Guiana 130,075; to Trinidad 133,277; to Dutch Guiana 57,600.

[3]J. F. Normano and A. Gerbi, *The Japanese in South America,* New York, 1943, page 68.

[4]*International Labour Review,* vol. 48, No. 5 (November 1943), page 630.

[5]For details of agreements between Italy and Argentina, in furtherance of the latter country's immigration policy, see *ibid.,* vol. 55, No. 6 (June 1947), page 502, footnote, and vol. 57, No. 6 (June 1948), pages 654-656.

are among the countries which have announced the taking of steps to facilitate to some degree the immigration of Europeans. In a number of cases, however, the execution of the projects has been halted or postponed, pending the completion of preparations for the reception and settlement of the immigrants in the receiving countries.[1]

Recent expressions of the great interest in immigration are found in the proceedings of the first session of the Economic Commission for Latin America, culminating in the resolution of 24 June 1948,[2] and of the thirtieth session of the International Labour Conference.[3]

[1]For details of immigration policies of Latin-American countries, see *Memorandum on Immigration Policy,* 1947, International Labour Office, Geneva (PMC/I/6/Rev.1), mimeographed, and various numbers of the *International Labour Review,* particularly vol. 55, No. 5 (May 1947), pages 436-444.

[2]Rapporteur's report, United Nations document E/840, pages 11 and 44.

[3]Provisional Record, thirtieth session of the International Labour Conference, San Francisco, 1948.

CHAPTER 6

TRANSPORTATION [1]

I. INTRODUCTION

In the Latin-American countries the movement of raw materials and foodstuffs toward the sea has in most cases been the main factor determining the structure of the railway systems. The more recently developed highways, on the other hand, were built primarily to serve the needs of the respective countries. The lowering of transportation costs has been the determining factor in the expansion of agriculture and mining, but a sufficient volume of production for the market was necessary before transport could be developed.

In Colombia, for instance, the decrease in the transportation costs of coffee between Bucaramanga and Barranquilla, from 24 to 4 per cent of the New York wholesale price between 1876 and 1943,[2] was responsible in part for the more than sixty-fold increase in Colombian coffee production. Conversely, the increase in coffee production contributed to an expansion of the railroads from 593 kilometres in 1898 to 3,335 in 1940.[3]

Manufactures in Latin America, which consist of the processing of primary commodities mainly for export, have usually been established in the areas producing those commodities, particularly in the case of minerals; or at the point of embarkation, as in the case of numerous food processing industries. In both cases, the processing industries have utilized the transportation systems created for the movement of raw materials. Nor has the production of manufactured goods, in the last few years, directly affected the structure of the transportation systems in Latin America to any great degree. With very few exceptions there are no manufacturing centres whose location was determined by the transport cost of the raw materials used, and whose development required the construction of transport facilities primarily serving such industries.

The two chief difficulties with which the Latin-American countries have had to contend in the building of their transport systems are topography and the shortage of capital. Physical obstacles can usually be overcome in the construction of a road or railway, but they are nevertheless serious handicaps which increase transportation costs.

[1]The tables contained in this chapter were compiled by the Economic Commission for Latin America. The text was prepared for the most part by the Transport and Communications Division of the United Nations Department of Economic Affairs.

[2]Robert Carlyle Beyer, "Transportation and the Coffee Industry in Colombia," in *Inter-American Economic Affairs,* Washington, D.C., 1948.

[3]*Ibid.*

TABLE 59. THE GROWTH OF RAILWAY LINES IN LATIN AMERICA, 1937-1947; RAILWAY LINES PRESENTLY UNDER CONSTRUCTION AND PLANNED

	Index numbers, base: 1947 = 100				*Kilometres*			*Under construction and planned as percentage of length in 1947*
	1913	*1921*	*1930*	*1941*	*1947*	*Under construction*	*Planned*	
Argentina	75	82	88	96	43,666	—	1,250[a]	3
Bolivia	55	96	96	98	2,343	1,283[b]	344[b]	70
Brazil	72	85	93	98	34,843	614[b]	4,277[c]	5
Chile[d]	82	84	92	93	9,840	501[b]	—	5
Colombia	33	45	93	98	3,195	860[b]	1,063[b]	60
Costa Rica[e]	97	100	100	100[f]	630	..	..	..
Cuba[e g]	73	89	100	100[f]	5,062	..	..	..
Dominican Republic	70	89	89	100[f]	270	..	..	..
Ecuador	57	57	89	98	1,177	49[h]	..	4
El Salvador	46	70	100	100[f]	604	..	..	..
Guatemala[f]	99	100	100	100[f]	943	..	..	..
Haiti[d]	45	45	53	100	409	..	..	..
Honduras[d]	..	..	..	100	1,160	..	..	..
Mexico	104	70	84	100	24,363	1,683[b]	4,907[i]	27
Nicaragua	70	70	70	100[f]	379	..	..	..
Panama	..	28	35	42	372	..	..	..
Paraguay[j]	..	..	..	100	1,137	..	..	..
Peru[k]	71	77	88	100	4,154	64[b]	..	1.5
Uruguay	85	89	90	99	3,005	..	69[b]	2
Venezuela	102	104	107	104	997	..	..	..

Sources: Data on length of railway lines for 1913, 1921 and 1930 were obtained from various issues of the *Statistical Yearbook of the League of Nations,* for 1941 from the *Congreso Sudamericano de Ferrocarriles,* Buenos Aires, unless otherwise stated, and for 1947 from the *Congreso Panamericano de Ferrocarriles,* Buenos Aires.

[a]*Source: The Argentine Five Year Plan 1947-1951.*

[b]*Source: World Trade in Commodities 1948,* U. S. Department of Commerce.

[c]*Source: The SALTE Plan* of Brazil.

[d]Including some industrial lines which also serve as common carriers.

[e]Excluding some industrial lines which also serve as common carriers.

[f]*Source: The Statesman's Yearbook.*

[g]Excluding 4,654 kilometres of railway lines operated by the sugar industry.

[h]*Source: Industrial Reference Service,* No. 30, U. S. Department of Commerce.

[i]*Source:* Bank of Mexico.

[j]Includes industrial lines.

[k]Including railways which are not presently in operation.

The construction of a railway system calls for very large investments and, if it is extended over a long period of time, its use may be uneconomical until the whole network or line has been completed. Construction costs of highways are much lower and sections of roads can be fully utilized before the entire highway is completed.[1] Furthermore, repair and maintenance are generally less costly than in the case of railways. Consequently, though railway freight rates between stations are generally cheaper, particularly over long distances, the Latin-American Governments, faced with inadequate systems and insufficient private and public resources, seem to favour an expansion of their highways.

In spite of the existence of several large navigable rivers, the inland waterways are of relatively little importance in the transport network of Latin America.

The transportation systems of most Latin-American countries fall short of their present needs, and an improvement appears essential to the further development of their economy.

II. RAILWAYS

The development of railway systems in Latin America began in the second half of the past century and was undertaken largely by foreign investors, mainly British. The period of greatest activity lasted until the First World War. By this time, the backbone of the railway networks of nearly all countries had been completed. At least 60 per cent of the total mileage in existence in 1947 was already in operation in 1913 (see table 59). After the First World War, the building of railroads declined sharply in most countries of the region. The 5,677 kilometres, 7,318 kilometres and 1,377 kilometres built in Argentina, Brazil and Cuba, respectively, between 1913 and 1930 were only feeder roads and links connecting the main lines built earlier. The largest relative increases in railroad construction in Latin America between those years took place in Bolivia, Colombia and El Salvador, but the absolute number of kilometres added to the small network already in existence was low. Special mention should be made of Panama, which started building its railroad after the First World War, and of Mexico, where, during the revolution of 1917, about 30 per cent of the system which existed in 1913 was destroyed. Although new mileage was added in Mexico during the 1920's, the country had not regained its 1913 level up to 1947.

During the depression, the construction of railways almost ceased. Haiti, Honduras, Nicaragua and Paraguay extended their lines on a relatively important scale, but without adding a significant number of kilometres to the total system of the region. The Second World War stopped the building of railroads completely, except in Panama.

[1]For speedways the difference in construction cost as compared with a single-track railway is not very noticeable.

Altogether the railway systems of Latin America had in 1947 a total length of about 137,000 kilometres, distributed in different proportions over the twenty republics (see table 60). Argentina has the largest extension of rails, with about 42,289 kilometres in 1941 or one kilometre of rails for each 65 square kilometres of territory and for every 376 inhabitants. Another measurement of the degree in which railway transport has developed in various Latin-American countries, based upon data relative to rolling stock, is shown in table 61.

TABLE 60. LENGTH OF MAIN AND BRANCH LINES OF RAILWAYS IN LATIN AMERICA IN RELATION TO TOTAL AREA AND POPULATION

	Year	*Length of main and branch lines in kilometres*[a]	*No. of square kms. of country area per km. of railway line*	*Population per km. of railway line*
Argentina	1941	42,889	65	376
Bolivia	1941	2,270	480	1,698
Brazil	1938	34,207	249	1,390
Chile	1939	3,575[b]	86	644
Colombia	1938	3,026	376	3,484
Costa Rica	1945	630[c d]	79	1,241
Cuba	1939	5,062	22	1,006
Dominican Republic	1945	270[e]	185	8,000
Ecuador	1939	1,071	425	3,174
El Salvador	1944	617[c]	55	3,318
Guatemala	1944	814[c d]	135	4,474
Haiti	1944	409[e]	64	8,760
Honduras	1945	505[b c]	305	2,455
Mexico	1939	19,810	99	1,183
Nicaragua	1944	379[c]	390	2,997
Panama[f]	1940	199[c]	372	3,663
Paraguay	1940	757	524	1,618
Peru	1939	3,341	374	2,371
Uruguay	1945	3,005[e]	62	765
Venezuela	1939	905	101	4,850
TOTAL Latin America	—	129,134	—	—

Sources: Data on length of railway lines have been obtained, unless otherwise stated, from *Latin American Transportation Survey—Railway Section,* prepared by the U. S. Department of Commerce 1941-1945 for the U. S. Foreign Economic Administration and the U. S. Board of Economic Warfare.

Data on total area of countries have been obtained from *Statistical Yearbook of the League of Nations 1942/44.*

Data on population have been obtained from the *Monthly Bulletin of Statistics,* United Nations.

[a]Data relate to common carrier lines only, unless otherwise stated; they exclude sidings and double tracks.

[b]Including certain industrial railways which also serve as common carriers.

[c]*Source: Industrial Reference Service,* 1945, Part I—Transportation and Public Utilities, U. S. Department of Commerce.

[d]Excluding certain industrial railways which perform public service.

[e]*Source: Boletín de la Asociación del Congreso Panamericano de Ferrocarriles,* Buenos Aires, November and December 1946.

[f]Excluding the Canal Zone.

TABLE 61. COMMON CARRIER RAILWAY ROLLING STOCK IN CERTAIN COUNTRIES OF LATIN AMERICA AND KILOMETRES OF RAILWAY LINE PER LOCOMOTIVE

	Year	Numbers: Passenger stock	Numbers: Freight wagons	Numbers: Locomotives	Kms. of railway line per locomotive
Argentina	1946	7,095	80,825	3,976	11.0
Bolivia	1942	189	1,016	88	26.6
Brazil	1946	4,168	57,776	3,870	9.0
Chile	1946	1,472	17,448	1,162	8.5
Colombia	1947	698	3,908	356	9.0
Costa Rica	1946	687	484	53	11.9
Cuba	1938	791	16,312	633	8.0
Dominican Republic[a]	1948	19	161	17	8.1[c]
Ecuador[b]	1947	41	310	38	11.8[c]
El Salvador[d]	1944	74	742	43	14.0
Guatemala	1946	..	2,164	97	9.7
Honduras[e]	1948	155	2,443	93	12.3[c]
Mexico	1946	1,596	22,686	1,440	16.9
Nicaragua	1946	76	274	30	12.6
Panama	1947	78	859	23	16.2
Paraguay	1948	58	466	25	17.6[c]
Peru	1947	218	2,977	226	18.4
Uruguay	1941	314	3,709	222	13.5
Venezuela	1939	132	1,038	99	10.0

Source: Unless otherwise stated the data of the rolling stock have been obtained from the Statistical Office of the United Nations and those of the length of the railway lines by which the figures on "kilometres of railway line per locomotive" are computed have been obtained from the Congreso Panamericano de Ferrocarriles.

[a]Sánchez-Moca branch only, representing 58 per cent of the whole coverage.

[b]Guayaquil-Quito Railways only.

[c]The length of the railway lines has been obtained from the *Universal Railway Year Book 1948-1949.*

[d]Rolling stock figures obtained from the *Industrial Reference Service, Part 1—Transportation and Public Utilities,* U. S. Department of Commerce, 1945.

[e]Including Standard Fruit and Steamship Company Railway (Vaccaro Lines) which does not serve as a common carrier.

As is usual in newly-developed areas with a limited domestic market and with a great economic dependence upon foreign trade, the structure of the railway systems in Latin America was not determined by the internal needs of the countries but mainly by their positions as large producers and exporters of raw materials and foodstuffs. Consequently, the first lines were built mainly to transport the products of the richest and most easily accessible regions to the ports for export. Among the first railways built in Peru and Bolivia were those that carried minerals to the coast. The same pattern is found in Argentina with regard to livestock and agricultural products, in Brazil and Colombia with regard to coffee and in Honduras with regard to bananas. Lines built linking the largest inland towns with ports were of similar importance. Even today, primary goods constitute the bulk of the freight transported by the railways (see table 62).

The topography of each country, an important factor in determining the accessibility of the sources of raw materials, was necessarily taken into account in planning the railway systems. High mountains in Bolivia,

TABLE 62. COMPOSITION OF RAILWAY FREIGHT IN FOUR LATIN-AMERICAN COUNTRIES, 1946

	Agriculture and livestock		*Industrial products*		*Mineral products*		*Miscellaneous*		*Total*	
Countries	*000 tons*	*Per cent*	*000 tons*	*Per cent*	*000 tons*	*Per cent*	*000 tons*	*Per cent*	*000 tons*	*Per cent*
Chile[a]	2,713	28	1,025	10	2,655	30	9,510	32	9,510	100
Cuba	14,209	72	190	1	543	3	4,648	24	19,590	100
Mexico	5,720	40	1,375	10	6,196	44	849	6	14,112	100
Peru	1,130	32	201	6	1,018	28	1,242	34	3,591	100

Sources: for Chile, *Estadística Chilena;* for Cuba, *Boletín Mensual de Estadística;* for Mexico, *Anuario Estadístico* and for Peru, *Anuario Estadístico.*

[a]State railways only.

Ecuador, Colombia, Peru and Mexico, and rivers and forests in Central America, Venezuela and Brazil handicapped railroad construction, while the large extent of plains in the central eastern sections of Argentina favoured the laying of tracks. Just as topography was a determining factor in the planning of lines, so was the construction and operation of railways a determining factor in the economic development and increase in production of some regions.

The lack of interest on the part of private foreign investors in the face of high construction costs was in a few cases compensated by government investment which ventured into expensive and sometimes uneconomic enterprises in order to bring the railways to isolated regions. Such enterprises were, however, limited by the lack of resources of most of the Latin-American Governments.

Immediate economic considerations on the part of foreign investors and the lack of a satisfactory policy in most countries were responsible for certain problems which were to have a lasting influence on the efficiency of the systems of Latin America and on the financial situation of the enterprises themselves.

One of these problems is the different gauge of the lines in the same country. Argentina has lines of four different gauges, although the greater percentage of trackage is in the broadest gauge (167.6 centimetres).[1] With Cuba and Central America as the main exceptions, the same problem prevails in the other countries. This difference in the gauge of rails prevents the easy connexion of the whole system within those countries, and in some cases with neighbouring countries. Another characteristic is the unsuitable location of some lines, which reduces their economic benefits. Some railroads between two important cities or regions run parallel with navigable rivers and new lines have been built parallel to others already in existence. Main highways have also been built parallel to existing railways.

Before the great depression the railways of Latin America appear to have been in a satisfactory financial condition, judging by the dividends paid. However, during the 1930's, they were adversely affected by several

[1]In 1948 the Argentine Government, which at present owns the whole railway system in the country, announced its intention of unifying the gauge of all lines.

factors. The volume of traffic declined as a result of the decrease in the volume of exports and imports and in economic activity generally. The competition of highway transport took from the railways their most lucrative form of transport, namely, the haulage of valuable products over relatively short distances. This competition had the additional effect of compelling the railways to change the rate-schedules prevalent until that time. The principle of basing rates on the value of the goods was abandoned. Companies followed a contract procedure, whereby the tariff is determined in consultation with the most important clients. Another factor responsible for the unsatisfactory financial position of the railways has been the governmental policy of not permitting freight rates to increase at the same pace as costs—a policy which was intended as a measure for stimulating economic activities in general. There was also considerable pressure on the part of labour to maintain and even increase wages. In the case of foreign-owned railways a reduction in dividend payments took place to the extent of the devaluation of local currency. Apart from any increase in prices, all countries which devalued their currencies were faced with an increase in the cost of imported materials and fuels.

These financial problems, which affected almost all the railways in Latin America during and after the depression, prevented them from accumulating the reserves necessary for the modernization and replacement of their equipment. The reduced efficiency of the equipment made it even more onerous to operate it.

During the Second World War, the situation changed considerably. The increase in economic activity caused by the war and the reduction in the number of transport vehicles on the highways, as a consequence of the decrease in the imports of vehicles and spare parts, added to the almost general shortage of petrol, increased the volume of freight and passenger traffic on the railways.

As is shown in table 63, most of the Latin-American countries reached their war peak in railway freight traffic in 1943-1945. For a few countries such as Uruguay and Nicaragua, the increase was from 18 to 27 per cent over the 1937 level. However, in most of them the increase in freight traffic in 1945 was from 30 to 100 per cent above the 1937 level. After 1945, freight traffic decreased in almost all countries except in Central America, where the increase continued right through 1947, but even where traffic decreased, it still remained at a level well above that of 1937.[1]

In passenger traffic, the war-time increase was even more important (see table 64). In 1945 the level for most of the countries was from 40 to 300 per cent higher than in 1937. In Cuba and Ecuador, the 1945 index

[1]Uruguay was an exception. Freight traffic in 1947 was 5 per cent below the 1937 level. The cause was the decline in agricultural production, as stated in the chapter on agriculture.

TABLE 63. RAILWAY FREIGHT TRAFFIC IN FIFTEEN LATIN-AMERICAN COUNTRIES, 1937-1947

(Indexes based either on ton-kilometres performed or tons of goods carried)

	Base year	Traffic in base year: Million net ton-kms.	Traffic in base year: Thousand freight tons	Index numbers, base year = 100: 1941	1943	1945	1946	1947
Argentina[a]	1937	13,408	.	99	126	130	126	116
Bolivia	1938	.	1,124	137	146	136[b]	..	..
Brazil[c]	1937	5,255	.	120	126	135	134	135
Chile[d]	1937	1,686	.	119	130	140	138	137
Colombia	1937	276	.	113	181	191	210	198
Cuba[e]	1937	719	.	104	220	195	187	196
Dominican Republic	1939	2	.	183	396	357	261	200
Ecuador	1938	47	.	160	213	219	245	238
El Salvador	1937	.	373	89	140	144	144	..
Guatemala	1937	.	573	103	116	148	165	181
Mexico	1937	5,381	.	113	150	149	152	161
Nicaragua[e]	1937	13	.	100	128	118	117	..
Peru	1937	287	.	115	124	140	144	134
Uruguay	1937	361	.	119	..	112	107	90
Venezuela	1937	.	341	120	155	156	148	125

Source: Statistical Office of the United Nations.
[a]Indexes based on figures of the fiscal year ending 30 June of the year stated.
[b]In 1944.
[c]Thirteen main Brazilian railways.
[d]Data relate to gross ton-kilometres.
[e]Data relate to fiscal years ending 30 June of the year stated.

TABLE 64. RAILWAY PASSENGER TRAFFIC IN TEN LATIN-AMERICAN COUNTRIES, 1937-1947

	Million passenger kilometres 1937	Index numbers, base: 1937 = 100: 1941	1943	1945	1946	1947
Argentina[a]	4,198	111	124	166	184	215
Brazil[b]	4,953	134	148	175	183	188
Chile	1,198	112	178	139	139	140
Colombia	484	95	135	162	176	168
Cuba[c]	204	132	256	362	361	345
Ecuador[d]	46	178	347	386	334	321
Mexico	1,719	115	176	198	175	166
Nicaragua[c]	55	104	137	180	179	..
Peru	136	93	157	184	192	183
Uruguay	235	114	..	129	134	139

Source: Statistical Office of the United Nations.
[a]Indexes based on traffic of the fiscal years ending 30 June of year stated.
[b]Thirteen main Brazilian railways.
[c]Data relate to fiscal years ending 30 June of year stated.
[d]Base figure for 1938. Indexes on 1938 base.

was about three times as high as in the base year 1937. Although after 1945 passenger traffic decreased in some countries, such a decrease was

smaller than in freight traffic. Moreover, in Argentina and Peru the increase continued through 1947. Such a difference between freight and passenger traffic after the war was partly due to two sets of factors. On the one hand, production levelled off in some countries or even declined, and the shift in favour of highway transport continued to increase. On the other hand, passenger traffic was maintained by increasing money incomes in the face of stationary or slowly rising rates.

As indicated above, the condition of railway equipment in many Latin-American countries was very unsatisfactory at the beginning of the war. The great increase in their activity in the war period contributed even more to its deterioration. Moreover, although most of the railways increased their earnings during that period, they were unable to obtain the parts and replacements needed, due to shortages in the supplying countries. Consequently, at the end of the war, most of the railway lines in Latin America operated largely with obsolete equipment.

Although there is no complete information available pertaining to the present condition of the rolling stock in all of the Latin-American countries, what is known about some of it might give an approximate idea of the general situation. In Brazil, 57 per cent of the locomotives in use are over 30 years old. In Mexico, about 52 per cent of the locomotives are considered obsolete or in poor condition. In Argentina, the number of locomotives decreased from 4,100 in 1930 to 3,900 in 1946 and the number of freight cars from 57,600 to 52,400. Meanwhile, the rolling stock imported during this period scarcely exceeded 1,500 units and as repairs made in the country were insufficient, its average efficiency was considerably below normal.

After 1946 some Latin-American countries spent a part of their foreign exchange assets (including loans) on purchasing railway equipment but since no detailed information is available with regard to these operations, it is not possible to determine the degree in which they have contributed to increase the efficiency of the lines. Nevertheless, taking into account the great amount of investment needed to modernize the Latin-American railways, it appears that the equipment imported after 1946 was not sufficient and that the larger part of the equipment requirements still remain to be satisfied. In fact, some of the Latin-American countries have planned large investments for the expansion and improvement of their railway systems.

Table 65 shows that Argentina, Brazil, Chile and Mexico intend to invest the equivalent of about $1,200 million for that purpose, while table 59 shows that the extension of lines under construction as planned will add 13,182 kilometres of track in these four countries. All extensions, if carried out as planned, will increase the length of the Latin-American system by more than 10 per cent. The lines under construction, as planned in Argentina, Chile and Uruguay, are chiefly short inter-connecting sections or small extensions for the development of new regions.

TABLE 65. PLANNED INVESTMENT FOR RAILROADS OF FOUR LATIN-AMERICAN COUNTRIES

Thousand U.S. dollars

Countries	*Extension of track*	*Equipment*	*Improvement of roadbeds*	*Total*
Argentina	186,000	..	..	215,000
Brazil	156,000	73,700	120,000	350,500
Chile	30,000	73,000	80,000	183,000
Mexico	358,000	66,600	84,700	509,000

Sources: For Argentina, *Five Year Plan, 1947-1952;* for Brazil, *SALTE Plan;* for Chile, Department of Highways and for Mexico, Bank of Mexico.

The latter include a line running parallel to the Andes, on the Argentine side, to provide transportation facilities for a growing fruit- and vegetable-producing area. In Uruguay, it is intended to improve transportation in a cattle-breeding section where it is at present unsatisfactory. In Chile, new railway lines will be built in the south in order to connect the area with the more developed regions in the central and northern parts of the country. In Peru, 64 kilometres will be built to connect the existing line to Bolivia with the new Peruvian port of Matarani. The Mexican railway from Puerto Mexico to Campeche in the peninsula of Yucatan, the Colombian line from Cartagena to Medellín and Tumaco in the south and the railway line from Quito to San Lorenzo in Ecuador are all intended to open up new areas. The other lines planned or under construction are designed to serve as the inter-connexions of the existing railways.

The lines planned by Bolivia deserve special mention, as they represent an increase of 70 per cent over the present system. These projects are not entirely Bolivian, however, since they form part of two international lines which pass through that country. One will extend the Argentine lines from Yacuiba to Santa Cruz; another is a Brazilian project which will connect Santos with Arica, passing through Santa Cruz. However, the work on these railways is progressing so slowly that the possibility of supplying the most densely populated areas of Bolivia with foodstuffs from the fertile Santa Cruz area in the near future depends entirely on the highway under construction between Cochabamba and Santa Cruz. Because of the great amount of capital necessary to accomplish these tasks and because of the discouraging experience in the past regarding the profit on investment in railways, very little can be expected in the way of raising sufficient private capital.

At present the investment pattern in railways points in the opposite direction; foreign private capital (there is practically no domestic private capital in this field) is being repatriated. At the beginning of the war, railways accounted for one-fourth of all foreign investments in Latin America. The equivalent of over $2,400 million had been invested in these enterprises, mostly by British and French companies since American

investments were significant in the countries nearest to the United States. The repatriation process is shown below.

FOREIGN RAILWAY INVESTMENTS IN LATIN AMERICA, 1938-1948

	Outstanding in 1938		*Repatriation between 1939 and 1948*
	Amounts (millions of U.S. dollars)	*Percentages of total foreign investments*	*Millions of U.S. dollars*
Argentina	1,267	39	1,267
Others	1,147	16	321
	2,414	23	1,588

Governments are being regarded as the main source of funds for the financing of railway improvement and expansion. The possibility of floating bond issues, however, is considerably limited in most countries. Moreover, the financing of the large foreign currency expenditures resulting from the imports of material depends in a number of cases upon the possibility of the respective Governments' receiving foreign loans. After the war, some Latin-American countries, such as Chile, Colombia and Brazil, obtained loans from the Export-Import Bank in small amounts, to be devoted only to the purchase of equipment but not for the extension of railway lines. Some Latin-American countries have included in their lists of projects, submitted to the International Bank for Reconstruction and Development, railway development for the realization of which they need loans. So far, no credit from the Bank has been granted to Latin-American countries for that specific purpose, with the exception of Chile which has not yet used the amount authorized.

III. HIGHWAY TRANSPORTATION

THE HIGHWAY NETWORKS

In the past, the use of highways for long-distance transportation was for a long time restricted by the high cost of transporting foodstuffs by horse, mule wagons and ox-carts. After the building of railroads, highways became even less important for long-distance hauls, and for many years transportation on highways was largely local in nature.

The introduction of motor highway transport in Latin America, which began on a large scale in the early 1920's, had a considerable effect upon the transportation systems of the respective countries. The development of motor transport required a greatly improved network of roads, which in turn made possible the new increase in transportation. Considering the high cost of railroad construction and of maintenance of lines and equipment, the development of highways permitted the opening of new areas. Furthermore, because of its greater flexibility and other

advantages, motor transport tended to limit railways to the transport of bulky goods over long distances.

The Latin-American non-oil-producing countries are also confronted with the problem of oil supplies which must be added to the difficulties of replacing motor vehicles which are common to almost every Latin-American country.

Up to the present, Latin-American countries do not in general have a nationally integrated highway network. At the beginning, most of the development consisted of local stretches of graded roads, giving access to railheads or commercial centres. Several countries have scarcely gone beyond this stage. In some countries, such as Colombia, roads are part of an intricate combination, with rail and river arteries, supplemented by well-developed air transport.[1]

In most countries, however, the road systems were developed a stage further when Governments began to link up important zones, or the territory as a whole. In this respect it should be noted that a part of the highway mileage runs parallel to previously existing railways, which have suffered from competition, and that many highways are important only for travel and tourist traffic. Due to the proximity of the United States, road travel has had great economic importance for Mexico, where the income derived from tourists amounts to an estimated $US150 million a year.

During the last twenty-five years, Latin-American Governments have taken an increasing interest in the development of highways and the majority of them have special Roads Departments, usually a branch of the Ministry of Public Works or Communications. Several also have special plans for the construction of specific roads within a certain number of years.

Many Latin-American countries have to depend on long sea or river transportation to supply some parts of their territories, while others have to depend on imports of foodstuffs which they can produce but cannot transport economically to the consumption centres. In most Latin-American countries, the lack of adequate highway transportation is therefore seriously hampering economic development and efficient distribution of products, thus affecting unfavourably the standard of living of their populations.

Table 66 gives an estimate of the total length of highways in Latin-American countries, in relation to population and territorial area.

The Pan-American Highway

The Fifth Pan-American Conference held in Santiago, Chile, in 1923, abandoned the original project of a single railroad to join all of the Americas in favour of a new project termed the Pan-American Highway. As now planned, it consists of a trunk road from Nuevo Laredo on the

[1]Lloyd J. Hughlett, ed., *Industrialization of Latin America,* New York, 1946.

TABLE 66. LENGTH OF HIGHWAYS IN RELATION TO TOTAL AREA AND POPULATION

	Total length in kilometres	*Percentage of total length*		*Population per km. of road*	*Area (sq. km.) per km. of road*
		Paved	*Improved*		
Argentina	61,600	10	38	261	45.3
Bolivia	24,816	—	6	155	43.4
Brazil	256,300	1	24	185	13.8
Chile	40,296	3	36	137	18.3
Colombia	18,800	6	25	560	61.0
Costa Rica	1,637	54	38	480	30.4
Cuba	5,000	62	14	1,018	22.2
Dominican Republic	3,250	77	10	661	15.4
Ecuador	7,100	3	35	478	34.7
Guatemala	5,600	—	54	650	19.4
Haiti	2,880	2	61	1,232	9.6
Honduras	1,300	—	55	953	88.6
Mexico	50,000	22	16	466	39.3
Nicaragua	890	22	54	1,276	166.2
Panama	2,277	31	41	320	33.1
Paraguay	6,000	1	12	204	12.5
Peru	33,400	6	85	237	37.3
Salvador	6,240	6	29	328	3.5
Uruguay	41,000	2	14	56	4.5
Venezuela	15,000	13	39	300	60.8

Source: Official statistical data of the countries concerned.

United States frontier to Buenos Aires. Branches run from Medellín in Colombia to La Guaira in Venezuela; from Arequipa in Peru to Valparaíso; from Rosario to Asunción and from Buenos Aires to Rio de Janeiro. Connecting roads run from Santa Fé on the Asunción branch to Porto Alegre on the Rio de Janeiro branch and from Valparaíso to Buenos Aires.

The Pan-American Highway Confederation was organized in 1924 and plans for its financing were prepared at the Third Pan-American Highway Congress held in Santiago in 1939, and again at the Havana meeting of the American Foreign Ministers in 1940.

In the meantime each country was working separately on its section of the highway. From 1939 to 1940 the Central American Republics obtained loans from the Export-Import Bank for the completion of their parts of the highway and in 1941 the United States Government authorized the appropriation of a sum not exceeding $20 million to assist the five Central American Republics in the surveying and construction of the sections of the Pan-American Highway within their borders.

By the end of 1947, the total length of the Latin-American sections of the Pan-American Highway, as planned, was 36,655 kilometres. Of this total, 11,368 kilometres were already paved; 20,133 kilometres had a gravel or other type of improved surface, 3,946 were seasonal dirt roads and 1,108 kilometres had either not been constructed at all, or not been opened to traffic.

Once completed, the Pan-American Highway will facilitate tourist traffic. Some of its sections will also have an important economic sig-

nificance, particularly in Central America, as they traverse regions with potential agricultural resources which have up to now remained isolated.

Motor vehicles

The rapid increase in the number of motor vehicles during the 1920's was chiefly for the purpose of satisfying urban needs. Comparison of the number in use then and in later years can therefore be misleading. It is only after 1930 that the increase in the number of registered trucks corresponds to the development of highway transport services, and even then a certain proportion is absorbed by commercial urban transportation and by a further mechanization of various municipal services.

Most of the Latin-American data on motor vehicles are totals and therefore only an approximate breakdown can be made into categories, distinguishing vehicles used for highway transport from those employed exclusively for industrial and commercial purposes in built-up areas. Nor is there sufficient information available concerning the capacity, condition or age of the vehicles. It has therefore been impossible to make accurate estimates of their numbers, or requirements for renewal, except for some countries and over a certain period of time.

The motor vehicles in Latin America comprise over half a million buses and trucks (see table 67.) Of these, over 420,000 are freight-carrying vehicles, the great majority being two-ton trucks with an average age of over eight years. Sixty thousand are replaced each year. The total increase is 30,000 to 40,000 vehicles a year.

As can be inferred from table 66, their distribution has no direct relationship to either the total mileage or the total area of the country concerned. The number of trucks is, in fact, interrelated with several factors which include the number and development of large cities, industrial development, type of agricultural activities, the efficiency of the railway network and the availability of foreign exchange.

The rate of replacement of obsolete trucks usually depends on the same factors. It has been estimated that since the war annual replacement has been 14 per cent—in other words, about 50,000 to 60,000 trucks. If it is borne in mind, however, that during the war this percentage was not only much lower, but that vehicles normally considered unfit were put back into service, it must be recognized that this rate of replacement scarcely covers obsolescence. In view of the list price f.o.b. New York of the average size truck at present imported, Latin America requires between $120 to $130 million annually to replace worn-out vehicles, in addition to transport and other charges. If a further $15 to $20 million a year are added for the purchase of spare parts, it can be understood why some countries continue to use over-worked vehicles at a technically prohibitive operating cost. This is of major importance if considered in the light of a possible decline in prices of goods carried, which could not

TABLE 67. TRUCKS, BUSES AND PASSENGER CARS REGISTERED IN LATIN AMERICA, 1929, 1939 AND 1947

	Trucks and buses			*Passenger cars*		
	Registered in 1939	*Index numbers 1939 = 100*		*Registered in 1939*	*Index numbers 1939 = 100*	
		1929	*1947*		*1929*	*1947*
Argentina	59,500[a]	83	250[a]	206,000[a]	126[a]	147[a]
Bolivia	3,307	26[a]	228[a]	2,120	68[a]	176[a]
Brazil	69,969	81	171[a]	111,832	94	118[a]
Chile	14,134	104[b]	193	31,992	84[b]	105
Colombia	11,175	48[a]	195	15,622	61[a]	139
Costa Rica	866[a]	42[a]	254[a]	2,263[a]	49	147
Cuba	16,621	81	156	27,669	93	133
Dominican Republic	863	99[a]	289	1,482	..	167
Ecuador	1,353	38[a]	237	1,308	100[a]	140[c]
El Salvador	895	27[a]	127	2,586	60[a]	128
Guatemala[d]	1,702	58	181	2,539	83	139[a]
Haiti	610[a]	71[a]	138[a]	1,817[a]	109[a]	153[a]
Honduras	621[a]	19[a]	96[a]	649[a]	47[a]	227[a]
Mexico	49,487	45	204	89,372	70	150
Nicaragua	204[a]	44[a]	365[a]	615[a]	106[a]	120[a]
Panama Canal Zone[d]	1,912	86	167[a]	10,280	44	129[a]
Paraguay	600[a]	75[a]	230[a]	1,500[a]	47[a]	83[a]
Peru	9,746	53	187	13,881	57	150
Uruguay	15,018[a]	48[a]	160[a]	46,678[a]	70[a]	119[a]
Venezuela	14,219	3[a]	245	17,943	60[a]	163

Source: Unless otherwise stated, United Nations Statistical Office.

[a]*Source: Automóvil Americano 1948* and official publications of the countries concerned.

[b]In 1930.

[c]Estimate.

[d]Taxis are included in "trucks and buses".

be compensated by a corresponding reduction in freight rates, except through scrapping a considerable proportion of trucks. Such a measure could only have an adverse influence on Latin-American production.

The distribution and changes in the number of registered passenger automobiles is shown in table 67. It may be noted that in numerous countries there were more automobiles in 1929 than in 1939. By 1947-1948, however, the increase over 1939 was appreciable in most countries.

FINANCING OF HIGHWAYS

Roads are mainly financed by taxes on petroleum by-products, land taxes, funds allocated from the budget, domestic bond issues and foreign loans. With the exception of two countries, it has been impossible to determine the total sums invested in highways, owing to the fact that they are usually included in the Public Works budget and are administered by various organizations, and their estimates do not include indirect expenses.

Taxes on petroleum by-products are the most important. The principal tax—that on gasoline—has had to be levied with caution as it

is immediately reflected in freight rates. Funds from this source, however, scarcely cover maintenance costs, as was revealed by studies made in Mexico and Chile. A technical analysis made in the former country showed that in 1944 the direct maintenance cost on a total of 2,675 kilometres investigated was 4,000 pesos per kilometre per year. At the same time, the traffic was 600 vehicles a day, which, consuming one litre for every five kilometres, yielded an annual revenue of 4,380 pesos. The analysis does not specify whether this is the gross or net figure, but even assuming it to be net revenue, the balance would show a deficit, should there be any increase in maintenance costs. Traffic in Chile is lighter still; a similar study made there revealed that only on approximately 6 per cent of the total mileage does it amount to 300 vehicles per day per kilometre and that it does not reach 20 vehicles per day on 57 per cent of the total mileage.

Furthermore, the proceeds of the tax on gasoline and lubricants are sometimes devoted to the maintenance and improvement of city streets and various purposes other than transport. As a result, this tax brings in proportionately less as the total mileage increases. Consequently several countries are obliged to allocate increasing amounts from their general budgets to finance the extension, improvement and maintenance of their highways. In most countries, however, such sources are too small to enable them to solve their pressing transportation needs in the near future.

The position has been still further complicated by the scarcity of foreign exchange. Even though this affects motor vehicles more than road construction, a certain amount is always required for the purchase of material and mechanical equipment abroad.

IV. INLAND WATERWAYS

The river systems of Latin America, the countries they drain and their relative importance all differ so widely that it is difficult to deal with them as a whole. The most important and those which have the greatest possibilities are the Amazon, Paraná-Paraguay, Magdalena and Orinoco basins. The others are of local importance only and their rivers are only navigable over short distances.

The total navigable length of the Amazon River system is unknown, but 15,000 miles are open to river steamers, and ocean-going steamers make frequent journeys to Iquitos, in Peru, 2,300 miles from the Atlantic. The total area drained is estimated to be 2.7 million square miles, and includes territory in Brazil, Venezuela, Colombia, Peru and Bolivia. The deficiencies of transport are receiving particular consideration in the Peruvian sector. If rotenone, for instance, is exported to the United States via Belem, the cost per ton of shipping it from Iquitos to Belem is $US36 and from Belem to New York, $US47. This cost does not take into

account the Brazilian taxes or the cost of freight from the place of origin to Iquitos. If it is transported by road over the Andes, the cost of transportation to Callao is $US35 and from Callao to New York $US25. The Government has considered it more practicable to develop this district by means of roads rather than by improving river transport. A similar policy has been adopted by Bolivia and Colombia.

Brazil, holding the mouth of the river, is, in accordance with the SALTE Plan, trying to improve certain river ports and to build interconnecting canals. The Plan also includes the building of roads and railways in the same region. The possibilities of developing the zone economically depend on many different factors and it may be a long time before it is possible to improve on the present primitive system of canoes, rafts and small steamers.

The river system of the Paraná-Paraguay is the most important in Latin America. It serves the periphery of the wheat and cotton zones of Argentina, a part of southern Brazil and western Uruguay and it is Paraguay's principal means of communication with the outside world. It has been a decisive factor in the economic development of that part of Argentina which it drains. Thus Rosario, about 400 miles from the sea, is the second largest port of Argentina and 716,000 tons of merchant shipping called there in 1947. In 1945, 5,000 steamers, representing 510,000 tons, called at Asunción. This is the river system presenting the fewest problems, where the transport vessels are modern and efficient and compete with railways and roads.

The Magdalena river is of particular importance to Colombia, where all the principal zones of production are inland. Unfortunately the three rivers constituting the system, Magdalena, Cauca and Nechi, do not permit uniform navigation, and goods have to be trans-shipped from one type of vessel to another. In spite of the consequent high costs, river transport remains very important in Colombia. The Government has to some extent been able to co-ordinate river navigation with the road, cable and railway systems.

The Orinoco is still the principal means of communication in the plains of Venezuela and most of its course is navigable by craft drawing twelve feet of water. Its importance is limited, however, by the low density of population of the plains, but its significance may be expected to increase with the development of the country's iron ore resources. The Orinoco is connected with the Rio Negro, a tributary of the Amazon, by a natural canal 150 miles long.

The most important lake traffic is found in Lake Titicaca, where an efficient steamer service runs between Peru and Bolivia; in 1946, 203 steamers, with a total of 83,000 tons, entered the Peruvian port of Puno. In the Central American lakes, chiefly in Nicaragua, there are local transport services, which to a small extent link the export trade with the inland cities by means of rivers.

V. MARITIME TRANSPORT

The Latin-American countries are connected with their European and North American consumer markets, and in most cases with each other, by sea. Most of them, however, depend almost entirely on foreign shipping for the transport of their exports and imports. Changes in the volume of maritime traffic of several Latin-American countries are shown in tables 68 and 69.

TABLE 68. MARITIME TRAFFIC OF TWELVE LATIN-AMERICAN COUNTRIES, 1937-1947

(Entrances and/or clearances of vessels in international trade[a])

	Entrance or clearance	*1937 Thousand net reg. tons*	*Index numbers, base: 1937 = 100*				
			1941	*1943*	*1945*	*1946*	*1947*
Argentina[b]	entered	11,615	40	23	30	60	73
Brazil[bcd]	cleared	23,328	50	25	29	47	57
Chile[b]	cleared	2,693	84	65	95	90	100
Colombia[be]	entered	6,630	57	16	34	55	79
Costa Rica[be]	entered	1,501	84	36	32	64	89
Cuba[fg]	entered	4,051	104	120	124	122	143
	cleared	3,935	106	121	123	121	139
Dominican Republic[bg]	cleared	1,675	68	23	31	54	87
El Salvador[beh]	entered	1,818	27	16	19	27	45
Mexico	entered	1,494	54	15	39	60	70
	cleared	3,759	46	16	28	38	54
Peru[bce]	cleared	17,366	48	26	31	39	46
Uruguay[bg]	entered	11,575	44	33[i]	..	..	..
Venezuela	entered	3,762	60	13	41	83	..
	cleared	16,132	103	75	128	218	..

Source: Statistical Office of the United Nations.

[a]Unless otherwise stated, the figures relate to net registered tonnage of national and foreign vessels (power or sailing) and to only one entrance and one clearance for each voyage. Where the figures include vessels in ballast (i.e., vessels entering without discharging or clearing without having taken cargo), only entrances or clearances are shown according to whether the country is a net importer or exporter.

[b]Including vessels in ballast.

[c]Including coastwise traffic.

[d]Ports of Rio de Janeiro and Santos only, representing 37 per cent of total traffic in 1943.

[e]Number of entrances or clearances counted per voyage not known.

[f]Base figures for 1938. Indexes on 1938 base.

[g]All entrances or clearances are counted.

[h]May include coastwise traffic.

[i]In 1942.

Due to this dependence, they found themselves in an extremely critical position during the two world wars, and most countries are now increasing their merchant fleets. The registered tonnage of the most important countries shows an increase of 50 per cent in 1947-1948 over 1938 (see table 70.) Though the period of time is not the same, there is a parallel between this increase and that of about 40 per cent which took

TABLE 69. MARITIME TRAFFIC OF PORTS IN FIVE LATIN-AMERICAN COUNTRIES, 1937-1947

		Thousand tons in 1947	*Index-numbers, base: 1937 = 100*				
			1941	*1943*	*1945*	*1946*	*1947*
Brazil[a]	loaded	2,366	105	80	89	98	88
	unloaded	4,522	81	65	85	102	140
Chile	loaded	2,954	117	63	105	99	107
	unloaded	409	104	60	126	170	220
Colombia	loaded	4,592	58	22	33	42	63
	unloaded	725	80	26	85	112	123
Mexico	loaded	26,071	126	97	174	208	232
	unloaded	583	82	49	149	191	305
Venezuela	loaded	4,274	88	45	65	83	100
	unloaded	1,366	120	119	120	134	143

Source: Statistical Office of the United Nations.

[a]For four more important ports only (Santos, Rio de Janeiro, Salvador and Recife) which in 1947 covered approximately 55 per cent of the total loadings and 90 per cent of the total unloadings.

TABLE 70. GROSS TONNAGE OF MERCHANT VESSELS OVER 100 TONS IN NINE LATIN-AMERICAN COUNTRIES[a]

	Gross registered tons, 1938	*Index numbers, base: 1938 = 100*			
		1913	*1929*	*1947*	*1948*
Argentina	280,814	64	98	203	243
Brazil	483,446	65	113	125	146
Chile	157,707	69	92	121	119
Cuba	29,963	203	127	64	116
Honduras[b]	70,692	..	123	393	459
Mexico	28,729	132	163	375	399
Panama[b]	611,207	...	10	278	444
Peru	35,121	73	127	209	246
Venezuela	76,286	6	73	118	125

Source: Lloyd's Register of Shipping.

[a]Data relate to the tonnage on 30 June of the year stated and exclude sailing vessels. In 1948 Uruguay had a fleet of 63,062 gross tons.

[b]The greater part of the tonnage was foreign owned and not used in Latin-American trade. The 1913 figure is negligible.

Note: According to the U. S. Maritime Commission, 19 October 1948, Colombia had a merchant fleet of 30,000 gross tons (vessels of 1,000 tons and over) which has been constituted almost entirely since 1939.

place between 1913 and 1929. During 1929-1938, however, Latin-American shipping lost ground in the face of competition offered by European, North American and Japanese vessels, and by the end of 1938 the registered tonnage had decreased by nearly 4 per cent.

The efforts of the Latin-American countries to meet this competition were not vigorous enough. The cost of building and maintaining merchant ships is great and seldom does the financial position of these countries permit a policy of subsidies such as that followed by some important maritime countries. The merchant fleets of some countries

have been able to survive only because coastal traffic by foreign vessels has been forbidden by law.

The progress in expanding the Latin-American merchant fleets achieved since the late 1930's continues to be hampered, however, by negative factors, such as the type and size of vessels, development services and port difficulties. Both ocean-going and coastal vessels were acquired at different times and from different countries, a fact which has complicated repair and maintenance services. Most of the ships in service are old and therefore not only are slow but require constant and lengthy repairs. In several countries State-owned or subsidized ships are obliged to operate at a loss. This occurs, for example, in the south of Chile and on the run from Callao on the Pacific to Iquitos on the Amazon, 2,300 miles from the Atlantic. These journeys are usually essential to the development of the country, and costs could, in some instances, be reduced through the co-ordination of coastal freighting with international shipping.

The lack of port facilities is probably the most important factor impeding the progress of Latin-American shipping. The countries possess few natural harbours, and their artificial ports often have limited facilities. Slow loading and unloading increase the operational costs of ocean-going freighters. As Latin-American vessels use these ports more than foreign ships, they would benefit by further mechanization of the international ports, which would also reduce costs for foreign fleets.

Several countries have planned, and in some cases have already begun, to improve their seaports. A Brazilian plan provides for the investment of $70 million during the years 1949-1953 for the improvement of harbours and facilities in general in nineteen of its principal ports. The other countries have limited themselves to specific projects. Peru, in addition to installing machinery for the loading of coal in Chimbote, has opened up the port of Matarani which will replace Mollendo, an open bay with inadequate quays. With the help of foreign loans Chile has improved the port installations for the new steel plant located at Huachipato.

Improvements are necessary not only in the ports that service international shipping but also in those used by coastal traffic which in most countries comprises a greater tonnage than ocean-going craft. In spite of this, few countries have paid sufficient attention to the ports used by coastal traffic. Not only are there loading difficulties, but fleets have had to be adapted to the special conditions prevailing in the ports. As a result vessels are generally small, slow and expensive to run. Thus in Peru trucks are able to compete advantageously with coastal traffic over long distances, and even in Chile, which has many natural harbours, the railways are hardly affected by the competition offered by coastal freighting.

In conclusion it may be said that Latin-American merchant shipping is in a better position to compete with foreign merchant navies than in the 1930-1938 period; and that a plan is needed for the improvement of ports, both for international and coastal traffic, in nearly all the Latin-American countries.

VI. AIR TRANSPORTATION

Due to its relatively high rates, air transport in Latin America is still of small economic importance in the movement of goods. The volume of mail and valuable merchandise carried by air is, however, increasing rapidly and the speed of this means of transport offers particular advantages in the case of perishable goods and, in some cases, of animals. During the war quantities of strategic goods were transported by air.

The main economic function of air transport in Latin America is the movement of passengers. Owing to the lack of alternative means of transport and the great distances to be covered, passenger air services are of the greatest importance. As far as data on passenger traffic in the countries shown in table 71 can be considered as representative of the region as a whole, the increase has often been considerable.

TABLE 71. DOMESTIC AND INTERNATIONAL PASSENGER REVENUE TRAFFIC ON SCHEDULED FLIGHTS OF AIRLINES REGISTERED IN EIGHT LATIN-AMERICAN COUNTRIES

(Indexes based on passenger-kilometres performed or on aircraft-kilometres flown)

	Traffic in 1937		*Index numbers, base: 1937 = 100*		
	Passenger-kilometres (thousands)	*Kilometres flown (thousands)*	*1940*	*1943*	*1947*
Argentina	..	330	163	308	2,888
Bolivia	2,533	..	168	170	630
Brazil[a]	31,136	..	145	378	1,800
Chile	2,407	..	77	417	2,293
Colombia[b]	..	3,105	112	141	696
Mexico	24,283	..	164	724	2,054
Peru	..	3,439	90	126	190
Venezuela	..	342	..	..	3,071

Source: International Civil Aviation Organization.
[a]A small percentage of non-scheduled and non-revenue traffic is included.
[b]Non-revenue and non-scheduled flights included.

Partial data indicate a similar development in air cargo transport, which has in some cases progressed at an even more rapid pace than passenger traffic.

In view of the insufficient co-ordination between the land and water transport systems in most countries and the isolated character of certain

regions, the respective Governments have given particular attention to civil aviation with a view also to achieving a higher degree of political and cultural unity. This policy has followed different lines and includes the granting of subsidies, privileges with regard to air mail and the building and maintenance of air ports at government expense. Several Governments own and operate civil airlines. Some countries have excluded foreign airlines from operating within their territories. With a few exceptions, international air service is furnished by United States and some European lines.

In view of the geographical and other difficulties affecting surface transport, it seems probable that civil aviation will progress more rapidly than either land or water transport.

CHAPTER 7

FOREIGN TRADE [1]

I. INTRODUCTION

There is no need to point out the predominating influence which foreign trade has had and still has upon cyclical fluctuations in Latin America and through them upon the continent's economic growth. Ever since this region entered the international market about the middle of the last century, sharing in the process of capitalist development, its exports have tended to rise continuously. There has always been a very close link between the strength of this tendency and the rate of economic growth of these countries.

In the 1930's, however, this and other foreign dynamic factors were weakened by the world crisis; this weakening, in itself very serious, had the additional effect of showing up and emphasizing the discrepancies which had already become evident in the orientation of the main currents of Latin-American foreign trade. Exports were not directed to the countries from which these countries most preferred to import. The Governments had therefore to resort to further measures, to supplement those already taken to remedy the failing dynamic factor, in order to correlate the currents of foreign trade and so lessen the acute shortage of dollars.

Latin America was adapting itself to the new conditions of the 1930's when the Second World War broke out. Its economic forces were then considerably distended. If this brought about new difficulties, solutions began to be found for others which had previously seemed irremediable. The relatively small amounts imported by the United States from Latin America, with such an adverse effect upon the dollar shortage, were followed by enormous purchases. The scarcity of the previous years was quickly forgotten in view of the impressive quantity of foreign exchange reserves accumulated through the lack of imports.

But this is disappearing with the distension, as the economic forces tend to return to their former positions. This re-establishment of the close link between the present and the pre-war period confirms yet again the relatively slow pace of economic structural changes.

In foreign trade there is a manifest tendency for the main currents to return to their former course, creating new discrepancies similar to those of the 1930's.

At that time, for reasons which have already been examined, Latin America was striving to buy more from the United States than it could

[1]See appendices C to G for the total exports and imports of the twenty Latin-American countries during the decade 1937-1947.

sell to that country; meanwhile it sold more to Europe than it imported therefrom, in an attempt to use part of the foreign exchange thus obtained to pay for its excess imports from the United States. In other words, Latin America needed a net balance from its trade with Europe sufficient to cover the deficit resulting from its trade with the United States.

For this aim of multilateral compensation to be realized, however, it was essential that Europe should have a net balance with the United States. Only thus would it have sufficient dollars to pay for its excess purchases from Latin America.

It is already known that this was not the case, and that to avoid an unsustainable drain on its monetary reserves, Europe, like Latin America and other regions, was compelled to resort to forms of bilateral compensation, in an attempt to adjust imports to exports in so far as the former could not be covered by any other means.

Europe at the moment is faced with the necessity of making a similar adjustment, as will be seen in the last chapter relating to Latin America and European economic rehabilitation. Mention can be made here of certain data. Unfortunately they relate to North and Central America on the one hand and South America on the other; data for Latin America as a whole are not available. However, as a very high proportion of European trade with Latin America is with South America, the figures are representative of the region as a whole. Furthermore, the European countries include only those of Western Europe covered by the European Recovery Program.

In 1947, Western European imports from Latin America totalled $1,700 million, i.e., the same amount as in 1938.[1] If the reconstruction programme is carried out, it is estimated that in 1952-1953 purchases will reach $2,100 million, or 22 per cent more than in 1938. Since these European countries are now deprived of the revenue from some invisible items which previously covered part of their imports, their only way out is to sell a similar amount to Latin America, i.e., to the amount of $2,000 million.

To reach this figure, a considerable effort will be required from the European countries since it entails doubling the quantum of their exports to South America, which had totalled $1,000 million, at 1948-1949 prices. An idea of how far they are from this objective is given by the fact that their exports to South America in 1947 reached $750 million. European exports must therefore be increased by $1,250 million.

These data reveal the development of a situation similar to that of the 1930's. Europe would be willing to make substantial purchases from Latin America, but only in return for the sale of a similar amount. It certainly hopes to increase its exports to North and Central America and

[1]Both figures are computed at 1947 prices and are therefore indicative of the quantum of Latin-American exports to Europe.

other countries, but this would barely enable a reduction of its present enormous trade deficit, and offers no hope, in the foreseeable future, of a dollar surplus in trade with Latin America.

The question now arises whether Europe is in a position to compete effectively with the United States and take half the latter's South American market, or if it will attempt to do so and use its power as a purchaser to conclude compensatory agreements which have again been under negotiation recently.

The latter course would signify a return to a system of "discrimination", the shortcomings of which cannot be too strongly emphasized. The most outstanding of these could possibly be eliminated, however, if wider agreements of multilateral compensation could be reached instead of the innumerable bilateral arrangements usually made under this system.

It was said previously that during the 1930's the majority of the Latin-American countries were compelled to take measures to offset the deficiency of the external dynamic factor. It must now be asked whether this factor will be sufficient to stimulate the intense economic development of these countries in the future. A discussion of this matter calls for data covering a period long enough to show clearly the trend of phenomena in their cyclical movement. As yet, no systematic investigation has been made concerning the rate of economic growth of the various Latin-American countries over a long period. It is to be hoped that this will be remedied in future surveys, so that certain fundamental phenomena will be seen in an over-all perspective, which at present is not possible.

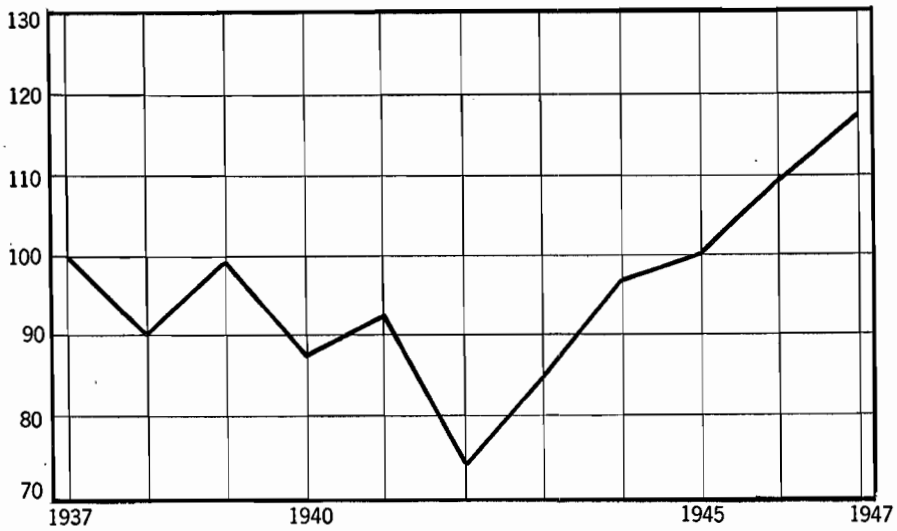
Meanwhile, only partial aspects can be discussed. It has already been said that the amount of products Western Europe plans to buy from Latin America in 1952-1953 is 22 per cent higher than fifteen years previously. At first sight this relatively low figure is surprising in view of the large increases of recent years in Latin-American exports. These were, however, profoundly affected by the rise in prices. An approximate idea of the changes in the volume of exports can be obtained by eliminating price effect as has been done in Chart 1. The fluctuations there portrayed give an impression very different from that obtained from values. In 1942, the index fell to 74 per cent of the 1937 level; thereafter it recovered the previous level, and surpassed the latter after 1945. The quantum index in 1947 was thus 16 per cent higher than that of 1937. If it is remembered that during this time population in Latin America increased by 22 per cent, it can be seen that the real increase in exports does not appear to indicate any substantial alteration in the elements of the problem which arose in the 1930's.

It is a fact that, if prices of primary products improve in relation to those of finished manufactures, Latin America would be able to import more with its exports than it could otherwise. The consideration of such a possibility is permissible when making assumptions concerning the

future. There is no sign of this possibility at present, however, judging by the natural deterioration of the price relation, following the fluctuations suffered in the decade now drawing to a close.

CHART 1. QUANTUM OF LATIN AMERICA'S EXPORTS

Base: 1937=100



Source: United Nations Economic Commission for Latin America.

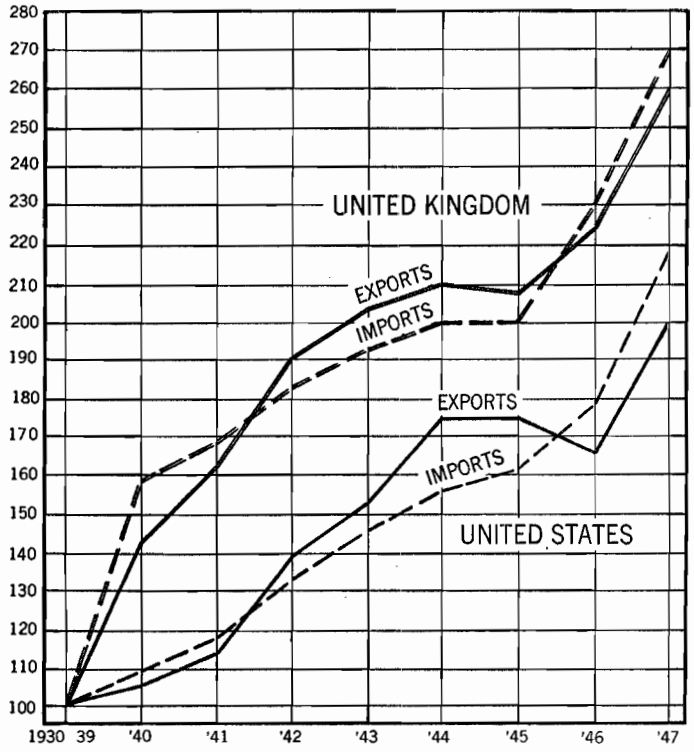
Furthermore, these fluctuations have given rise to certain illusory phenomena which should be guarded against. It is usually thought, in fact, that the fluctuations tend to offset to some extent the prevailing disparity between the movements of the prices of primary and finished products, which has been discussed elsewhere. In the 1930's the former were 64 per cent of the latter, compared to the 1870's. If an average of the period 1940-1947 is taken, the price relation is exactly the same as in the 1930's. The disparity has consequently prevailed in spite of the fluctuations.

In order to prove this statement, the import and export price indexes of the United States and United Kingdom have been used, assuming them to be representative of the prices of primary and finished products, respectively, and their relationship has been calculated, with data for the 1930's as a base. The considerable variations of these relations can be clearly seen in chart 2. After 1944 primary products improved appreciably in relation to manufactures, but this improvement barely compensated for the deterioration which had taken place in the relationship during the previous years of the decade. In fact the average relation of the United States' indexes for the years 1940-1947 is 100.7, while that of

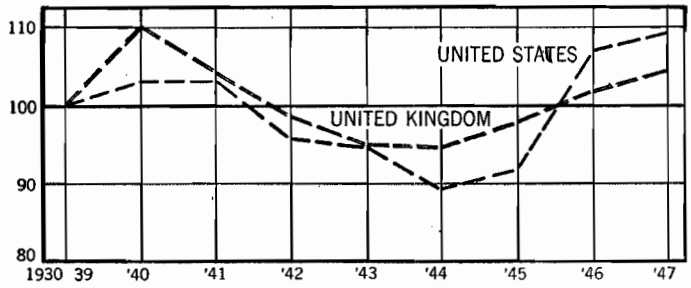
CHART 2. PRICE INDEX OF EXPORTS (PRINCIPALLY MANUFACTURES) AND OF IMPORTS (PRINCIPALLY PRIMARY PRODUCTS) OF THE UNITED STATES AND THE UNITED KINGDOM

Base: 1930-1939=100

Single solid lines correspond to United States.
Double lines correspond to United Kingdom.



RELATIONS BETWEEN EXPORT AND IMPORT PRICES



Source: United Nations Statistical Office.

the United Kingdom is 100.1; these amounts are practically equal to the base 100 of the 1930's.

It could be objected that the simple average of the indexes, and consequently the relationship they measure, do not take into account the values of the imports and exports. In answer to this objection, weighted indexes have been calculated by multiplying annually the import and export price indexes of the United States by the corresponding import and export values.

Latin America does not appear to be any better off. In the 1940-1947 period, the average price index of the United States exports would have risen to 163.6 in relation to the base 100 of the 1930's, while that of imports would have risen to 159.5. In other words, the price relation would have deteriorated by 3 per cent against the prices of primary products, represented by import prices.

In view of their nature, these data naturally do not permit exact conclusions nor can they be used as an indication of what took place in each Latin-American country. They merely express generally and approximately facts which, however, appear sufficient to disperse the illusion created by the prices obtained in the international inflation caused by the war.

Latin America, therefore, does not appear to have bought more imports with a given quantity of exports in the 1940-1947 period than in the 1930's. On the other hand, as the quantity of exports has varied but slightly, there are serious doubts as to whether foreign trade, during the war and post-war period, has given rise to any perceptible increase in the real income of these countries. This leads to the conclusion that any increase in real income must be the result of the increment of employment in their internal activities.

This, briefly, is the present position of Latin America as a whole, in foreign trade. It is of interest to examine how that position was reached: the effects of the distension of forces brought about by the war on the different countries, its influence on the structure of foreign trade, and the influence of these changes on Latin America. This will be dealt with in the second part of this chapter.

II. PRESENT STRUCTURE OF FOREIGN TRADE

Long-term trends

Before examining the present structure of Latin-American foreign trade, a brief survey should be made of the immediate past; it must be recognized, however, that since the period was abnormal the facts revealed by an examination thereof are not conclusive.

In 1937 the Latin-American countries were at the peak of a slow process of recovery from deep depression, the trough of which they had

reached in 1932 when exports stood at 35 per cent and imports at 25 per cent of the 1929 level.[1] The period of "prosperity" during the middle 1930's was so short that it did not permit any relaxation of the restrictive and discriminatory measures limiting Latin-American foreign trade. The price decline began in 1938. As is usually the case, raw material and foodstuff prices dropped more than those of manufactured products and capital goods.

The effect of the war was decisive and prevailed over the action of all the other factors which influenced Latin America's commercial relations with the rest of the world. In the first place, it checked the normal course of the business cycle and distorted the established relations between prices and costs of agricultural, mineral and industrial articles. In the second place, it compelled several Latin-American countries to modify their tariff policy. At first the desire to check the fall in customs revenue resulting from the contraction of imports caused them to raise tariffs, but before long another point of view prevailed and each country found it necessary to ensure a greater supply of imported articles, regardless of fiscal implications. Exchange control regulations were then relaxed in most of the countries in which they had been applied.

The fall in exports from 1937 up to 1940 is due, as regards price, to the cyclical down-swing, and as regards volume, to the loss of the European markets. In 1941 exports began to recover rapidly, as a result of the war demand and of the need felt by the customers of the East Indies and the Philippines to find alternative sources of supply. Imports followed the same pattern, though with a smaller decline between 1938 and 1943 and a swifter increase after the war—that is, as soon as restrictions were lifted by the supplying countries.

It is difficult to ascertain what part of the expansion of the last three or four years can be attributed to the normal increase of trade, and what portion is due to the stimulus of abnormal but favourable circumstances. The expansion of exports during the period 1943-1947 more than compensates for the smaller sales of the preceding five years, while imports of the last three years surpassed the total of the preceding eight years. Perhaps the most significant fact is that in 1947 exports were nearly equalled by imports (see charts 3 and 4).

Changes in the pre-war pattern

An examination of the evolution of exports in each country reveals both differences and similarities. Some Latin-American countries have been able to increase the value of their exports without augmenting the

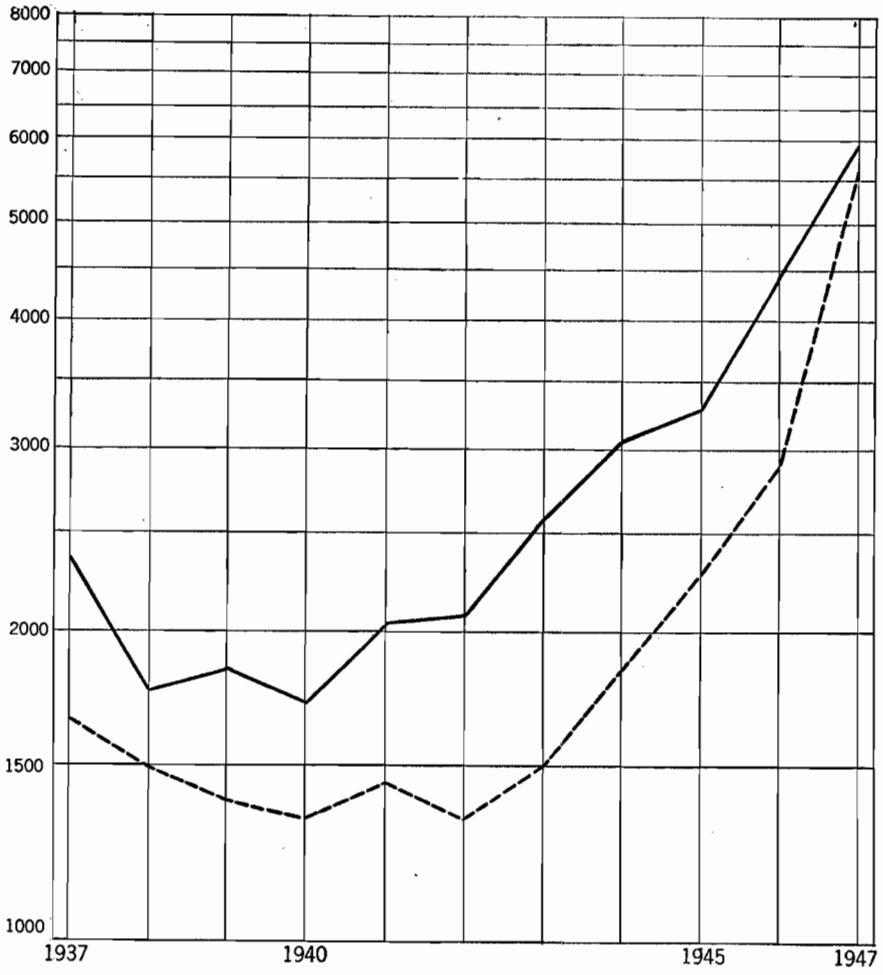
[1]United States Tariff Commission, *Foreign Trade of Latin America*, part I, pages 33 and 34, Washington, 1940.

volume, i.e., without increasing production they have benefited almost exclusively from the export price rise; others have increased both the value and volume of their export trade. In a few exceptional cases the increase of volume was as great as, or greater than, increase in value (chart 5.)

CHART 3. FOREIGN TRADE OF LATIN AMERICA

(In millions of U. S. dollars)

Solid line indicates exports.
Broken line indicates imports.

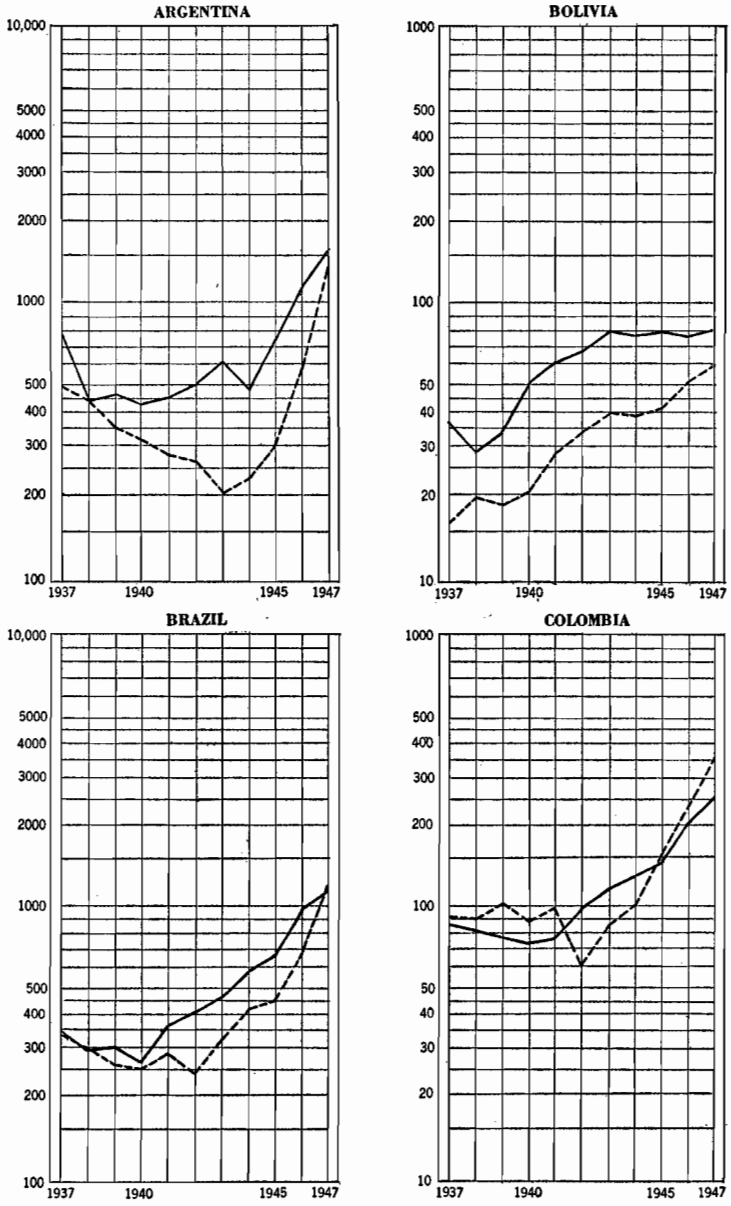


Source: United Nations Economic Commission for Latin America.

CHART 4. EXPORTS AND IMPORTS OF THE LATIN-AMERICAN COUNTRIES: 1937-1947

(In millions of dollars)

Solid lines indicate quantum.
Broken lines indicate value.



Source: United Nations Economic Commission for Latin America.

CHART 4. (*Continued*)

(In millions of dollars)

Solid lines indicate exports.
Broken lines indicate imports.

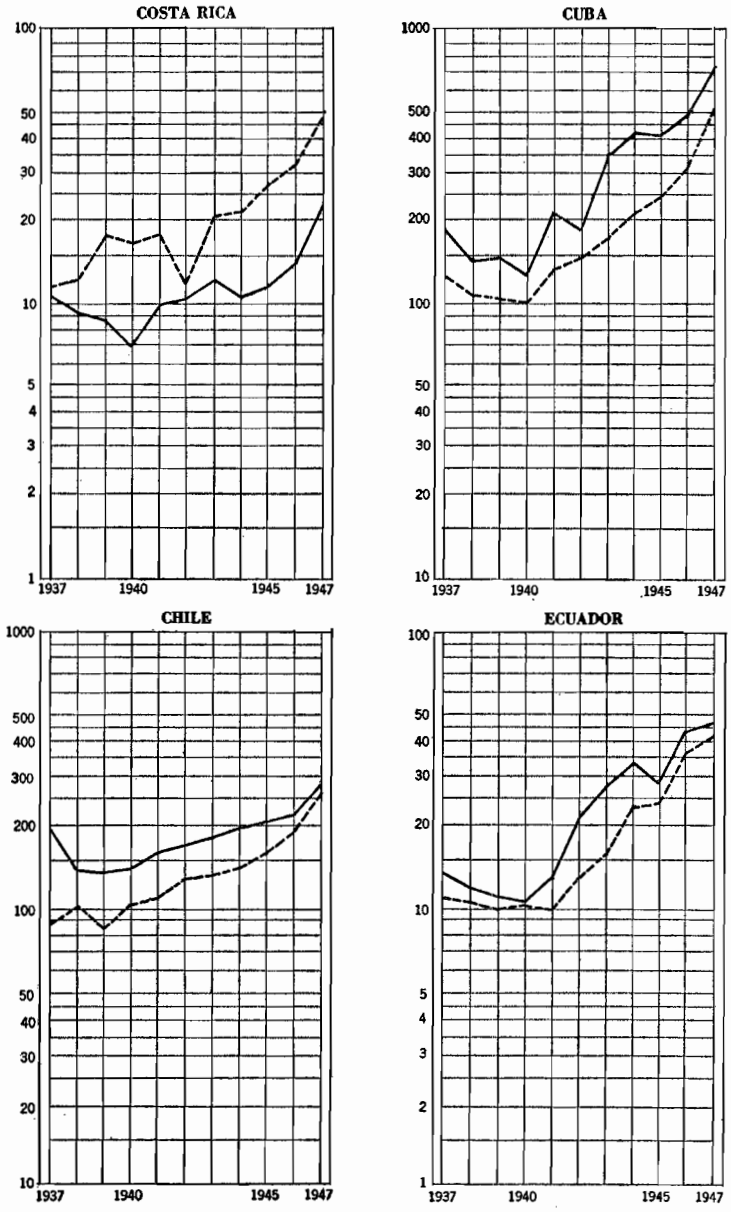


CHART 4. (*Continued*)

(In millions of dollars)

Solid lines indicate exports.
Broken lines indicate imports.

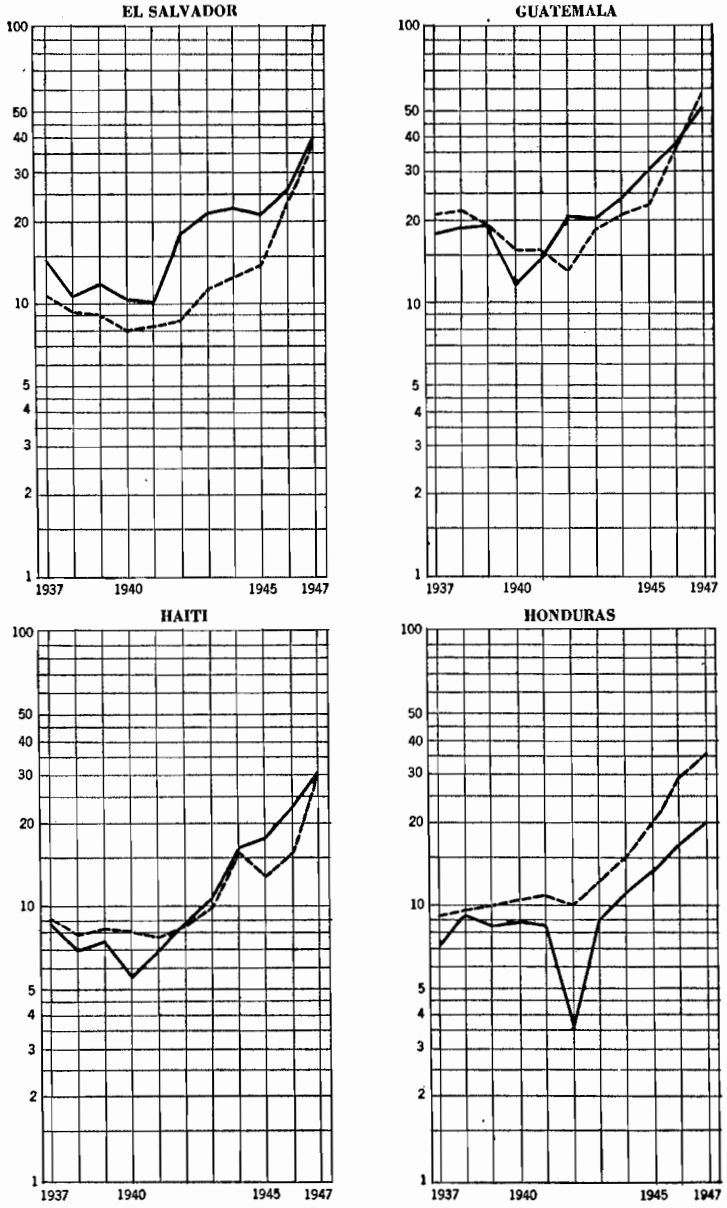


CHART 4. (*Continued*)

(In millions of dollars)

Solid lines indicate exports.
Broken lines indicate imports.

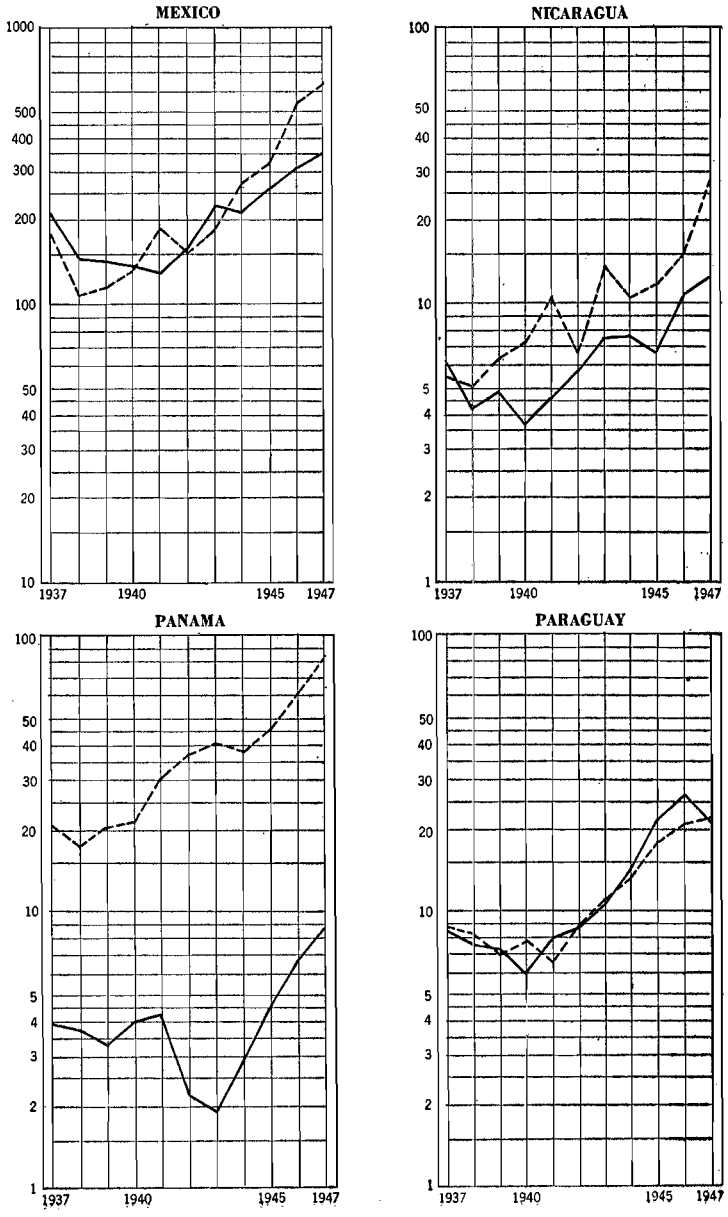
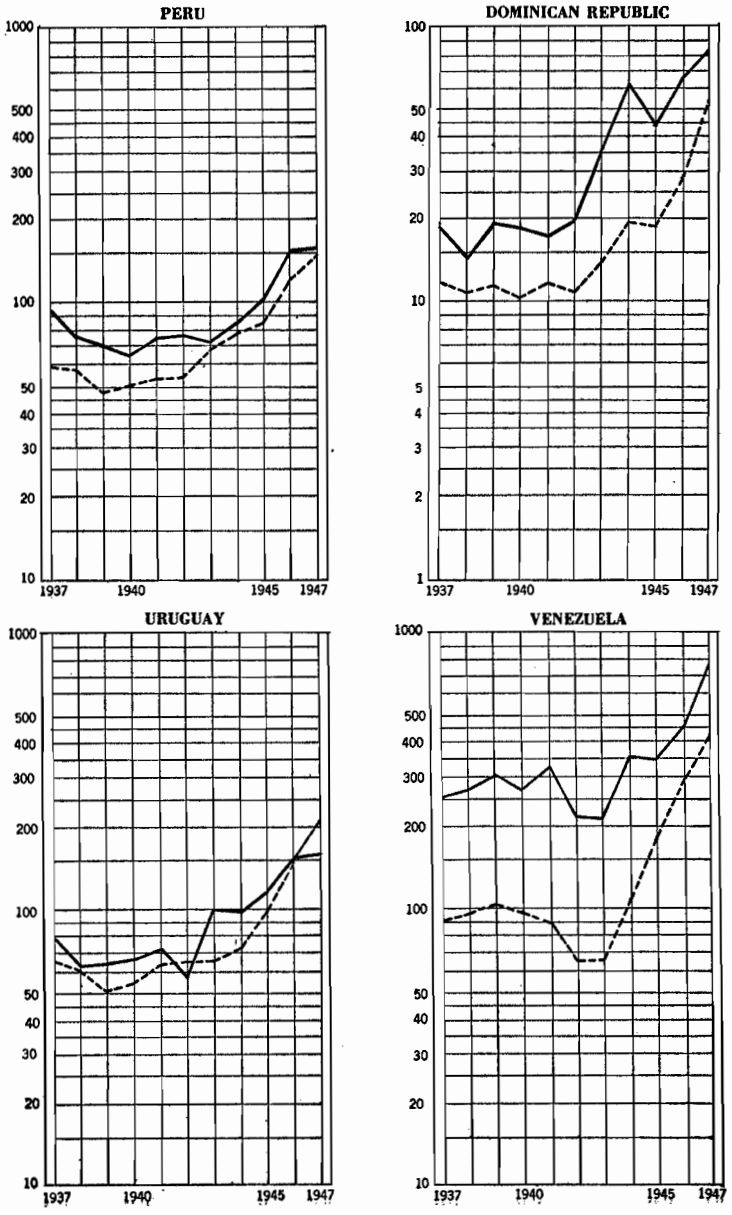


CHART 4. (*Continued*)

(In millions of dollars)

Solid lines indicate exports.
Broken lines indicate imports.



The first group mentioned above includes Argentina, whose "quantum" of exports remained lower than in the base year throughout the whole period, while the index of value recovered steadily, reaching the pre-war level in 1945 and rising sharply above it in 1946 and 1947.

There was an important increase in both volume and value in Nicaragua, due in this particular case to the high proportion of gold exported. In other Central American countries, such as the Dominican Republic, Guatemala, Honduras and Haiti, which produce tropical fruits, coffee, cocoa and sugar, there was a considerable increase in volume after 1943.

Among the mining countries, Bolivia showed a steep rise in both volume and value, the latter tending to increase less sharply. In Chile, on the other hand, the volume of exports remained fairly constant and the increase in price was but slight. Peru and Mexico, like Argentina, appear throughout the period with a volume index lower than in the base year, and an index of value which after 1943 surpassed the base year.

Venezuela, a typical oil-producing country, has had two favourable periods: one before the outbreak of war, and the other after 1944, with a swift rise in 1947.

The effects of the war on Latin-American foreign trade varied from country to country. Some were obliged to reduce their imports to a third of their pre-war volume and half their value (which was the case in Argentina), while others (Chile, Bolivia, Peru, the Central American and Caribbean countries) were able to maintain imports at about the same level.

These differences can be accounted for in the first place by the extent to which each Latin-American country depended on its European suppliers, and secondly, by the basic structure of their imports. A country like Argentina whose principal imports are raw materials, fuel, semi-processed products, machinery and vehicles, naturally suffers from the interruption or restriction of supplies and materials required for the war or diverted from civilian use. Furthermore, in terms of volume it is one of the biggest Latin-American importers and any reduction would therefore affect it more severely. Countries like Cuba and those of Central America whose traditional trade was with the United States, were less affected by the loss of the European continental markets. Chile, Bolivia and Peru, whose imports included a large proportion of foodstuffs, were able to buy from other markets in the Americas.

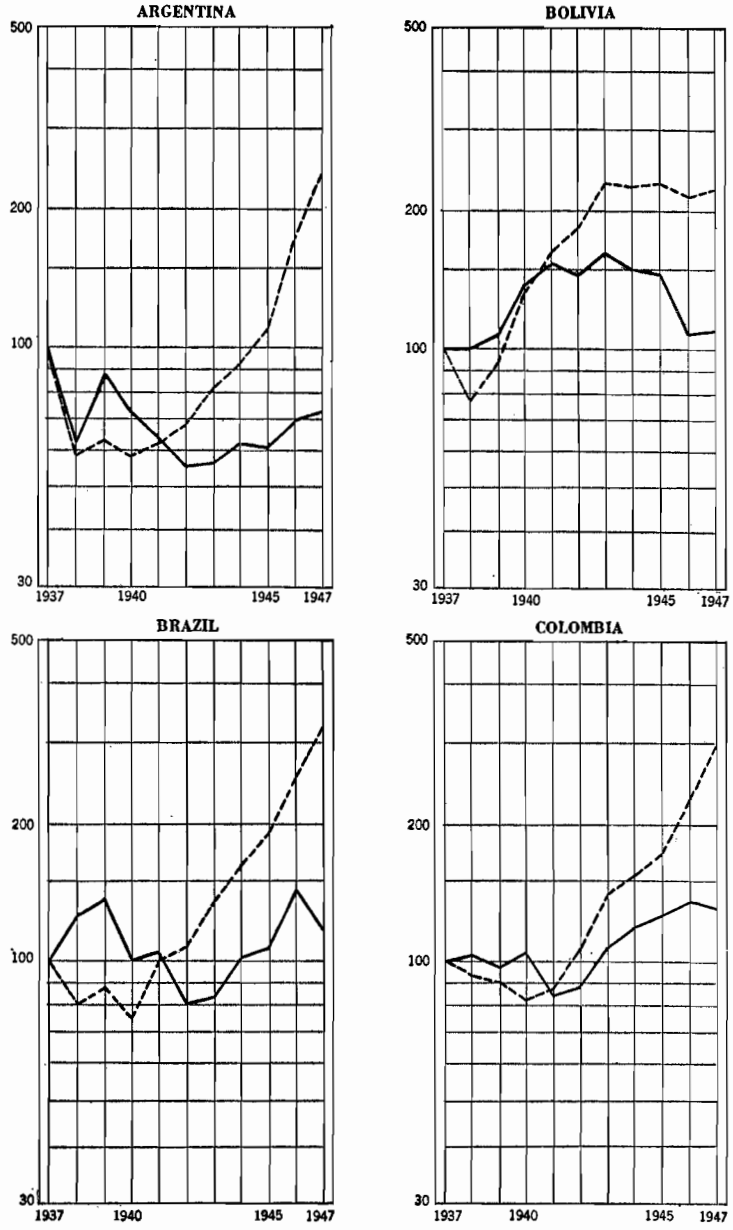
Chart 3, on page 190, shows the changes in the values of imports of the 20 Latin-American countries from 1937 to 1947.

In fact, a comparison of the present structure of Latin-American foreign trade with pre-war trade will not reveal changes which can be considered fundamental. Both imports and exports are characterized by the same broad lines as before. Latin-American economy continues to be extremely sensitive to the fluctuations, in volume or in price, of

CHART 5. INDEXES OF THE VALUE OF EXPORTS AND QUANTUM

Base: 1937=100

Solid lines indicate exports.
Broken lines indicate imports.



Source: United Nations Economic Commission for Latin America.

CHART 5. (*Continued*)

Base: 1937=100

Solid lines indicate quantum.
Broken lines indicate value.

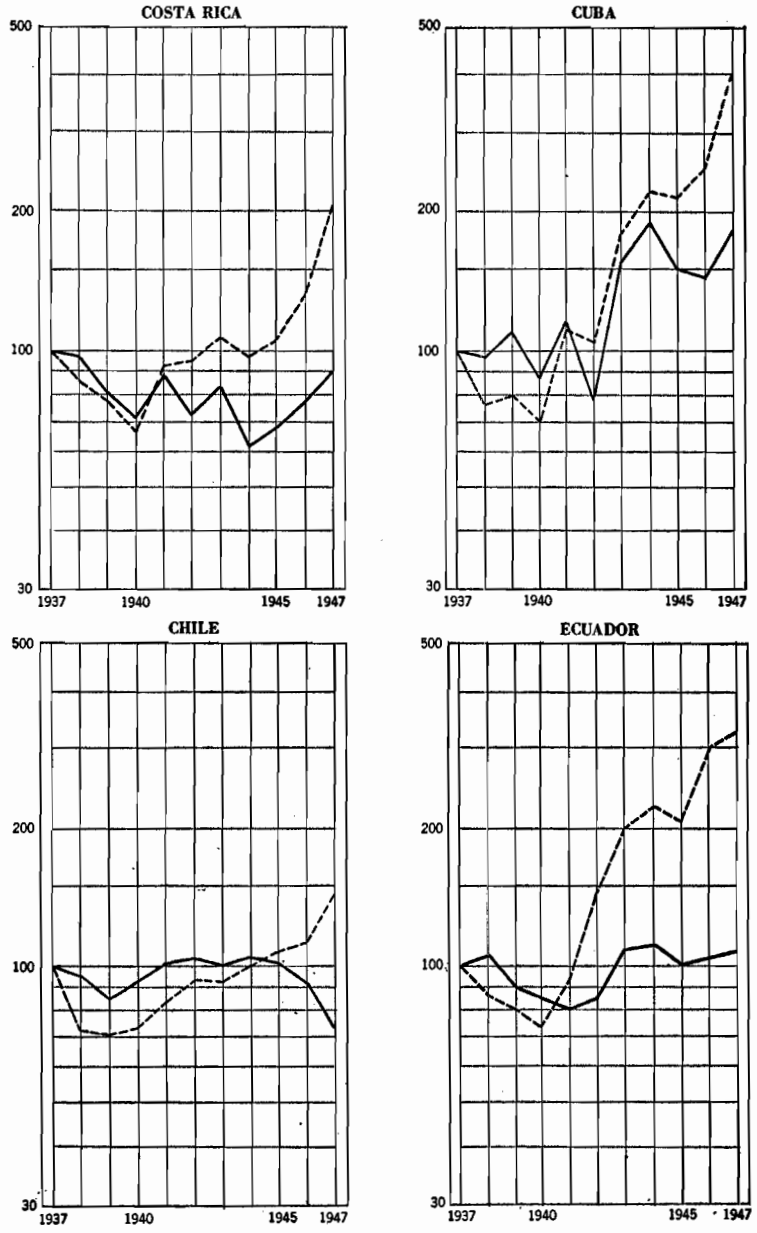


CHART 5. (*Continued*)

Base: 1937=100

Solid lines indicate quantum.
Broken lines indicate value.

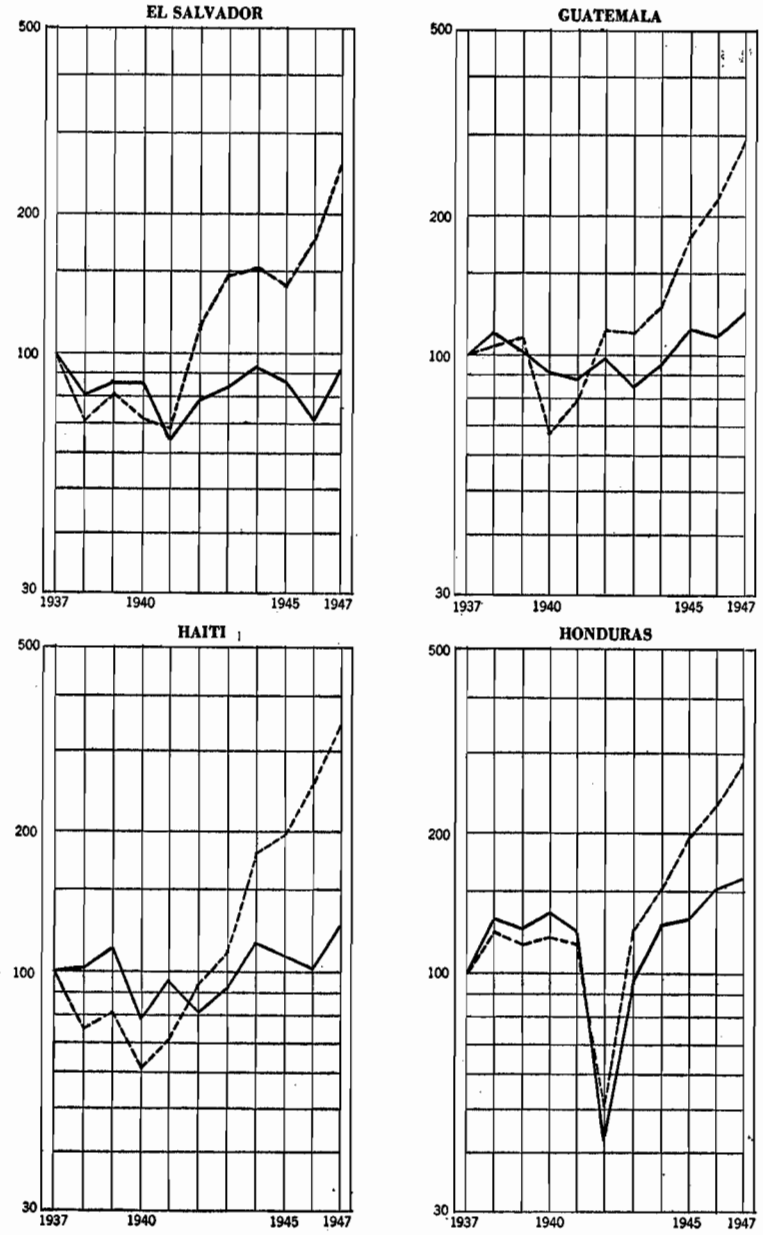


CHART 5. (*Continued*)

Base: 1937=100

Solid lines indicate quantum.
Broken lines indicate value.

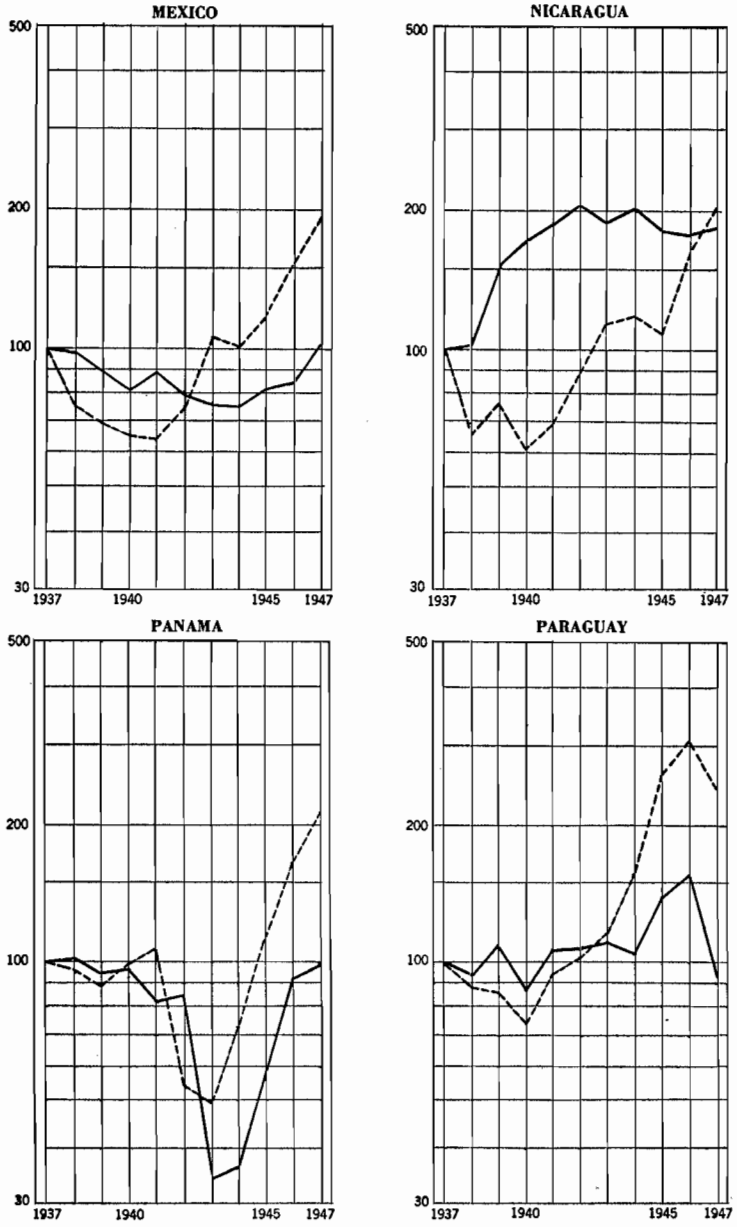


CHART 5. (*Continued*)

Base: 1937=100

Solid lines indicate quantum.
Broken lines indicate value.

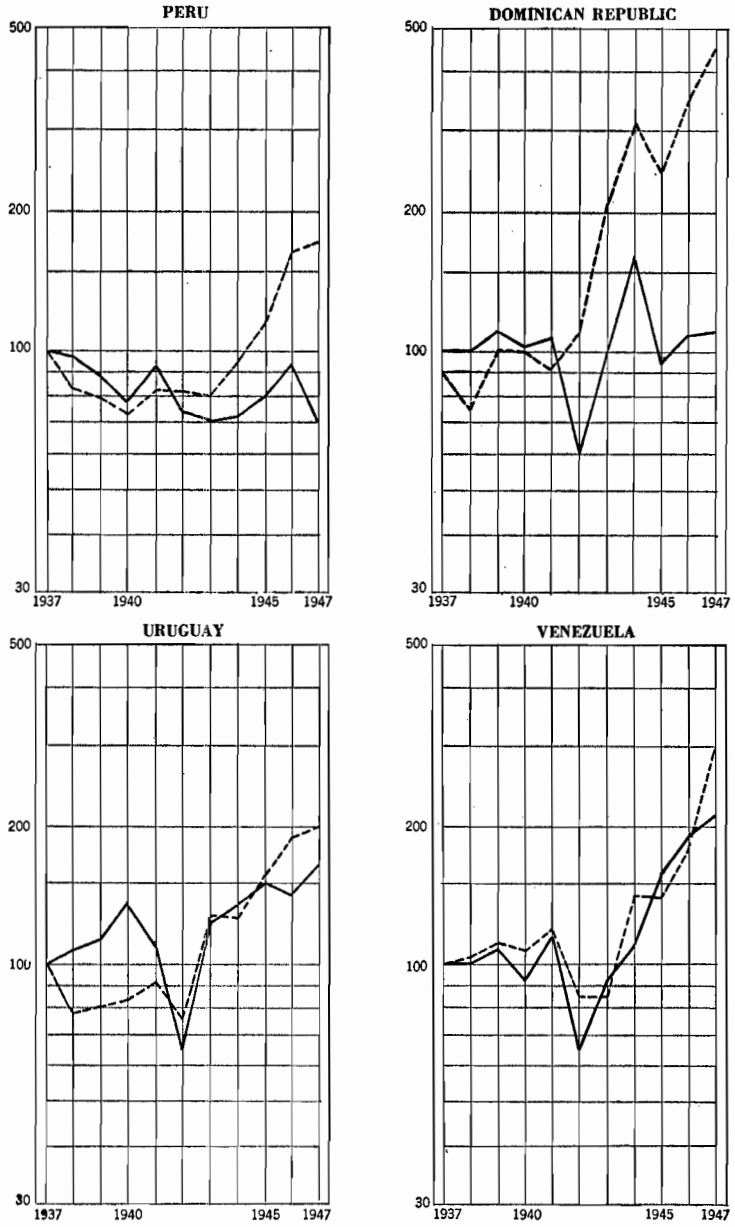


TABLE 72. RELATION OF FOREIGN TRADE TO NATIONAL INCOME IN FOUR LATIN-AMERICAN COUNTRIES

Exports and imports as per cent of national income

	Argentina			*Brazil*			*Chile*			*Mexico*		
	Exports	*Imports*	*Total*	*Exports*	*Imports*	*Total*	*Exports*	*Imports*	*Total*	*Exports*	*Imports*	*Total*
1938	15.8	16.5	32.3	..	..	..	..	..	..	15.7	9.3	25.0
1939	16.9	14.4	31.3	..	..	..	..	..	..	14.9	10.2	25.1
1940	15.1	15.9	31.0	15.0	15.0	30.0	25.6	19.1	44.7	14.1	9.8	23.9
1941	14.0	12.2	26.2	..	..	..	24.6	16.8	41.4	9.5	11.9	21.4
1942	15.0	10.7	25.7	18.8	11.8	30.6	22.1	15.9	38.0	11.1	8.4	19.5
1943	17.2	7.4	24.6	16.9	11.9	28.8	18.7	13.7	32.4	11.1	8.9	20.0
1944	16.5	7.0	23.5	16.5	12.3	28.8	17.9	13.2	31.1	9.4	17.1	26.5
1945	16.6	7.7	24.3	..	..	..	17.0	12.9	29.9	10.6	13.4	24.0
1946	..	..	..	..	..	..	..	..	..	14.8	20.3	35.1

Sources: National Income Statistics of Various Countries 1938-1947, Statistical Office, United Nations and United Nations Economic Commission for Latin America.

international trade. This vulnerability is due to the fact that as a region Latin America produces, with a large exportable surplus, primary goods (raw materials and foodstuffs), while importing manufactured or semi-processed products (capital goods and durable consumer goods). Its foreign trade is determined by the tendencies, usually unequal, which affect these two basic components.

Nor has the dependence of national income on foreign trade been altered to any appreciable extent. It would be very useful to know what changes have taken place in the relation between national income and export and import coefficients, during the period under consideration. However, complete and recent data are available for only a very few countries; these can be found in table 72.

These figures must of necessity be treated with extreme caution, in view of the different methods used in the calculation of the national incomes. They show nevertheless that in Argentina, Brazil and Chile national income diminished steadily in relation to foreign trade throughout the period; in Mexico it fell until 1942, but returned to its previous level in 1946 owing to a considerable increase in imports.

To make these comparisons clear, it should be pointed out that during the war the propensity of the Latin-American countries to import was rendered ineffective by the shortage of products; and as soon as supplies were again available, pent-up demand rose to the limits imposed by the amount of foreign exchange available in the importing countries. If data could be obtained for national income in 1947 and 1948, it is probable that the import coefficients would be higher.

In order to determine whether there has been any relative increase in Latin-American exports, their present position can be compared with those of the rest of the world (table 73). Exports of Latin America improved in relation to world exports during the war; its share, which was 9 per cent in 1937, rose to 13.4 per cent in 1946, but this proportion was not maintained in 1947. This comparison is incomplete, however, unless data relating to volume are taken into account, that is, unless the price effects are eliminated.

TABLE 73. LATIN AMERICA'S POSITION IN WORLD EXPORTS

	Million U. S. dollars		*Percentage of total*
	World	*Latin America*	
1937	26,200	2,350	9.0
1938	22,600	1,770	7.8
1946	33,200	4,460	13.4
1947	47,800	5,890	12.3

Sources: Major Economic Changes in 1948, United Nations, 1949, and the United Nations Economic Commission for Latin America.

The stimulus received by the Latin-American economy from exports has been chiefly monetary in nature. Whether the expansion will con-

tinue cannot be predicted. It is difficult to draw conclusions from a two-year period, and impossible to make hypotheses on what might have happened without the intervention of the war. It is interesting, however, to see that the quantum index of Latin-American exports is higher in the post-war years than in 1937, which is not the case with world exports (table 74.)

TABLE 74. WORLD AND LATIN-AMERICAN EXPORTS

Index numbers, base: 1937 = 100

	World			*Latin America*		
	Value	*Prices*	*Quantum*	*Value*	*Prices*	*Quantum*
1937	100	100	100	100	100	100
1938	86	95	91	75	83	90
1946	127	167	76	189	174	109
1947	182	200	91	250	216	116

Sources: Major Economic Changes in 1948, United Nations, 1949, page 20, and United Nations Economic Commission for Latin America.

Compared with 1946, however, world exports had made relatively more progress in 1947 than had those of Latin America both as regards value and volume. In fact, world exports in 1947 had increased 43 per cent in value and 19 per cent in volume, while those of Latin America increased by only 32 per cent and 6 per cent, respectively. This could lead to the conclusion that the strong stimulus which had augmented Latin-American exports during the war and the years immediately following is no longer at work.

As regards imports, the real increase is very moderate, though greater than that of exports (table 75.)

TABLE 75. INDEX OF QUANTUM OF IMPORTS OF SEVEN LATIN-AMERICAN COUNTRIES

Index numbers, base: 1937 = 100

	1938	*1943*	*1946*	*1947*
Argentina	95.1	33.6	78.1	132.4
Brazil	93.2	62.8	102.4	149.2
Chile	102.7	85.5	113.5	118.8
Colombia	87.1	39.6	108.1	..
Cuba	91.7	87.4	111.1	145.8
Mexico	66.0	96.0	223.4	..
Peru	101.4	87.9	132.0	..

Note: The index numbers of imports in real terms are designed to show movements in the aggregate value of imports in the respective countries after the elimination of the effect of the changes in prices and transfer costs. These indexes are therefore not to be confused with the index numbers of the value of imports (i.e., imports at current prices) nor with the index numbers of physical volume of imports (i.e., total tonnage of imports).

The index numbers in the table have been constructed by multiplying the actual quantities of imports for each of the years 1937-1947 by "constant" prices in the base year 1937, except for Argentina where 1941 prices have been used and the base shifted to 1937.

Source: United Nations Economic Commission for Latin America.

On the whole, the volume of imports was lowest in 1942 and 1943. Recovery started at the end of the war and by 1946 most of the Latin-American countries had passed their 1937 level. To calculate a quantum valid for the whole of Latin America recourse must be had, in view of the lack of data, to statistical deflation. Given the high proportion of manufactures imported by the Latin-American countries from the United States and the United Kingdom, the price index of the finished goods exported by these two suppliers can be used as a check in calculating the volume imported at constant prices, as in table 76.

TABLE 76. TOTAL IMPORTS OF LATIN AMERICA

	Value in million U. S. dollars	*Index numbers, base: 1937 = 100*	
		Prices	*Quantum*
1937	1,653	100	100
1938	1,494	98	92
1946	3,442	150	139
1947	5,644	179	186

Note: The base of the original price index has been shifted from 1938 to 1937.
Sources: For the price index, International Monetary Fund; for total value and the derived quantum index, United Nations Economic Commission for Latin America.

It is interesting to see that in 1947, contrary to the preceding year, the quantum increase was greater than that of prices. The efforts of the Latin-American countries to satisfy their pent-up demand for imported products appear therefore to have been successful—but at the expense of a severe drain upon the gold and foreign exchange reserves accumulated during the war from exports sold at considerably lower prices, which signifies a weakening of purchasing power. The question arises whether this movement can be maintained during the next few years.

Another reason for the sensitivity of Latin-American economies to changes in world trade is the concentration of their exports on a few primary products, the demand for which is sufficiently elastic to cause greater fluctuations both in volume and in price than is true of processed products.

Table 77 shows the extent to which Latin-American exports are concentrated in a small number of products. Eight account for 50 per cent of total exports and a further seventeen for 75 per cent (nearly 80 per cent before the war) (see also appendix H).

A tendency towards diversification is evident, with some fluctuation in the degree of importance of the products. The most noteworthy change is the relative fall in the exports of cereals (wheat and maize) and the rise in tropical and sub-tropical products such as coffee, sugar and cocoa.

This wider range of products exported by the continent as a whole does not give an accurate picture of the degree of dependence on foreign factors. The heavy concentration becomes much more evident when it is observed that most of the products listed are exported by only two or

TABLE 77. TWENTY-FIVE PRINCIPAL LATIN-AMERICAN EXPORTS ARRANGED ACCORDING TO THEIR VALUE IN 1947

	Per cent of total value of exports			
Products	*1937*	*1938*	*1946*	*1947*
Crude petroleum	12.0	17.0	9.8	12.8
Coffee	11.4	13.0	13.4	12.7
Sugar	6.3	6.5	9.0	12.0
Cotton	4.1	4.4	5.4	4.4
Meat	4.8	6.4	4.0	3.9
Maize	8.4	3.3	2.8	3.6
Wheat	6.7	3.3	2.0	3.4
Hides	3.8	3.3	3.3	3.3
SUB-TOTAL	57.5	57.2	49.7	56.1
Wool	4.1	4.8	3.7	3.0
Copper	5.7	4.9	2.9	3.0
Linseed oil	..	..	1.5	2.3
Cotton textiles	..	..	2.0	1.7
Tobacco	0.7	0.9	1.5	0.8
Cacao	1.2	1.2	1.2	1.6
Lead	1.7	1.7	0.7	1.0
Wood	0.3	0.4	1.0	1.0
Tin	0.9	1.0	1.2	0.9
Rice	0.1	0.2	1.0	0.9
Bananas	1.3	1.7	1.0	0.9
Petroleum by-products	1.6	1.2	0.7	0.7
Silver	2.0	2.9	0.9	0.7
Sodium nitrate	1.7	1.8	0.8	0.6
Quebracho	0.6	0.7	0.5	0.6
Vegetable wax	0.3	0.3	0.7	0.4
Zinc	1.1	1.0	0.5	0.5
TOTAL of the 25 commodities above	80.8	81.9	71.5	76.7
Remaining products	19.2	18.1	28.5	23.3

Source: United Nations Economic Commission for Latin America.

three countries and often by only one. Specialized production for export continues to be a characteristic of several Latin-American countries, such as Bolivia, Cuba, Colombia, Venezuela and most of the Central American countries.

The traditional exports of Latin America remain practically the same as before the war, though in most cases their relative importance has somewhat diminished. A greater diversification in exports is noted in Argentina and Brazil. Both these countries, and Mexico as well, are already exporting a certain number of manufactured articles. The share of finished goods in total exports increased considerably as a result of the war, but it has decreased in the post-war years. To appreciate this fully, it must be realized that the volume of exports of manufactured goods reached a peak in the years of lowest total exports. In absolute terms, the range of fluctuations of exports of these products was less marked than that of others (table 78).

These manufactures consist mainly of processed foodstuffs, textiles, and wood and metal products, which were in great demand in other Latin-American countries, but which also found markets outside this con-

TABLE 78. VALUE OF MANUFACTURED GOODS IN THE TOTAL EXPORTS OF FOUR LATIN-AMERICAN COUNTRIES

Percentages

	Argentina	*Brazil*	*Chile*	*Mexico*
1937	1.0	0.5	1.4	—
1938	2.3	0.4	1.9	2.4[a]
1943	19.4	19.7	6.5	28.9
1946	11.2	7.4	8.1	37.5
1947	3.9	7.7	7.4	24.3

Source: United Nations Economic Commission for Latin America.
[a]1939.

tinent—such as South Africa (cotton textiles from Brazil and woollen textiles from Argentina). Little of this trade was maintained after the war, because of its marginal character.

On the other hand, there has been a confirmation of the tendency of several Latin-American countries to export part of their traditional production in a more advanced state of processing, such as concentrates instead of mineral ore, washed wool instead of unwashed, flour in place of wheat, and oil instead of oilseeds. This movement is still in its infancy and is hampered on one hand by lack of storage and means of industrialization, and on the other by the policy of buyers who still prefer the raw materials. The tendency was strengthened during the war by the need to save shipping space, a factor which is now less significant.

The present composition of Latin-American imports is very similar to that existing before the war. Owing to the lack of data, few valid conclusions applicable to the region can be drawn and those only on very broad lines. When foreign supplies became available, accumulated demand in countries with a relatively low standard of living was directed to the purchase of consumer goods, especially foodstuffs and clothing, as was the case in Bolivia, Mexico and Peru. The more industrialized countries with a higher standard of living and greater self-sufficiency in food production, imported relatively more capital goods, transport equipment and durable consumer goods, e.g., Argentina and Uruguay (table 79).

These tendencies have been greatly influenced by currency regulations, import quotas established by certain countries, and the relationship between the availability of each currency and the possibilities of supply from markets where these currencies are acceptable. However significant it may appear at first sight, a comparison between the data for 1937-1938 and those for 1946-1947 on the structural changes in the composition of imports, must be treated with extreme caution in view of the accumulated demand and distorted price relationships which rendered the first two post-war years abnormal.

GEOGRAPHIC DISTRIBUTION

The geographic distribution of Latin-American exports was one of the spheres most affected by the war. The traditional European market

TABLE 79. DISTRIBUTION OF IMPORTS BY GROUPS OF COMMODITIES IN NINE LATIN-AMERICAN COUNTRIES

As per cent of the total value of imports

		Elements for industry		*Consumer goods*	
	Year	*Primary goods*[a]	*Capital goods*[b]	*Durable*[c]	*Others*[d]
Argentina	1937	32.4	11.6	1.3	54.7
	1943	29.6	4.1	1.0	65.3
	1946	34.0	14.2	1.5	50.3
Brazil	1938	24.2	30.3	6.8	38.7
	1943	24.6	20.9	1.9	52.6
	1946	22.6	32.4	1.2	43.8
Chile	1937	32.7	19.8	8.7	38.8
	1943	34.4	12.9	5.5	47.2
	1946	29.5	19.8	6.8	43.9
Colombia	1937	21.9	24.8	5.2	48.1
	1943	39.8	11.1	6.0	43.1
	1946	..	..	..	..
Cuba	1937	28.9	10.8	1.5	58.8
	1943	23.4	3.3	0.7	72.6
	1945	26.0	6.8	1.7	65.5
Guatemala	1937	12.6	23.8	1.5	62.1
	1943	17.1	8.7	2.3	71.9
	1946	13.0	14.0	2.5	70.5
Mexico	1937	32.9	36.9	1.6	28.6
	1943	33.7	22.2	2.4	41.7
	1946	24.4	39.1	2.6	33.9
Peru	1937	30.8	22.6	6.0	40.6
	1943	36.4	16.8	3.7	43.1
	1946	28.2	24.8	5.4	41.6
Uruguay	1937	40.4	21.8	1.7	36.1
	1943	60.6	6.8	1.4	31.2
	1946	44.4	14.4	1.9	39.3

Note: Distribution not identical with table 14 due to methodological differences.
Source: United Nations Economic Commission for Latin America.
[a]Includes raw and semi-processed materials and fuels.
[b]Includes machinery, industrial vehicles and equipment.
[c]Includes articles for household use, furniture, jewels.
[d]Miscellaneous.

of the majority of these countries was lost with the fall of France and the Low Countries (table 80).

Before the war over half the exports of Argentina, Bolivia, Brazil, Chile, Haiti, Peru and Uruguay went to Europe; in some cases, as for example Argentina and Bolivia, the proportion absorbed by the European market was 75 per cent. The Caribbean countries and Colombia, because of the complementary nature of their production and their proximity, directed their trade chiefly to the United States.

During the war, many European markets became inaccessible to Latin-American exports and those that remained open suffered the effects of submarine warfare.

The restoration of trade relations after the war was difficult and incomplete: difficult, due to the scarcity of hard currencies in European

countries which compelled them to adopt bilateral trade policies to assure an adequate supply of foodstuffs; incomplete, because some markets—such as Germany—virtually disappeared, and those of Eastern Europe were almost entirely cut off. The pattern of regional exports to Europe underwent some marked changes; for example, a drastic reduction of Bolivian exports to Europe took place as a result of the replacement of the European tin purchases by those of the United States, which contractually reserved for itself the Bolivian production of this mineral and established the necessary processing plants. Uruguay succeeded in recapturing its previous export position and even replaced the German market, which had acquired a certain importance, by buyers from other countries.

Geographic location also played its part. Countries dependent on Pacific ports have sought markets in the United States even after the restoration of their trade with Europe, probably on account of the rise in maritime freight.

Within the pattern of trade with Europe, the United Kingdom constitutes a special case. Even though there was a relative decline in Latin-American exports to the United Kingdom, it was not as great as that in exports to other European countries. The United Kingdom, having lost its position as redistributor of raw materials and foodstuffs for continental Europe, strove to maintain the level of imports of essential products such as Brazilian coffee and meat from Argentina and Uruguay. This was accomplished by a system of annual contracts. Another outstanding fact is the relative increase in exports to the United Kingdom from two Caribbean countries, Cuba and the Dominican Republic, which have become its two main suppliers of sugar.

The intra-hemispheric trade can be divided into two categories: trade with the United States and intra-Latin-American commerce. The former was the result of a deliberate policy on the part of the United States to support and develop the Latin-American economy, and at the same time to acquire essentials for the production of war materials. When primary products such as rubber, manila hemp, tin, copra, sugar, etc., could no longer be provided by Asiatic countries, the United States turned to Latin America as a source of supply.

There was also evident on the part of the Latin-American countries a considerable effort to capture a market in the United States, either as a substitute for their European customers or as an outlet for their export products.

The situation varies considerably from one country to another, but we find that the countries most favoured by American purchases have been the mining countries and those producing tropical crops. Only three Central American countries have reduced their exports to the United States as compared with the pre-war period, and this is a relative decline offset by the higher absolute value of exports.

TABLE 80. DISTRIBUTION OF LATIN-AMERICAN EXPORTS, BY DESTINATION

As per cent of the total value of exports

	Continental Europe			*United Kingdom*			*United States*			*Latin America*		
	1937	*1946*	*1947*	*1937*	*1946*	*1947*	*1937*	*1946*	*1947*	*1937*	*1946*	*1947*
Argentina	45.3	39.6	30.4	29.1	22.1	30.0	12.8	15.0	9.9	8.3	14.0	12.1
Bolivia	29.9	0.4	0.7	59.9	36.3	36.4	7.3	58.6	59.8	2.9	4.5	3.1
Brazil	42.2	29.2	34.5	9.0	8.8	7.8	36.3	42.2	38.8	7.0	13.1	14.2
Chile	36.9	24.1	25.1	24.4	12.4	10.6	28.2	36.6	44.5	4.5	22.0	15.2
Colombia	22.7	2.5	2.9	0.4	0.4	0.7	56.6	85.8	88.2	0.9	4.9	2.4
Costa Rica	29.3	10.3	10.7	20.0	0.6	1.8	45.1	73.8	77.2	2.7	11.6	7.2
Cuba	6.4	8.8	7.5	10.8	13.4	17.8	80.7	67.4	66.7	0.8	6.6	1.9
Dominican Republic	38.9	13.3	5.3	12.3	42.5	41.4	32.1	18.0	25.3	0.9	2.2	9.2
Ecuador	44.3	6.5	8.8	2.7	0.3	1.2	33.2	42.3	42.4	15.8	37.3	36.6
El Salvador	30.7	4.3	6.2	1.1	0.3	0.1	60.7	71.4	77.5	2.7	14.9	12.1
Guatemala	32.6	6.1	5.5	0.6	—	0.4	63.9	86.5	86.4	0.9	2.2	1.3
Haiti	52.3	11.6	28.9	16.2	7.3	9.3	27.9	62.0	59.6	—	15.6	0.6
Honduras	5.9	0.9	0.4	1.9	0.3	—	86.5	63.7	72.9	3.9	18.6	22.6
Mexico	22.8	3.0	5.5	12.0	0.6	2.9	56.2	71.3	76.6	7.4	15.8	9.1
Nicaragua	34.4	1.2	3.0	0.8	2.9	1.7	55.4	78.2	77.4	4.6	13.9	17.1
Panama	7.2	11.1	10.2	1.2	0.1	—	90.9	76.0	85.4	0.3	4.6	2.5
Paraguay[a]	46.4	6.9	1.7	13.9	21.2	9.6	10.1	7.4	2.2	28.0	64.3	48.0
Peru	27.8	13.3	17.1	22.8	8.4	8.6	22.2	25.4	29.3	14.8	41.1	41.7
Uruguay	35.4	33.5	46.7	24.1	22.5	12.3	14.1	29.8	28.6	12.8	8.7	7.7
Venezuela[b]	77.6	4.6	..	6.2	3.3	..	13.7	29.9	..	0.8	1.6	..

Source: United Nations Economic Commission for Latin America.

[a]Exports in transit through Argentina are included in those to Latin America.

[b]Exports to the Dutch West Indies are included in Continental Europe in 1937 but they are not in 1946.

Intra-Latin-American trade, within its limits, was the greatest beneficiary of the change in the pattern of trade. The causes of this change are obvious: the disappearance of the European markets compelled the Latin-American countries to look for other purchasers and for sources of supply nearer at hand. Undoubtedly the other Latin-American countries were the sources most accessible. These forces combined gradually to augment trade between countries in the region (table 81).

TABLE 81. DISTRIBUTION OF EXPORTS BY GROUPS OF NEIGHBOURING COUNTRIES

Per cent of total value of exports

Exports				
From	*To*	*1937*	*1946*	*1947*
Argentina	Bolivia	0.4	0.9	0.6
	Brazil	5.7	3.8	4.5
	Chile	0.6	2.3	2.6
	Paraguay	0.4	1.0	0.7
	Uruguay	0.5	1.2	1.5
	TOTAL OF GROUP	7.6	9.2	9.9
Brazil	Argentina	4.7	7.5	9.5
	Bolivia	—	0.1	—
	Paraguay	—	0.2	0.4
	Uruguay	1.8	1.6	1.7
	TOTAL OF GROUP	6.5	9.4	11.6
Chile	Argentina	1.5	7.7	7.7
	Bolivia	0.4	2.3	1.6
	Peru	0.6	1.9	1.3
	TOTAL OF GROUP	2.5	11.9	10.6
Peru	Bolivia	1.3	4.1	3.2
	Brazil	0.8	0.9	0.4
	Colombia	—	4.5	4.6
	Chile	6.0	19.3	19.6
	Ecuador	0.2	1.0	2.2
	TOTAL OF GROUP	8.3	29.8	30.0
Mexico	Central American and Caribbean countries	0.5	6.0	3.7

Sources: Official publications of the respective countries, and the United Nations Economic Commission for Latin America.

This movement already existed before the war, though only on a modest scale. It was determined in some regions by the industrial development of certain Latin-American countries—Argentina, Brazil and Mexico—which could expect to become increasingly important as suppliers of industrial products to neighbouring countries. The natural groups of markets already formed only needed a fresh stimulus to expand, as was the case of Argentina in relation to Uruguay, Paraguay and Bolivia; or Mexico to the Central American countries.

New commercial contacts were rapidly established between the Latin-American countries, both through the efforts of private business firms

which sent agents to the other markets of the continent, and through the policy of certain Governments—Argentina, for instance—which authorized special exchange rates for exports to neighbouring countries. Several countries found new and sometimes unexpected opportunities for complementing each other's production, either through their geographical position (tropical and temperate zones) or through industrial progress or specialization. The process had the dual effect of helping to compensate for the loss of European markets, while at the same time it maintained for local industry a minimum supply of raw materials and fuel no longer available from the traditional sources of supply. Brazilian iron and coal from Peru and Chile required by Argentina are a case in point.

Naturally this reorientation of trade could not be achieved without effort and change in normal trade channels. Transport was the main obstacle encountered. Many Latin-American countries, despite their proximity, were isolated from each other because of the inadequacy of the transport systems. Land routes have always proved difficult and sometimes prohibitive (as in Peru, Bolivia, Chile, Argentina, Brazil and Uruguay). It was necessary to build and develop merchant fleets, with or without official help. The diversity of currencies was another obstacle, and payment agreements, credit and even barter were resorted to in order to facilitate trade between the Latin-American countries.

Uruguay is the only country of those examined whose proportion of exports to other Latin-American countries dropped, but this is explained by the intense concentration of its exports. These consist mainly of wool, meat and hides, which compete with Argentina and are difficult to place on a large scale in Latin America; a wide market for the wool and hides was found, however, in the United States. Imports from other Latin-American countries to Uruguay, on the other hand, increased both relatively and in absolute value.

The question now arises whether the final result can be regarded as permanent or only temporary. The short time which has elapsed since the end of the war would seem to permit of only general conclusions.

The European markets have not yet fully recovered. The foreign exchange problem, which the European Recovery Program should ease to a certain extent, is hampering the establishment of post-war trade currents. At the same time, the degree of development reached by some Latin-American countries will probably enable them, in normal times, to increase the volume of their sales to Europe without prejudice to their intra-American exports.

The data analysed above would seem to indicate that a part of the gain in intra-regional trade is not permanent; a comparison of the first available data for 1947 and 1948 with those for 1946 shows that some countries have relatively reduced their exports to other Latin-American countries. It must not be forgotten that even in the case of neighboring

and complementary economies, the trade which grew out of the war originated as an emergency measure, and at relatively high prices which have not been maintained.

There has been a general increase of Latin-American total exports although the twenty countries have benefited in varying degree. Consequently changes in their relative position have occurred, although none of them are of great significance (table 82).

TABLE 82. VALUE OF EXPORTS FROM TWENTY LATIN-AMERICAN COUNTRIES
Percentage distribution

	1937	*1943*	*1946*	*1947*
Argentina	32.2	23.6	26.2	26.5
Brazil	14.8	18.1	21.8	19.2
Venezuela	10.8	8.4	10.2	13.3
Cuba	7.9	13.6	10.7	12.7
Mexico	9.0	8.7	7.1	6.9
Chile	8.2	6.9	4.9	4.7
Colombia	3.7	4.8	4.5	4.3
Uruguay	3.3	3.9	3.4	2.6
Peru	3.9	2.7	3.4	2.6
Dominican Republic	0.8	1.4	1.5	1.4
Bolivia	1.5	3.2	1.6	1.4
Guatemala	0.7	0.8	0.8	0.9
Ecuador	0.6	1.1	1.0	0.8
El Salvador	0.6	0.8	0.6	0.7
Haiti	0.4	0.4	0.5	0.5
Costa Rica	0.4	0.5	0.3	0.4
Paraguay	0.3	0.4	0.6	0.3
Honduras	0.3	0.3	0.4	0.3
Nicaragua	0.3	0.3	0.2	0.2
Panama	0.2	0.1	0.2	0.1
TOTAL	100.0	100.0	100.0	100.0

Source: United Nations Economic Commission for Latin America.

Argentina, with a slight decrease, Brazil with a considerable increase, and Venezuela with a smaller one, continue to occupy the highest positions, together comprising 59 per cent of total exports as before the war. Cuba has risen from sixth to fourth place, surpassing Mexico and Chile. These six countries account for 70 per cent of Latin-American exports, as against 74 per cent in 1937. The relative positions of Colombia and the Dominican Republic have improved, while those of Uruguay and Peru have worsened slightly. The changes in the remaining countries have been negligible.

The changes in geographic distribution were far more pronounced in imports than exports, which is clearly explained by the dislocation of European industry between 1940 and 1945, its slow recovery, and the advent of the United States as the principal source of manufactured products and some essential raw materials, including fuels. Such changes occurred in all the Latin-American countries, as can be seen in table 83.

In some cases (Central America and the Caribbean) the imports from continental Europe fell and in 1946 still remained a fraction of the

TABLE 83. DISTRIBUTION OF LATIN-AMERICAN IMPORTS, BY ORIGIN
Per cent of total value of imports

	Continental Europe		*United Kingdom*		*United States*		*Latin America*	
	1937	*1946*	*1937*	*1946*	*1937*	*1946*	*1937*	*1946*
Argentina	41.7	21.9	20.7	13.2	16.1	28.5	9.1	23.6
Bolivia	25.0	3.2	8.2	3.6	29.0	37.0	31.0	55.6
Brazil	41.4	14.3	12.1	7.9	23.0	52.8	15.5	11.1
Chile	35.7	6.3	10.9	5.7	29.1	40.2	16.4	41.9
Colombia	27.4	4.6	18.8	4.7	48.2	73.2	2.5	14.7
Costa Rica	29.3	2.6	20.0	2.3	45.1	76.6	2.7	14.6
Cuba	13.2	5.9	4.9	1.4	68.6	76.3	2.9	11.2
Dominican Republic	10.0	4.4	5.9	1.4	52.3	77.1	1.5	6.5
Ecuador	38.7	2.2	10.1	6.9	39.6	58.0	5.8	26.5
El Salvador	42.0	4.9	11.0	2.8	40.4	70.7	5.7	18.6
Guatemala	40.8	2.8	8.3	2.0	45.3	67.7	4.4	21.3
Haiti	17.6	1.4	17.8	0.7	51.0	86.0	0.9	4.8
Honduras	12.5	1.4	3.0	1.0	62.0	77.4	4.4	15.8
Mexico	27.5	4.6	4.9	2.6	62.1	83.6	1.9	7.7
Nicaragua	22.3	0.4	8.5	1.4	54.2	76.9	7.1	18.3
Panama	14.0	4.0	6.0	1.7	52.0	71.6	3.6	4.3
Paraguay	23.4	3.1	9.0	7.2	7.6	21.0	44.2	67.6
Peru	32.7	8.0	10.3	6.5	35.4	56.2	11.1	24.8
Uruguay	30.9	11.2	16.8	8.7	13.6	32.7	22.1	39.9
Venezuela	33.7	5.9	9.7	5.5	55.2	70.3	1.0	14.5

Source: United Nations Economic Commission for Latin America.

1937 level, while in others they have had some recovery, but have never reached more than half the pre-war proportion. The imports from the United Kingdom also suffered a considerable relative decline, but it was less severe on the whole than that of imports from continental Europe.

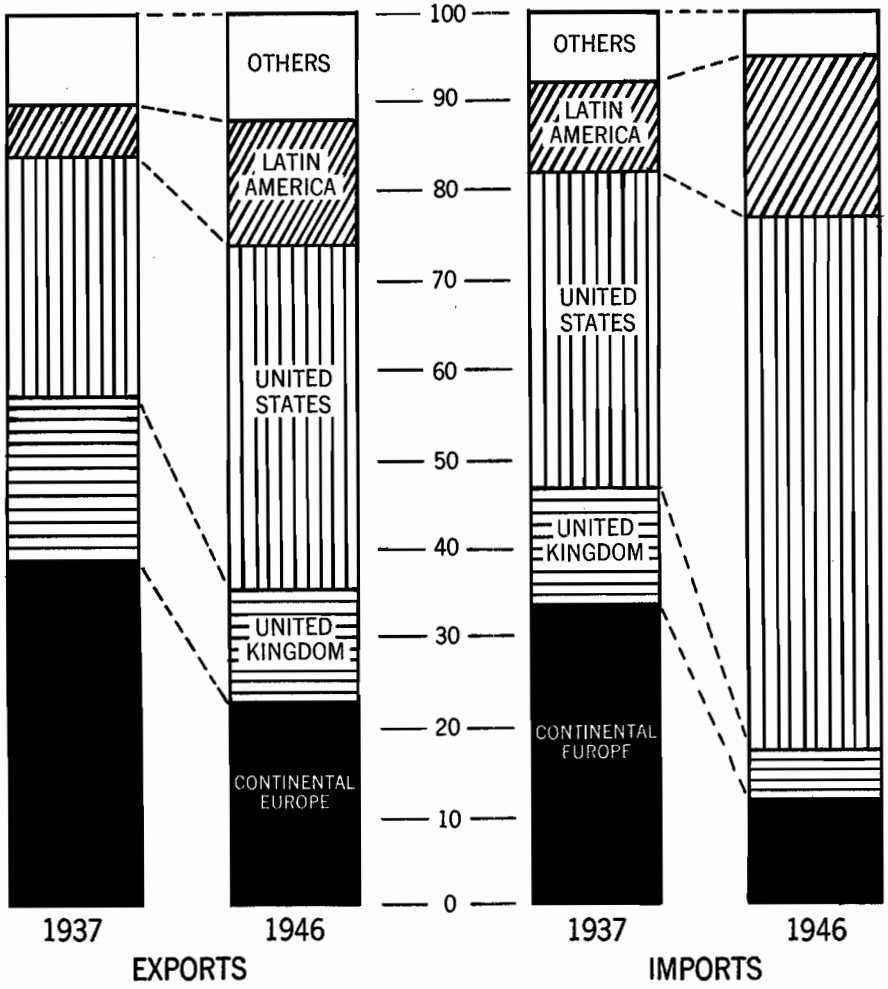
The higher import demands of the Latin-American countries were absorbed by the United States and Latin America itself. In other words, trade has been carried on within the limits of the continent to a far greater extent during the years under review than ever before. Countries such as Costa Rica, Cuba, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua and Panama now purchase over 70 per cent of their imports from the United States; Brazil and Peru over 50 per cent; Chile, Bolivia and Uruguay over 30 per cent. Only the Argentine imported less than this proportion from the United States. This is to some extent due to distance, but probably more to another powerful factor: the means of payment. The Latin-American countries tend to buy from the United States as much as they can earn in dollars. Some, like Argentina, and Brazil, which sell only a few products to the United States or take advantage of multilateral trade, feel constrained to restrict their imports from that country to meet essential needs.

Intra-Latin-American commerce includes situations in which there has been a proportionately great increase, such as in Bolivia, Chile, Peru and Uruguay, which have practically doubled their regional imports. Brazil is the only country whose imports from Latin-America have declined, owing chiefly to the diversion of its imports of wheat and flour from Argentina to the United States and Canada.

However pronounced these changes, they cannot be assumed to be permanent. Though a return to pre-war distribution is unlikely, a tendency is evident in some countries to return to some of their traditional sources of supply, especially in face of the dollar shortage which may compel them to make bilateral agreements with the European countries (chart 6).

CHART 6. GEOGRAPHIC DISTRIBUTION OF THE FOREIGN TRADE OF LATIN AMERICA

(As per cent of the total)



Price Relationships

The changes of position which have just been pointed out are due principally to price effects, which have varied according to the products exported and imported. In world trade, the prices of foodstuffs, especially vegetable oils, show the greatest gain, while minerals benefited less than other primary products from the abnormal conditions created by the war and post-war period (table 84). Bolivia, Peru, the Central American and Caribbean countries were able to maintain imports at about the same level.

Table 84. Market price indices of primary commodity groups 1947 and 1948

	Average price ratio			
	1937 = 100		*1938 = 100*	
	1947	*1948*	*1947*	*1948*
Food, excluding vegetable oils....	224	231	297	303
Vegetable oils (partly food).....	309	..	447	..
Other primary materials.....	205	215[a]	255	273[a]
Textiles	218	237	261	329
Minerals	162	201[a]	194	238[a]
Total	213	224[b]	276	289[b]

Source: Post-war Price Relations in Trade between Under-developed and Industrialized Countries (E/CN.1/Sub.3/W.5). To be published as: *Relative Prices of Exports and Imports of Under-developed Countries,* A Study of Post-war Terms of Trade between Under-developed and Industrialized Countries.

[a]Excluding nitrate of soda.

[b]Excluding nitrate of soda, shellac and palm-oil.

These differences can be accounted for in the first place by the extent to which each Latin-American country depended on its European suppliers, and, secondly, by the basic structure of their imports. A country like Argentina whose principal imports are raw materials, fuel, semi-processed products, machinery and vehicles, naturally suffers from the interruption or restriction of supplies of materials required for the war or diverted from civilian use. Furthermore, in terms of volume it is one of the biggest Latin-American importers and any reduction would therefore affect it more severely. Countries like Cuba and those of Central America whose traditional trade was with the United States, were less affected by the loss of the European continental markets. Chile, Bolivia and Peru, whose imports included a large proportion of foodstuffs, were able to buy from other markets in the Americas.

As a matter of fact, a comparison of the present commodity pattern of Latin-American foreign trade with that of the pre-war period will not reveal changes which can be considered fundamental.

Both imports and exports are characterized by the same broad lines as before. Latin-American economy continues to be extremely sensitive to the fluctuations, in volume or in price, of international trade. This vul-

nerability is due to the fact that as a region Latin America produces, with a large exportable surplus, primary goods (raw materials and foodstuffs), while importing manufactured or semi-processed products (capital goods and durable consumer goods).

Price indexes for Latin-American exports vary from 384 (base 1937= 100) for maize to 88 for nitrate (see table 85). Consequently, the benefit which might have accrued to the Latin-American countries has also varied, since it was determined by the relative importance of each of these products in the composition of the country's exports.

TABLE 85. PRICE INDEXES OF TWENTY-TWO LATIN-AMERICAN EXPORT PRODUCTS IN 1946 AND 1947

Products	*Base: 1937 = 100*	
	1946	*1947*
Maize	243	384
Rice	351	378
Cacao	168	328
Linseed oil	266	316
Sugar	212	262
Quebracho (extract)	160	254
Tobacco	240	248
Coffee	186	241
Hides	213	237
Meat	199	219
Wheat	159	215
Cotton	149	201
Lead	115	198
Bananas	172	195
Tin	162	190
Zinc	82	161[a]
Petroleum	88	134
Silver	131	133
Copper	101	133
Wool	111	129
Petroleum by-products	80	114
Nitrate	109	88
Weighted average	172	196

Note: The calculations have been based on the trade statistics of the twenty Latin-American countries.

Source: United Nations Economic Commission for Latin America.

[a]The price for 1947 was taken from *Post-war Price Relations in Trade between Under-developed and Industrialized Countries* (E/CN.1/Sub.3/W.5), 1949, (to be published as: *Relative Prices of Exports and Imports of Under-developed Countries,* A Study of Post-war Terms of Trade between Under-developed and Industrialized Countries) since zinc exports of one of the larger producers are under-valued.

If the price indexes of the principal products are weighted by their relative importance in the exports of each country, the Latin-American countries can be listed according to the magnitude of the price increase of their exports (see table 86). This ranking shows the food-producing countries, especially those in the tropics, to be the most favoured while those worst off are the mining countries.

TABLE 86. MAGNITUDE OF THE PRICE INCREASE FOR EXPORTS OF NINETEEN LATIN-AMERICAN COUNTRIES BETWEEN 1937 AND 1947

	Base: 1937 = 100	
	1946	*1947*
Ecuador	275	328
Dominican Republic	210	271
Cuba	214	261
Argentina	188	260
Nicaragua	210	257
Brazil	199	246
El Salvador	186	241
Costa Rica	180	235
Haiti	181	234
Paraguay	186	230
Guatemala	182	229
Colombia	174	224
Panama	172	224
Peru	157	201
Bolivia	157	184
Mexico	122	179
Uruguay	157	163
Venezuela	94	138
Chile	118	126

Note: The index numbers are the weighted average of the price ratios of the principal export products of each country. The weights have been determined by the relative value of the various commodities within the total value of the exports in 1946 and 1947.

Source: United Nations Economic Commission for Latin America.

It cannot be said whether the dependence on a few export products (Brazil), or on many (Argentina), has been more or less beneficial in each particular case. Diversification naturally reduces both external dependence and the intensity of economic fluctuations, but at the same time it prevents taking full advantage of a cyclical peak.

These problems are linked to the character of the principal economic activities of each country. Mining can be expanded with additional capital and labor, and as a rule there is no lack of either in the countries which benefit by increased demand for minerals. The expansion of bush and tree crops and stock-raising requires more time; other crops, though relatively easy to increase, are subject to climatic conditions requiring a greater use of machinery, which in most cases has been scarce.

The price movement of imported articles has been somewhat different from that of exports. As a rule, the price rises over the pre-war level were greater in the case of consumer goods (foodstuffs, beverages and textiles) than in durable goods (machinery and equipment).

It should be observed, when making these comparisons, that a large proportion of the foodstuffs imported by these countries comes from Latin America; this is true of wheat, rice, coffee, cocoa and sugar, all of which increased considerably in price during the war. It may be concluded that generally, for the Latin-American countries, the purchase of

TABLE 87. IMPORT PRICE INDEXES FOR SEVERAL LATIN-AMERICAN COUNTRIES IN 1946 (1938=100)

	Foodstuffs	*Machinery and equipment*
Colombia	252	170
Mexico	271	152
Cuba	299	168
Peru	307	162
Brazil	354	163
Chile	354	138

Source: International Monetary Fund.

equipment and the replacement of machinery worn out by excessive use during the war were subject to more favourable conditions than was the procurement of consumer goods. It is difficult to ascertain whether full account has been taken of this situation.

Terms of trade are a fundamental trade relationship, that of reciprocal prices measured by the price indexes of exports and imports. For the Latin-American countries terms of trade are of great importance, because their economies are so closely tied to exports and imports. The relations between the prices of primary products—which made up the bulk of Latin-American exports—and those of manufactured articles in world trade have had varying effects on the purchasing power of the countries exporting the primary products. According to a study of this subject made by the International Monetary Fund covering thirteen Latin-American countries, some had improved their position in comparison with the pre-war period, since the rise in the prices of exports was greater than in those of imports; in other words the "terms of trade" had turned in their favour.[1] The position of other countries had deteriorated, however. It should be pointed out that the first category includes countries mainly producing foodstuffs, and the second, countries whose chief exports are minerals (table 88).

These indexes should be applied with caution, since they refer to a single year (1946) and are weighted by 1938 values, 1938 being the base year and one already affected by a drop in the prices of Latin-American products. Therefore it is convenient to mention also other data.

In the period preceding the depression of the 1930's, terms of trade favoured the countries producing primary goods; the depression greatly accentuated the disparity between the two categories. Terms of trade for the under-developed countries had recovered by 1937, but again turned downward as a result of the recession in late 1937 and 1938. The war checked the effects of the down-swing, but only in 1947 did the terms of trade again turn in favour of primary products. The indexes for Latin America are shown in table 89.

[1] *Terms of Trade in Latin-American Countries*, International Monetary Fund, Department of Research, Washington, 1949.

TABLE 88. TERMS OF TRADE OF THIRTEEN LATIN-AMERICAN COUNTRIES IN 1946

	Price indexes, base: 1938 = 100		*Terms of trade*[a]
	Exports	*Imports*	
Brazil[b]	277	200	138
Argentina	258	215	120
Ecuador	268	227	118
Mexico	192	169	114
Costa Rica	195	175	111
Guatemala	195	175	111
Colombia	200	190	105
Cuba	233	234	100
Venezuela	160	168	95
Nicaragua	178	190	93
Peru	195	217	90
Chile	163	198	82
Bolivia	193	237	81

Source: International Monetary Fund.
[a]Export price index divided by the import price index.
[b]The countries have been arranged according to the favourable changes in their terms of trade.

The year 1947 seems to have been exceptional. The deterioration in the terms of trade which took place in the first ten months of 1948 possibly indicates a change in the post-war tendency which should be closely watched.

TABLE 89. TERMS OF TRADE OF LATIN AMERICA, 1925 TO 1948

Years	*Price indexes, base: 1937 = 100*		*Terms of trade*
	Exports	*Imports*[a]	
1925	146	139	105
1929	125	124	102
1933	66	80	83
1935	82	91	90
1936	88	94	94
1937	100	100	100
1938	76	98	78
1946	153	150	86
1947	214	179	120
1948[b]	224	191	117

Source: International Monetary Fund.
[a]Based on the United States and United Kingdom export price indexes of manufactures.
[b]January to October.

CHAPTER 8

BALANCE OF PAYMENTS

I. BALANCE OF PAYMENTS OF LATIN AMERICA AS A WHOLE IN 1947

Very few Latin-American countries have been able to publish regular information concerning their balance of payments. Fortunately, the countries which are parties to the Bretton Woods Agreement have undertaken the systematic compilation, on the basis of a common model, of such data as have been published by the International Monetary Fund for 1947. This is the only compilation which has been made to date, so that after examining the principal data contained therein, recourse must be had to fragmentary information to obtain an approximate idea of the movements which took place after the war.

With respect to the balance of payments, 1947 is an exceptional year, and the data relating to it can therefore not be taken as typical. On the other hand, they show very clearly the phenomena of transition which, after the large surpluses of the previous years, led to an opposite change in the balances of payments of most Latin-American countries, to be discussed in the following chapter on inflation.

There is another outstanding fact among the developments of this transitional period which was also mentioned in the discussion of the recent trends in foreign trade. In order to cover its large deficit with the United States, Latin America was compelled to use part of the surplus gained in its trade with Europe and other countries, and consequently had to relinquish part of its dollar holdings. This was not sufficient, and Latin America had to make use of a sizable part of its monetary reserves and other means to liquidate its deficit. It is obvious, however, that Europe, Latin America and the other countries of the world would not have been able to continue covering their deficit in this way for long. Sufficient proof of this can be found in the inconvertibility of the pound sterling and the tightening of import controls. It was not long before their effects were felt, and, though complete information for 1948 is not yet available, it can be stated that the deficit in the balance of payments has been considerably reduced.

Let us examine the figures for 1947. Due to the net imports from the United States, and to the other payments which must be made to that country, Latin America has had a deficit on current account of $US1,878 million (see table 90).

TABLE 90. BALANCE OF PAYMENTS OF LATIN AMERICA IN 1947

Millions of U.S. dollar equivalents

Items	*With the United States*	*With Europe and other countries*	*Total*
Merchandise and services			
Trade balance	—1,457	1,979	522
Financial services	— 385	— 195	—580
Freight and insurance	— 103	— 413	—516
Various	67	— 112	— 45
Surplus or deficit on current account	—1,878	1,259	—619
Loans and investments	358	208	566
Total surplus or deficit	—1,520	+1,467	— 53
Modes of payment			
Gold	876	2	878
Foreign exchange	644	— 854	—210
Other means	—	— 401	—401
TOTAL	1,520	—1,253	—267
Errors and omissions	—	— 214	—214

Source: International Monetary Fund.

Of this large deficit in the current accounts with the United States, $US358 million have been covered by different loans and private and official investments made by the United States in Latin America, as shown in detail later. The remaining $US1,350 million were covered by $US876 million in gold and $US644 million in convertible foreign exchange.

This free foreign exchange included only $80 million of the already existing monetary reserves, since $US564 million came from Europe, principally, and other countries which, as has already been said, paid part of their deficit with Latin America in this way. The latter had a surplus on current account, with Europe and other countries, of $US1,253 million, resulting from net exports amounting to $US1,979 million, less certain services, due principally to Europe.

In addition to this surplus, there was an outflow of funds from Europe and other countries to Latin America, chiefly short-term, which amounted to $208 million net. The total due Latin America amounted therefore to $1,467 million.

To meet this obligation, Europe and other countries transferred foreign exchange to Latin America, and made various types of settlements with these countries. The foreign exchange included the $564 million which Latin America in turn transferred to the United States, and a further $290 million, the majority of which can be assumed to have been blocked; these two sums totalled $US854 million. In addition to this, Latin America redeemed and paid debts amounting to an equivalent of $US189 million, loaned $202 million and granted $10 million in donations. These various receipts from Europe and other countries totalled an equivalent of $401 million.

Let us now examine the balance of payments as a whole, and its results. Latin America's total deficit with the United States is almost completely compensated by its surplus with Europe and other countries, leaving a net deficit of barely $US53 million. This is theoretical, since in fact this multilateral compensation cannot be effected, as Europe does not have sufficient available dollars.

It is for this reason that, in spite of a net deficit of $US53 million, Latin America lost $958 million in gold and foreign exchange and had to acquire or recover from Europe assets which, in view of their nature, or relatively small liquidity, cannot be used to make new purchases in the United States. The following summarizes the position (in millions of dollars):

Gold and foreign exchange paid by Latin America to the United States to meet its liabilities		*Assets received or recovered by Latin America from Europe and other countries to compensate surplus*	
Gold	878	Redemption and amortization of debts	189
Convertible foreign exchange	80	Loans	202
TOTAL	958	Foreign exchange presumably blocked	290
		Grants	10
Net deficit	—53	Errors and omissions	214
	905		905

For the sake of simplification, the loans and investments which contributed to the payment of Latin America's deficit with the United States, have been lumped together. They are shown below in detail (see table 91).

The deficit on current account of $US1,457 million with the United States and the excess on current account of $US1,929 million with Europe and other countries together amounted to a net deficit of $US472 million for the whole of Latin America. It must be pointed out, however, that not all the countries had a deficit. Cuba, Venezuela, Peru, Guatemala, Costa Rica and the Dominican Republic had a surplus. The greatest was that of Cuba, which totalled $US112 million. Argentina and Mexico, on the other hand, had the greatest deficits, $US194 million and $US138 million, respectively.

II. GENERAL CHANGES IN SEVERAL LATIN-AMERICAN BALANCES OF PAYMENTS FROM 1937 TO 1947

There is not sufficient information to follow the changes which took place in the balances of payments of the Latin-American countries during the period 1937-1947. We must be satisfied with fragmentary data with which it may be possible to determine the most significant facts marking the current balances and capital movements since the war.

The fundamental fact, which prevails over all others, is the formation of large trade-credit balances in Latin America, which amounted,

TABLE 91. LOANS AND INVESTMENTS OF THE UNITED STATES IN LATIN AMERICA IN 1947

Millions of U.S. dollar equivalents

1. *Net private investments*	
Long-term	254
Short-term	—26[a]
Total	228
2. *Net public loans and investments*	
Loans by the United States Government	110
Advances of the International Monetary Fund	31
Loans by the United States Stabilization Fund	100
Various[b]	37
Total	278
Less:	
Amortization and other refunds	81
Subscriptions to the International Bank and the International Monetary Fund	67
	—148
3. *Net total of loans and investments*	358

Source: International Monetary Fund.

[a]Net increase of short-term assets of Latin America in the United States.
[b]Includes grants of 34 million.

over the whole period, to an accumulated total of $7,700 million. It is this which has enabled the Latin-American countries, after deducting the liabilities of their other current accounts, to increase their gold and foreign exchange and reduce their external debts. It is of great interest to determine, even if only approximately, in what way these surpluses have been utilized.

The total mentioned above can be distributed according to its use between the end of 1937 and the end of 1947.

	Million dollars[a]
Increase in gold and foreign exchange	2,300
Net increase in short-term assets	500
Repatriation of debts and foreign investments	2,700
TOTAL	5,500

[a]The difference between the total of items whose utilization is known and that of favourable trade balances ($US2,200 millions) corresponds to liabilities and to errors and omissions.

The other outstanding feature of the period under review, a feature that is a direct consequence of the above, is the repatriation of debts and the liquidation of foreign investments (see appendix I). This movement was due, in several cases, to the nature of the foreign exchange surpluses: where they were not convertible into gold or other currencies, countries with such surpluses preferred to use them to reduce their exter-

nal debt in that particular currency, or to acquire foreign enterprises. The case of the pound sterling is well known and was due to Great Britain's need to liquidate investments abroad in order to improve her balance of payments and finance part of her war expenditures.

With these two fundamental facts pointed out, they must now be considered in greater detail, taking into account the particular situation of some countries and the consequences thereof upon the structure of Latin-American balances of payments.

Four phases can be distinguished in the development of Latin-American trade balances between 1937 and 1948. In the three years preceding the outbreak of the Second World War, the aggregate average net exports amounted to $483 million per year. They were $558 million during the first three years of the war and rose to $1,089 million during the last three years. In 1946 a new phase was entered, in which the export surplus tended to decline, owing to the sharp rise in imports when the European markets were re-opened and the restrictions on United States exports were slackened.

There is another distinctive aspect in this development. From the point of view of the net position of the trade balance, the twenty Latin-American countries can be divided into three groups.

Countries with a regular trade surplus

This group consists of Argentina, Bolivia, Brazil, Chile, Cuba, Dominican Republic, Ecuador, El Salvador, Peru, Uruguay and Venezuela. It is the most important group and determines the final position of total Latin-American trade. In these countries there was, on the whole, a progressive increase in the export surplus until 1945 or 1946 and a sharp fall after that date for the reasons given above. Argentina had the largest favourable balance, followed by Venezuela and Brazil.

Countries with a regular trade deficit

This group, whose trade is of relatively little importance for the whole of the region, includes four Central American countries (Costa Rica, Honduras, Nicaragua and Panama). Their negative balances did not decrease during the war and in some cases showed a tendency to increase. The largest and most persistent trade deficit was that of Panama.[1]

Countries with alternating trade surpluses and deficits

It is difficult to make a general comment on the positions of the remaining five countries (Colombia, Mexico, Guatemala, Paraguay and Haiti). Colombia had a deficit from 1937 to 1941, a surplus from 1942 to

[1]This country is able to meet its imports and financial obligations largely with receipts from the Canal Zone.

TABLE 92. NET TRADE BALANCE OF LATIN AMERICA

Millions of U.S. dollar equivalents

	1937	*1938*	*1939*	*1940*	*1941*	*1942*	*1943*	*1944*	*1945*	*1946*	*1947*
I. *Usual surplus*											
Argentina	275.6	— 5.2	113.9	107.6	183.6	235.1	405.1	455.6	439.3	580.5	219.2
Bolivia	20.5	8.3	15.8	29.0	32.7	32.2	42.2	40.0	39.9	22.2	21.0
Brazil	13.0	— 6.3	42.6	12.5	78.0	161.6	149.2	159.1	206.7	298.1	— 85.9
Chile	104.1	36.3	51.7	35.9	50.2	49.8	47.7	50.6	48.7	19.8	13.1
Cuba	56.5	36.7	41.7	23.4	77.6	35.7	173.2	218.5	171.0	168.7	222.6
Dominican Republic	6.1	3.3	6.7	7.4	4.7	8.3	21.7	41.6	25.3	38.8	29.5
Ecuador	2.6	1.8	1.2	— 0.4	3.2	6.3	12.3	9.6	3.9	8.9	3.1
El Salvador	4.4	1.2	3.3	2.3	1.7	8.8	9.7	9.9	7.5	4.5	2.9
Peru	32.7	16.9	22.6	12.9	19.4	23.4	1.5	5.0	20.5	30.4	8.8
Uruguay	12.9	0.6	11.4	11.5	7.7	— 5.9	36.2	25.2	24.9	4.4	— 60.6
Venezuela	162.3	175.8	200.9	175.8	246.2	153.8	152.2	244.4	170.4	160.6	485.2
II. *Usual deficits*											
Costa Rica	— 1.1	— 3.3	— 8.4	— 9.8	— 8.0	— 2.1	— 8.2	— 11.1	— 15.4	— 18.7	— 25.1
Honduras	— 2.2	— 0.8	— 0.9	— 1.3	— 2.4	— 6.4	— 4.4	— 3.4	— 5.5	— 11.8	— 10.0
Nicaragua	+ 0.6	— 1.3	— 1.6	— 3.4	— 5.8	— 0.9	— 5.8	— 2.4	— 5.2	— 4.0	— 7.5
Panama	— 17.8	— 13.9	— 17.0	— 18.7	— 28.7	— 35.7	— 38.3	— 35.4	— 41.1	— 49.2	— 67.1
III. *Variable balance*											
Colombia	— 8.1	— 8.3	— 26.7	— 12.7	— 20.9	+ 37.6	+ 41.0	+ 29.9	— 20.0	— 29.2	—108.3
Guatemala	— 3.1	— 2.7	— 0.2	— 3.7	— 1.2	+ 6.9	+ 2.5	+ 3.3	+ 7.3	+ 0.8	— 4.9
Haiti	— 0.2	— 0.7	— 1.1	— 2.5	— 0.7	+ 0.1	+ 0.8	+ 0.1	+ 3.9	+ 6.9	+ 0.1
Mexico	+ 40.8	+ 37.8	+ 20.2	+ 13.6	— 55.8	+ 7.7	+ 47.1	— 65.8	— 78.7	—224.9	—254.9
Paraguay	— 0.5	— 0.7	+ 0.3	— 1.9	+ 1.6	— 0.3	— 0.5	+ 0.5	+ 4.5	+ 5.4	— 0.7

Source: United Nations Economic Commission for Latin America.

1944, and a deficit again from 1945 to 1947, which suggests that the tendency towards an export deficit was modified by the exceptional circumstances of the war period. Guatemala appears to be in a similar position, though not until 1947 did it lose its export surplus, which had prevailed from 1937 to 1941. The case of Mexico is different; it had relatively important surpluses from 1937 to 1940, a deficit in 1941, surpluses in 1942 and 1943 and a marked increase in its import surplus since then. Haiti altered its position, which had been unfavourable until 1941, to a favourable one after 1942. Paraguay, on the other hand, showed no definite tendency, but its balances comprise relatively small amounts[1] (see table 92).

The surpluses of the trade balance enabled various Latin-American countries, which had suspended payments on the external debt during the critical period of the thirties, to resume payments abroad, although some countries—for example, Brazil and Mexico—did so after negotiating with the creditors a reduction in the amounts outstanding and interest due. Other countries have used their credit balances to redeem certain foreign currency obligations.

For Latin America as a whole the reduction which took place in the external public debt from 1938 to 1948 was equivalent to $US1,100 million. This is a net reduction inasmuch as a few countries had increased their foreign debt during this period. In the other countries, however, the various transactions of redemption and reimbursement lightened their financial burden (see table 93).

TABLE 93. PARTIAL LIQUIDATION OF THE LATIN-AMERICAN PUBLIC DEBT IN 1938-1948

	Nominal value (Millions of $US equivalents)	*Per cent of reduction*
Argentina	580	93
Brazil	515	43
Chile	66	20
Uruguay	58	37
Cuba	39	31
Others	266	39
TOTAL	1,524	49

Source: Public Debt 1914-1946, United Nations.

[1]It must be borne in mind that in all the above-mentioned cases the figures are those of the unadjusted trade balances, which differ, sometimes appreciably, from those in the balance of payments. For the sake of consistency, unadjusted figures have been taken from official foreign trade statistics. In some cases, such as Chile, Peru and Venezuela, it can be objected that the balances shown in the balance of payments data do not correspond to the true balance of trade since the movements made without foreign exchange are not reported (as is the case with the foreign mining companies). It is also probable that, in spite of exchange controls, the real value of some export transactions is higher than that declared, while the opposite occurs in the case of imports. This difference gives rise to the accumulation of foreign exchange balances which remain abroad or which return to the country through unofficial channels.

In addition to reducing the public debt several Latin-American countries followed a policy of redeeming foreign capital invested principally in public utilities.

The purchase of the British-owned railways in Argentina, Brazil and Uruguay alone represented a disinvestment of British capital amounting to nearly £200 million. Argentina and Uruguay have also repatriated other foreign investments.

In 1941 Mexico negotiated a general agreement with the United States to determine the amount of compensation to be paid to the expropriated oil companies. This was fixed in April 1942 at $24 million.[1] The sum agreed upon between Mexico and the United States as compensation for the expropriated petroleum companies was paid in full in 1947. In 1948, Mexico reached an agreement with the United Kingdom pledging itself to pay the latter country $81.3 million plus 3 per cent yearly interest from 18 March 1938 to 18 September 1948 for expropriated petroleum interests. The first instalment paid in September 1948 amounted to $8.7 million.

The greatest disinvestments in Latin America were carried out by the United Kingdom. The liquidations made between 1937 and 1948 totalled £522 million for shares and bonds alone (see table 94).

TABLE 94. BRITISH INVESTMENTS IN LATIN AMERICA[a]

Million pounds

	End of 1937	*End of 1948*	*Net change*
Government bonds	330.4	206.1	—124.3
Railways	494.3	176.2	—318.1
Banks and shipping	22.0	14.4	— 7.6
Others	308.1	236.0	— 72.1
TOTAL	1,154.8	632.7	—522.1

Source: South American Journal, Annual Report.
[a]Securities quoted on the London Stock Exchange.

The total reduction of public debt and foreign investments in Latin America during the last ten years amounted to an equivalent of $2,640 million, resulting from an increase in the dollar debt ($36 million) and a reduction of the debt in other currencies (see table 95).

TABLE 95. PARTIAL LIQUIDATION OF PUBLIC INDEBTEDNESS AND OF FOREIGN INVESTMENTS IN LATIN AMERICA ACCORDING TO CURRENCIES

Millions of U.S. dollar equivalents

Currency	*1938*	*1948*	*Change*
Pounds sterling	4,841	2,584	—2,257
Dollars	4,370	4,406	+ 36
Other	1,392	974	— 335
TOTAL	10,603	7,964	—2,639

Sources: Public Debt, 1914-1946, United Nations; the *South American Journal,* (London) 1938; and later years, *American Direct Investments in Foreign Countries,* U. S. Department of Commerce, 1936 and 1940, and other publications.

[1]*Bulletin* of United States Department of State, 18 April 1942.

The final position varies greatly from one country to another. The greater part of the reductions indicated above took place in Argentina, Brazil and Mexico, whose foreign debt at the end of 1948 was $2,700 million less than at the end of 1937. On the other hand, it must be remembered that these and other countries have a commercial debt deriving from unpaid imports. The Latin-American balances of payments are not at the moment burdened by financial services, which were estimated at $200 million annually before the war, and which are now not more than $100 million, in spite of the resumption of certain services interrupted during the great depression. Today in some countries this remittance is only a small percentage of the value of exports (see table 96).

TABLE 96. RELATION BETWEEN REMITTANCES FOR PUBLIC AND PRIVATE FINANCIAL SERVICES AND EXPORTS IN FOUR LATIN-AMERICAN COUNTRIES

Per cent

	Argentina	*Chile*	*Peru*	*Uruguay*
1937	18.5	..	..	..
1938	26.6	..	34.4	..
1939	27.3	..	28.5	..
1940	26.4	..	24.7	12.0
1941	26.4	..	20.2	13.8
1942	28.4	9.6	19.4	16.0
1943	18.1	5.4	17.2	9.4
1944	21.0	—	20.7	9.9
1945	15.5	20.9	17.4	9.6
1946	11.4	19.1	11.5	7.6
1947	4.9	..	7.3	5.8

Sources: United Nations Economic Commission for Latin America and International Monetary Fund.

The measures taken during the war by the Latin-American countries against capital belonging to or controlled by the Axis powers also affected both the nationalization of foreign enterprises and service payments. Meanwhile certain payments due European countries have accumulated, and authorization to transfer them has been limited by the amount of available currency and by exchange controls.

Reduction of remittances for financial services was also influenced by the nationalization of capital belonging to foreigners or foreign corporations which have preferred to invest their profits in Latin-American countries, in view of the difficulties of transfer or the risks involved in the country of origin.

Freight is another current item which has been greatly affected by the war. In Argentina, for instance, the sums deriving from freight and port expenses, which were about 33 million pesos before the war, rose progressively to 249 million pesos in 1947, an increase due principally to the increasing participation of the Argentine merchant fleet in the trans-

port of imports and exports. To a lesser extent the same thing occurred in Uruguay, in whose balance of payments the entries deriving from shipping rose from $2.3 million in 1940 to $4.1 million in 1946, then fell to $1.6 million in 1947. The foreign exchange credits of the merchant fleet in Chile rose from 24 million pesos in 1942, the first year for which there are data, to 72.4 million pesos in 1944 and to 387.5 million pesos in 1947. In Peru, freight and other income received from shipping first appear in the balance of payments in 1944, when they stood at 11 million soles; this rose to 16.6 million in 1947. The first complete balance of payments in Brazil is for the year 1947 but, though there are no data available for previous years, the same increase in freight must have taken place given the increase registered in its shipping tonnage.

In some countries immigrant remittances were affected by the war when transfers to certain zones of Europe were interrupted. The movement was resumed in 1945. The case of Uruguay can be taken as an example. From 1940 to 1942 the remittances made by immigrants to the countries of their origin were less than the funds they brought with them. In 1943, the movement was reversed and family remittances were considerably higher than the funds brought by new immigrants. The same is probably true of countries such as Argentina, Brazil and Chile, where there are considerable numbers of European immigrants who regularly send funds to their families in the country of their origin. Measures have been taken, however, to restrict these remittances.

As regards the tourist movement, data are also extremely scarce. However, there is evidence that the relatively important number of Latin Americans who travel to Europe and spend freely has diminished greatly, but has been partly replaced by those visiting the United States. Inter-Latin-American tourist movements have developed considerably. Uruguay is a country where the contribution of tourists, principally from Argentina, figures largely in the balance of payments. The net favourable balance rose from less than $1 million in 1940 to $15 million in 1947.

Mexico also has a favourable tourist balance. Visitors from the United States, Canada and other American countries spend some $US150 million a year, in Mexico while the Mexicans, according to the latest estimates, spend only about $US63 million a year abroad. In 1938 the balance in favour of Mexico was only $US4 million.[1] Another source of foreign exchange in this country is the remittance of funds by workers residing permanently or temporarily in the United States. While this movement was of little importance before the war, in 1946 and 1947 workers' remittances amounted to $US34 million and $US29 million, respectively.

[1]In 1948 Mexico had a net favourable balance of $US94 million.

III. BALANCE OF PAYMENTS WITH THE UNITED STATES, 1940-1948

An attempt has been made in the two preceding sections of this chapter to deal with the balance of payments of Latin America as a whole in the light of the information available, which unfortunately is only fragmentary. On the other hand, thanks to compilations made by the Department of Commerce of the United States,[1] there are very complete data for the present decade concerning the United States, so that the relationship is known from one side at least.

While these figures cannot be taken as representative of the whole, they nevertheless show that the movements of Latin-American balances of payments are usually the result of the divergent tendencies of the United States, on the one hand, and of Europe and the rest of the world on the other, as can be seen from the figures for 1947.

The compilations used have been combined and summarized so as to illustrate the principal characteristics of the period under review; this is the purpose of table 97 and chart 7. The typical fluctuating movements of the balance of payments are at once evident in these two distinct phases. From 1940 to 1945 Latin America had large positive balances, while in the three following years the balance has become definitely negative.

During the first phase when there was an abundance of dollars from the United States, the rest of the world also transferred dollars to Latin America in payment of its purchases. These transfers were much greater in the second phase, which was one of contraction, with the rest of the world losing large amounts of foreign exchange. In this way Latin America could liquidate its deficit with the United States, though the region also had to draw on its own reserves to a great extent.

Let us examine the composition of the data relating to the period of surplus. From 1941 to 1945 the net exports of Latin America to the United States reached the extraordinary figure of $2,346 million. Thanks to this and a small credit balance of $37 million from other current items, the remittances on capital invested by the United States in Latin America, which represented a net sum of $1,052 millions, could easily be paid.

There was thus a current surplus of $1,331 million in the first period. Let us see in what manner the United States liquidated this balance in favour of Latin America. In the first place, attention is drawn by the fact that the total paid is $1,837 million more than the surplus. The explanation is simple: a considerable volume of Latin-American imports from the United States were acquired under the Lend-Lease Act which, as they did not have to be paid for, signified an increase in the current surplus. This figure is estimated at $328 million and is included in the item "uni-

[1] *International Transactions of the United States during the War, 1940-1945*, 1948, and *Survey of Current Business*, November 1948 and March 1949.

TABLE 97. LATIN AMERICA'S BALANCE OF PAYMENTS WITH THE UNITED STATES, 1940-1948

Millions of U.S. dollars

Items	Transition year 1940	1941	War period 1942	1943	1944	1945	Total 1941-45	Post-war period 1946	1947	1948[a]	Total 1946-48
Merchandise and services											
Trade balance	— 12	174	455	615	614	488	2,346	—252	—1,574	—396	—2,222
Net financial services	—160	—189	—188	—192	—252	—231	—1,052	—322	— 395	—324	—1,041
Miscellaneous	46	50	60	12	— 15	— 70	37	— 53	— 35	— 45	— 133
Surplus or deficit on current account	—126	35	327	435	347	187	1,331	—627	—2,004	—765	—3,396
Unilateral transfers and capital movements											
Unilateral transfers	1	7	47	182	271	75	582	50	33	22	105
Long-term capital movements	8	— 48	14	— 1	—106	65	— 76	— 25	410	85	470
TOTAL	9	— 41	61	181	65	140	506	25	443	107	575
Final surplus or deficit	—117	— 6	388	616	512	327	1,837	—602	—1,561	—658	—2,821
Modes of payment											
Increase or decrease (—) of gold holdings	—122	19	109	579	406	473	1,586	—167	— 809	—131	—1,107
Increase or decrease (—) of net short-term assets of Latin America in the United States	100	— 33	236	153	242	133	731	66	— 151	57	— 28
Payment to the United States[b]	— 95	8	43	—116	—136	—279	— 480	—501	— 601	—584	—1,686

Note: The signs of the United States balance of payments with Latin America have been inverted to express the situation of the latter.

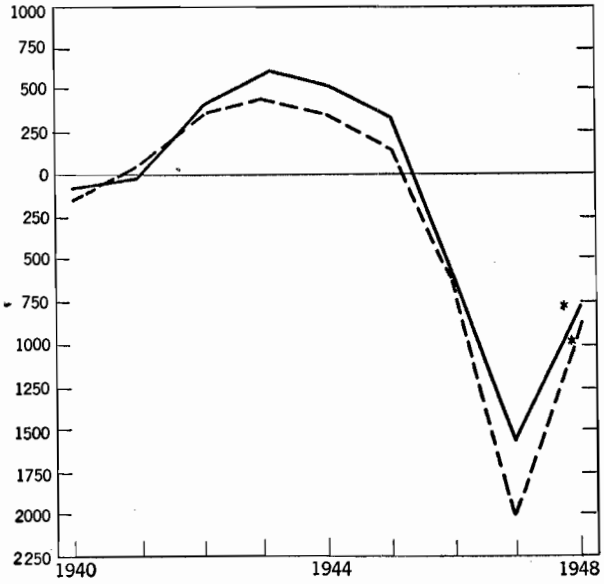
Sources: International Transactions of the United States during the War, 1940-1945, Department of Commerce of the United States, and *Survey of Current Business,* November 1948 and March 1949.

[a]Only nine months.

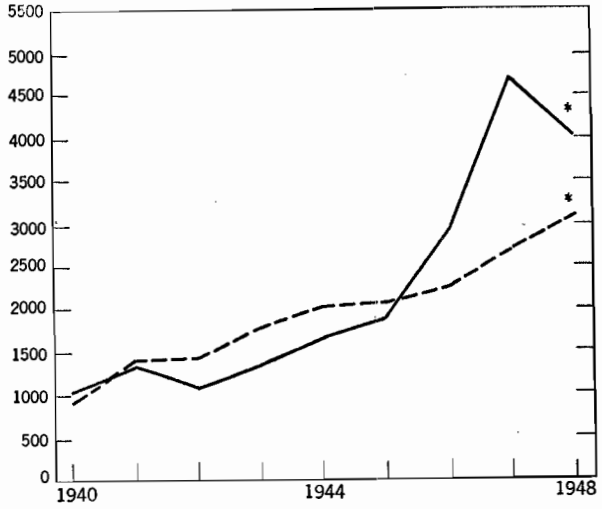
[b]With dollars obtained from other countries or payments to third countries with dollars derived from the net balance with the United States, errors and omissions included.

CHART 7. BALANCE OF PAYMENTS OF THE UNITED STATES WITH LATIN AMERICA

Solid line indicates current expenditures.
Broken line indicates current receipts.



Solid line indicates net inflow or outflow.
Broken line indicates current inflow or outflow.



* Estimated on a nine months' basis.
Source: United States Department of Commerce.

lateral transfers", which totalled $582 million in the first period.[1] At the same time, Latin America liquidated, during the same period, $76 million of United States investments. The final surplus of the period 1941-1945 can therefore be broken down as follows:

	Millions of dollars
Current surplus	1,331
Multilateral transfers and liquidation of investments	506
Final surplus	1,837

This final surplus of the balance of payments in favour of Latin America has been compensated as follows:

	Millions of dollars
Gold transferred to Latin America	1,586
Increase in net short-term assets in the United States	731
TOTAL	2,317

This figure exceeds the final surplus set forth above by $480 million; in so far as it is not covered by "errors and omissions", it is probably accounted for by the fact that the rest of the world paid for its purchases from Latin America in dollars, which the latter used to increase its assets in the United States.

We now reach the second phase of the balance of payments, which begins in 1946, and through which Latin America is now passing. Its salient feature is this: of the $2,317 million of gold and net short-term assets accumulated in the preceding phase, $1,135 million—or practically half—have been used to pay part of Latin America's final deficit to date. This final deficit rose to $2,821 million in the period 1946-1948 (until 30 September 1948).

It is of interest to ascertain how this deficit came about. The trade balance which in the first phase of five years showed a large surplus of $2,346 million, showed in the second phase of less than three years a deficit almost as large, $2,222 million.

Though on the one hand Latin America had a large current deficit, on the other it received during these three years a net sum of $470 million in the form of loans and various investments made by the United States. Furthermore, unilateral transfers were made in favour of Latin America, amounting to $105 million. With the help of these two items, totalling $575 million, the current deficit is reduced to a final figure of $2,821 million.

As has been seen, in order to liquidate part of this deficit Latin America lost $1,135 million of its resources, reducing its gold holdings by $1,107 million and its net short-term assets by $28 million. There remained $1,686 million to be compensated; exclusive of such amounts as are attributable to "errors and omissions", this sum was furnished to Latin America by Europe and other countries and used by Latin America to cover part of its deficit with the United States.

[1]This includes other items such as the remittances of the Mexican "braceros" in the United States, which are a service rather than a unilateral transfer.

CHAPTER 9

THE INFLATIONARY PROCESS

I. THE BACKGROUND

At the beginning of 1949 the majority of the Latin-American countries were facing monetary problems which in some cases were notably grave. With four exceptions, the gold and foreign exchange assets of all countries have declined from the peak they reached around 1946. Even though they are higher, on the whole, than in 1938, their usefulness as a means of international payment is relatively less in certain cases because part of the foreign exchange holdings are blocked or inconvertible, and also because international prices have risen.

It was natural that the large amounts of gold and foreign exchange which had accumulated during the war should be used to satisfy a pent-up demand for goods as they became available from foreign sources. It is remarkable, however, that this movement should have gained such strength in certain countries before there was any evidence of a recession in the highly industrialized countries—a circumstance which always attracts gold from less developed nations. There is no doubt that this movement is explained to a great extent by the large credit expansion which occurred in the Latin-American countries. It is evident that the expansion was stimulated in the first place by the great accumulation of gold and foreign exchange and its consequent effects upon bank deposits, given the characteristic manner in which the banking system functions. Later, however, the movement acquired its own momentum and continued to develop in spite of the dwindling of monetary reserves. In some cases the credit expansion reached a point at which it might have caused the complete exhaustion of the reserves, had not restrictive measures been applied; thus, in the countries most affected, exchange controls were tightened and there were even delays in payment abroad for imports already received.

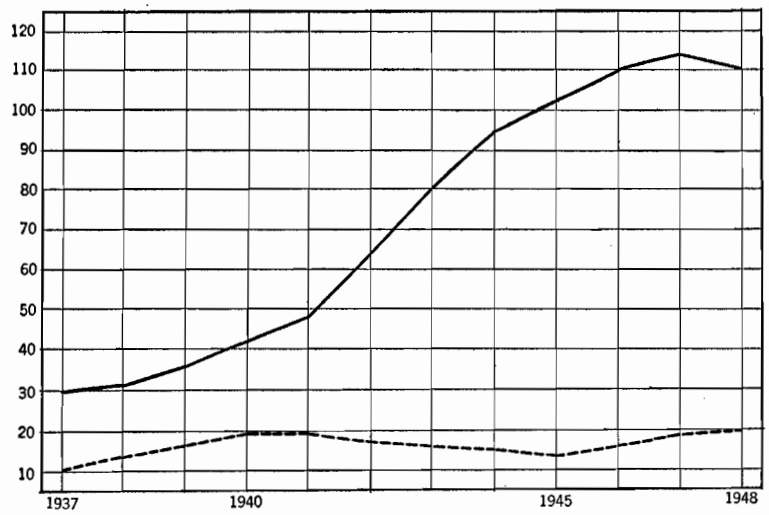
Unlike the United States, where a large expansion of the money supply such as occurred during the Second World War affected the gold reserves but slightly, any expansion in the other countries soon brings heavy pressure and a severe drain on reserves, unless restrictive internal measures are taken to divert this pressure (see chart 8).

These different reactions are due fundamentally to the different import coefficients. It is logical that where the coefficient is relatively high, as in the Latin-American countries, any increase in money incomes leads before long to a considerable increase in imports.

CHART 8. MONEY SUPPLY AND INTERNATIONAL ASSETS IN THE UNITED STATES AND ARGENTINA

Thousand millions of dollars

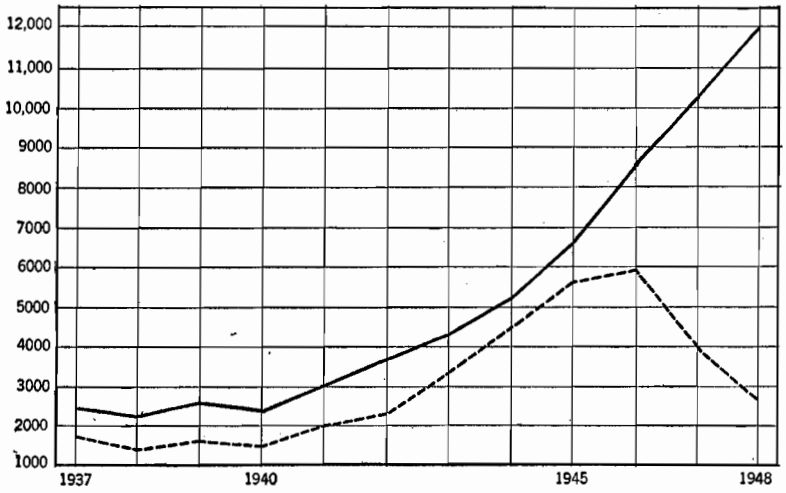
Solid line indicates means of payment.
Broken line indicates gold.



Note: The gold assets of the United States have been adjusted by subtracting for each year the net short-term balances of the rest of the world, against that country.

Millions of pesos

Solid line indicates means of payment.
Broken line indicates gold and foreign exchange.



II. CHANGES IN THE RESERVES

It is obvious that there have been differences in the starting points and the rates of development of the process which brought about the present monetary situation of the Latin-American countries. These general observations cover the majority of countries, however, and refer especially to those where export trade is highest.

Though the losses of gold and foreign reserves are both aspects of the same economic problem, it is advisable to analyse them separately, in order to determine their magnitude and effects.

As regards the first aspect, the decline of gold and foreign exchange reserves has been most marked in Argentina, Chile, Colombia, Costa Rica and Mexico; only Cuba and Venezuela increased their international assets to any great extent (see table 98).

TABLE 98. CHANGES IN THE GOLD AND FOREIGN EXCHANGE RESERVES OF SOME LATIN-AMERICAN COUNTRIES, BETWEEN 1938, THE PEAK YEAR[a] AND 1948

Groups of countries arranged according to the changes in their reserves	*Increase in 1948 in relation to 1938*[b]	*Increase (+) or decrease (—) in 1948 in relation to the peak year*[a]	*Percentage change between the end of 1948 and the peak year*
	Millions of U. S. dollars		
I. *Loss greater than 50 per cent*			
Mexico	+ 49	— 215	—74
Argentina	+187	—1,083	—64
Chile	+ 20	— 57	—52
Colombia	+ 57	— 93	—53
Costa Rica	+ 4	— 8	—61
II. *Loss of less than 50 per cent*			
Paraguay	+ 6	— 5	—45
Nicaragua	+ 3	— 3	—43
Ecuador	+ 24	— 9	—25
Uruguay	+156	— 62	—21
Bolivia	+ 24	— 6	—17
Guatemala	+ 37	— 4	— 8
Brazil	+679	— 47	— 6
III. *Countries which increased their reserves*			
Venezuela	+323	+ 135	+62
Cuba	+324	+ 60	+23

Note: The figures include only gold and foreign exchange assets held by the central banks or other monetary authorities. In Mexico and Cuba only gold is included.

Source: Data from *International Financial Statistics,* vol. 2, No. 2, of the International Monetary Fund.

[a]Figures for 1946, with the following exceptions: 1945 for Chile, Bolivia, Mexico and Peru; 1944 for Costa Rica and Nicaragua; 1947 for Guatemala and Brazil. The figures for 1948 are those for November, except in the case of Mexico, where they relate to June.

[b]1939, in the case of Paraguay, and 1940 in that of Venezuela.

As can be seen in table 98, the countries where a reduction of reserves occurred (the first and second groups), if taken together, show a

fall of about $US1,600 million[1] in relation to the peak year, which was 1946 in most cases. The countries which increased their holdings, on the other hand, showed a rise of about $200 million between 1946 and 1948. It should be pointed out that if absolute values are considered, Argentina and Mexico are responsible for 80 per cent of the decline indicated above.

The decline was an even more serious problem in certain particular instances where the reserves included blocked or inconvertible exchange. The progressive extension of bilateral agreements with blocked balances —due first to the war and then to the temporary inability to import from devastated areas goods needed by the Latin-American countries—divided the monetary reserves of these countries into two distinct categories; and while they might legally be the same as a backing for the note issue, their usefulness as a means of payment abroad is at the moment entirely different. To be able to understand the full significance of the problem now facing the Latin-American countries, there should be a review of the situation created by the decline of reserves and an examination of their composition and relation to regional foreign trade in terms of free and inconvertible foreign exchange.

According to the most recent data available, the total Latin-American gold and foreign exchange of the central banks amounted, at the end of 1948, to $2,670 million, that is, to about $2,000 million more than in 1938.

BREAKDOWN OF THE MONETARY RESERVES OF SEVENTEEN LATIN-AMERICAN COUNTRIES

Millions of dollars

	1938	*1946*	*1948*
Gold	685	2,540	1,500
Foreign exchange	75	1,320	1,150
TOTAL	760	3,860	2,650

Source: International Financial Statistics, International Monetary Fund.

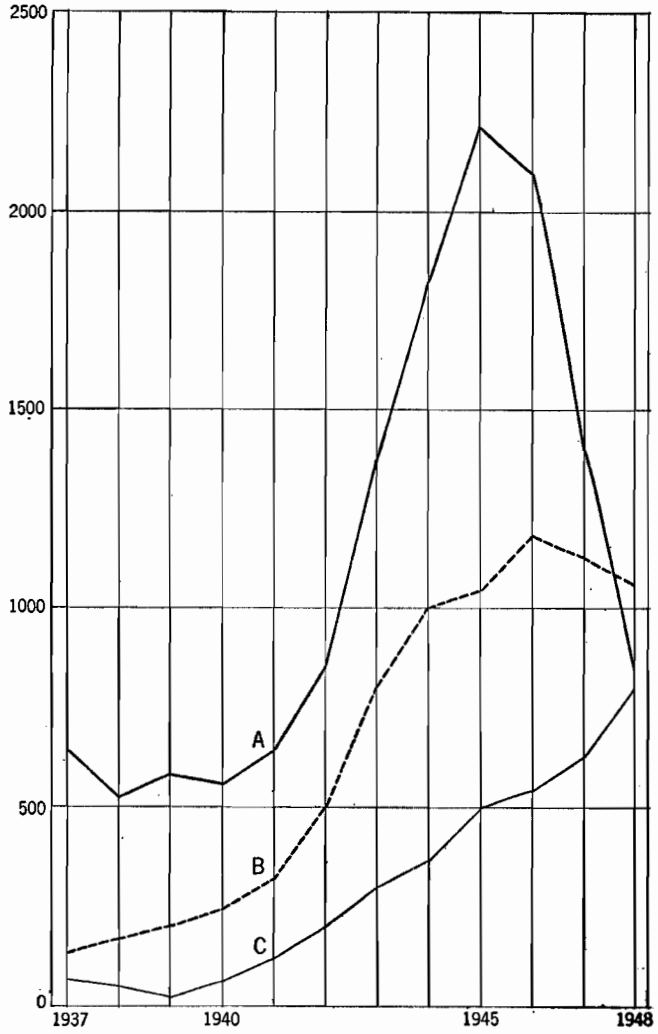
Since in 1946 the gold and foreign exchange holdings amounted to $3,800 million, there has been a decline during the last two or three years of over $1,200 million. The consequences of this reduction are indeed serious, if what has already been pointed out is remembered, namely, that part of the foreign exchange is inconvertible or can be used only in certain areas, and that this may amount to the equivalent of $800 million.[2] Excluding, therefore, the inconvertible exchange, the reserves which can be freely used are double those of 1938, but international prices were then less than half those obtaining today. If Cuba and Venezuela (whose share in the increase of gold and convertible exchange

[1]The foreign currencies have all been converted to dollar equivalents.

[2]Given the recent difficulties of Argentina and Brazil in this connexion, it can be surmised that the greater part of their foreign exchange which is not required to back the note issue is inconvertible.

was approximately $550 million) are excluded from the comparison of the international assets held in 1938 and 1948, the total increase of freely convertible assets is only 60 per cent in relation to 1938 (see chart 9).

CHART 9. GOLD AND FOREIGN EXCHANGE RESERVES IN SEVENTEEN LATIN-AMERICAN COUNTRIES
(In millions of dollars)



A. Countries whose losses of international assets amounted to more than 50 per cent since peak year.
B. Countries whose losses of international assets amounted to less than 50 per cent since peak year.
C. Countries whose international assets increased.
Source: International Financial Statistics, International Monetary Fund.

There is therefore an increase in the reserves which appears to contradict the dollar shortage found in many Latin-American countries. This is explained, however, not only by the fact that this increase is much less than that in the money supply since 1938, but also that the net increase of reserves referred to is not evenly distributed between the countries. For instance, gold and convertible exchange in those countries—notably Argentina and Brazil—which hold the largest amounts of pounds sterling is scarcely more than in 1938.[1] This is made clear by the fact that the commercial debt of these two countries (amounting to $US400 million for the two countries[2]), and the pledge of part of Brazil's gold against a loan of $80 million contracted for purposes of monetary stabilization, virtually reduced their reserves, which had not attained satisfactory levels since the great depression of the thirties, to levels lower than those in 1938. The importance of these factors can be appreciated when it is remembered that in 1947 the deficit of Latin America's balance of payments with the United States amounted to $1,900 million—that is, a sum equal to nearly 70 per cent of the total Latin-American reserve in 1948. Had such disparities continued, the monetary reserves of these countries would have been reduced to very small amounts. It is understandable that certain countries should have been compelled to take special measures to restrict imports and other current transfers, in order to check the heavy drain which threatened to exhaust the reserves.

III. INTERNAL FACTORS

We have examined, as far as the available data will allow, the movements of Latin America's monetary reserves during the last ten years. Let us now consider internal monetary circulation.

There is one outstanding phenomenon: in most of the countries the money supply has been expanded to levels several times those of pre-war. This increase, however, is not attributable to the same factors throughout the whole period; in most cases there are two distinct phases (see chart 10 and table 99). In the first stage external factors prevail in the creation of currency in circulation. As regards the second, internal causes are manifestly predominant.

In the first stage, which lasted approximately until 1944, the inflow of gold and foreign exchange resulting from the surplus in the balance of

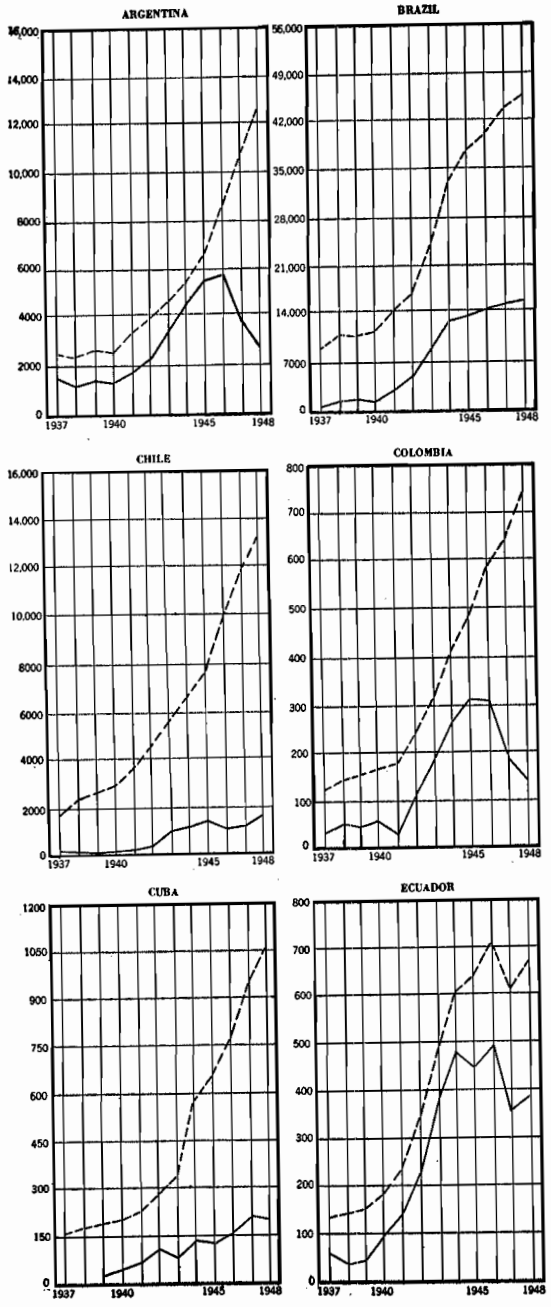
[1]It should be added that in some cases—that of Argentina is outstanding because of the large amounts involved—part of the reduction of reserves is due to the incidence of an extraordinary factor. Some countries, in view of the unusual accumulation of gold and foreign exchange, repatriated their external dollar debt before it was due, or bought public utilities, also in that currency. Argentina, Brazil, and Uruguay, on the other hand, in order to utilize the large amount of pounds sterling blocked in Great Britain, bought the British interests in railways (in this connexion see, in the chapter on balance of payments, the reduction of foreign investments in Latin America during the last ten years).

[2]According to recent information, Argentina has reduced its outstanding payments from $US250 million to $US100 million.

CHART 10. INTERNATIONAL RESERVES AND MONEY SUPPLY IN CERTAIN LATIN-AMERICAN COUNTRIES

(In millions of domestic monetary units)

Solid line indicates international assets. Broken line indicates money supply.



Note: Net gold and foreign exchange held by central banks or other authorities. Data for Mexico and Cuba refer to gold only.

Source: Data from *International Financial Statistics,* International Monetary Fund.

CHART 10 (*Continued*)

Solid line indicates international assets. Broken line indicates money supply.

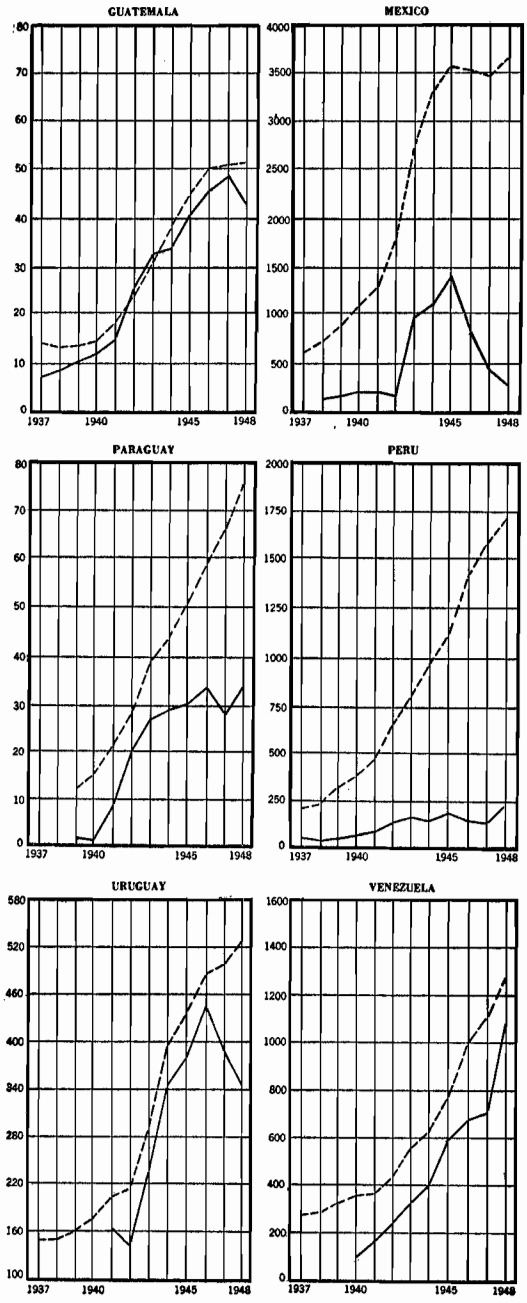


TABLE 99. INDEX OF THE INCREASE IN THE MONEY SUPPLY IN TWELVE LATIN-AMERICAN COUNTRIES

Index numbers, base: 1937 = 100

Year	*Argentina*	*Brazil*	*Chile*	*Colombia*	*Cuba*	*Ecuador*	*Guatemala*	*Mexico*	*Paraguay*[a]	*Peru*	*Uruguay*	*Venezuela*
1938	96	118	106	111	84	103	97	112	..	107	102	109
1939	104	116	122	114	84	108	98	133	100	125	105	118
1940	101	119	149	124	97	131	101	161	116	153	114	130
1941	131	152	183	138	123	171	119	192	170	199	127	131
1942	152	180	225	181	174	246	169	269	221	271	135	161
1943	181	261	285	244	237	351	221	409	314	342	188	204
1944	228	352	327	318	358	430	260	504	345	419	256	229
1945	276	403	380	369	411	453	312	540	397	473	284	295
1946	357	419	482	456	487	503	345	529	461	600	320	380
1947	433	462	584	500	590	438	350	526	517	682	326	417
1948	503	472	699	555	659	481	359	544	602	760	340	482

Source: Original data taken from the *International Financial Statistics* of the International Monetary Fund.

[a]Base: 1939 = 100.

payments led, through the banking system, to the increase in the money supply (notes and demand deposits). Money was also created by internal factors, but this expansion was of relatively little importance in the period under review, except in the case of countries such as Brazil, Chile and Mexico where an inflationary process had been under way for some time. Table 100 shows the close link existing between the increase in the reserves and that of the money supply in the cases of Argentina, Colombia,

TABLE 100. FLUCTUATION IN THE MONETARY RESERVES AND THE MONEY SUPPLY OF SEVERAL LATIN-AMERICAN COUNTRIES

Millions of national currency

Countries	*Currency unit*	*Increases or decreases in:*			
		Monetary reserves	*Money supply*	*Monetary reserves*	*Money supply*
		Period 1939-1944		*Period 1945-1948*	
Argentina	*peso*	3,237	3,239	—1,918	6,752
Brazil	*cruzeiro*	11,310	22,470	1,850	11,540
Chile	*peso*	473	4,148	— 40	7,022
Colombia	*peso*	230	265	— 114	342
Mexico	*peso*	928	2,609	— 695	189
Uruguay	*peso*	236	239	1	129
Venezuela	*bolivar*	300[a]	315	688	780

Source: International Monetary Fund, *International Financial Statistics,* vol. 2, No. 2. The figures for 1948 correspond to the latest date within that year for which information is available.

[a]In 1941-1944.

Uruguay and Venezuela during the years 1938-1944.[1] In the second stage, on the other hand, when reserves began to decline, the reduction in the money supply to which this decline gave rise was more than counterbalanced by progressively increasing expansion due to internal factors.

[1]This comparison does not mean that the increase or decrease in the money supply is governed entirely by external factors, but that the result of the action of all the internal and external factors entering into the monetary process corresponds approximately to the net increase of gold and foreign exchange.

The combined action of the expansion of the money supply and the reduction of monetary reserves has resulted naturally in a general decline of the relation between monetary reserves and the total cash and deposits in the hands of the public, from the levels they attained in the different countries during the middle forties. Nevertheless, with the exception of Argentina, Colombia, Mexico and Peru, this relation was at a higher level at the end of 1948 than at the beginning of the war. Owing to the lack of detailed information, it is not possible to determine the proportion of blocked exchange in these percentages.

IV. THE RISE IN PRICES

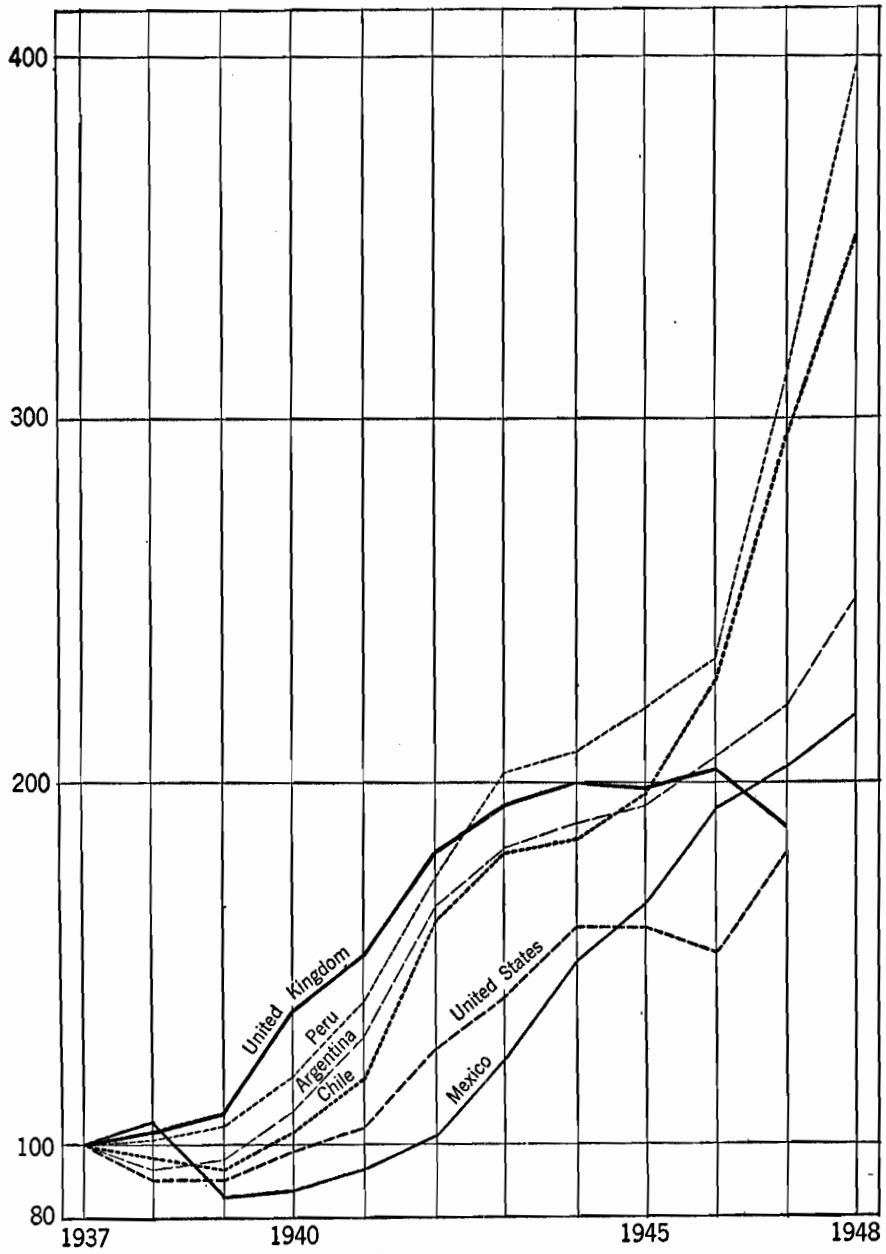
The large credit expansion which has taken place during the last ten years in the majority of the Latin-American countries was not accompanied by an increase in the volume of goods and services available on the market. This disequilibrium was naturally reflected in prices, which in some cases in 1948 were three times those obtaining before the war. Here, too, there are two fairly well defined stages in the development of the inflationary process.

In the first stage, which lasted until 1941 or 1942 in some cases, and which corresponded to the stage mentioned in connexion with the money supply, the price rise was relatively slight because supplies were still sufficient—imports had not yet fallen steeply and the stocks in the hands of manufacturers and in the distribution system were still considerable. Moreover, there was some uncertainty regarding the outcome of the war, and pessimism, generated by the cyclical down-swing which had become evident in 1938, still lingered. The *entrepreneurs* at first used their profits from the price rise to finance their own working capital requirements; but then, in order to forestall the expected currency devaluation, they soon began to put their returns into capital investment—especially into real estate, rural or urban—and had recourse to the banks to finance their requirements of working capital, now increased by the rise in prices and salaries. Meanwhile, similar action was taken by the governments, which devoted the increases in revenue to the financing of new expenditures, so that they, too, frequently turned to banking credit to cover their deficits when faced with a further budgetary deficit. It is evident that this process is based upon the initial stimulus of the banking system by the inflow of gold and foreign exchange.

At this point inflation enters its second stage; the forces it has generated acquire their own momentum and continue to develop independently of the fluctuations of reserves in a monetary system in which the action of exchange control prevails. This is reflected in the price

CHART 11. WHOLESALE PRICES IN CERTAIN LATIN-AMERICAN COUNTRIES AND EXPORT PRICES OF THE UNITED STATES AND THE UNITED KINGDOM

(Base: 1937 = 100)



Sources: Data for Argentina, Chile, Mexico and Peru have been taken from the United Nations *Monthly Bulletin of Statistics.* Data for the United States have been obtained from the *Indexes of Exports and Imports* published by the Department of Commerce and for the United Kingdom from those published by the Board of Trade.

movements: the rise in prices which took place was certainly influenced to some extent by external factors, since the prices of Latin-American imports also rose progressively. These increases, however, like those of freight rates, have only a partial effect on the creation of local prices; and as these have risen more than those of imports, it is obvious that internal factors have had a considerable influence on their progressive increase (see chart 11).

V. REPERCUSSIONS

Clearly the inflationary process has profound effects upon the economy of the affected countries, in addition to results deriving from the maladjustments it produces in the domestic distribution of credits, and its pressure on monetary reserves.

As is well known, there is a close relation between the price levels of the different countries and the relative values of their respective currencies. In this connexion a new set of exchange rates had been reached after the great changes of the thirties. But, as has just been seen, price relations have been altered by the inflation. In Latin America there is a new structure of prices, costs and wages in so far as exchange rates have been supported with one or two exceptions through the fixed rates supported by exchange controls. It is possible that under these conditions, the new price levels do not permit some countries to compete in international markets formerly favourable to them, while at the same time they stimulate imports of goods which are comparatively cheaper than the local products. This naturally brings an increasingly heavy pressure to bear on the dwindling reserves and lessens the possibility of creating new means of payment abroad through exports. This consequence of the inflationary process undoubtedly calls for a careful study of all the contributing factors, since the measures adopted in relation to its external aspects can only be of lasting value if the fundamental causes of the evil are removed.

CHAPTER 10

LATIN AMERICA AND EUROPEAN RECOVERY[1]

I. MEANING OF THE EUROPEAN RECOVERY PLANS FOR LATIN AMERICA

Mineral-producing countries, tropical agricultural countries and non-tropical agricultural countries[2] participated in the total foreign trade of Latin America in the years 1928, 1935 and 1938 in the following proportions: mineral-producing, 26, 32 and 37 per cent; tropical agricultural, 37, 37 and 36 per cent; non-tropical agricultural, 37, 31 and 27 per cent. The third group had traditionally relied on a large export surplus to both continental and non-continental Europe to equilibrate its international accounts and, especially, to neutralize an almost continuous deficit with the United States. The second group had a fairly permanent, large export surplus with the United States, a less important export surplus with western continental Europe, and a very small export surplus with the United Kingdom and eastern European countries. The Latin-American mineral producing countries alternated between an export surplus and an import surplus with the United States during most of the 1930's; with regard to Europe, this group formerly had a relatively significant export surplus with the United Kingdom, as well as with the continental European countries. Trade relations of the three groups with the rest of the world (excluding intra-Latin-American trade) were in general of little importance—amounting to less than 5 per cent of total Latin-American foreign trade—and resulted in an export surplus only to the mineral producing countries.

The Second World War modified substantially the foreign trade relations of all Latin-American countries, particularly of the non-tropical agricultural countries, by increasing the share of the United States and diminishing considerably the share of Europe, both in export and in import trade.

It has been generally assumed that these war-time changes in the direction of foreign trade were temporary, and that traditional economic relations with Europe and the rest of the world would be restored after the reconstruction period. Since the end of the war, the largest foreign traders in the region, i.e. Argentina and Brazil, expressed their confidence in such a return to the pre-war patterns of trade by extending credits to

[1]This chapter was prepared by the Latin American Unit, United Nations Department of Economic Affairs.

[2]For basis of classification, see chapter 1, section III.

some of their traditional buyers (Belgium, Czechoslovakia, Finland, France, Italy, the Netherlands and Romania)[1] for the purchase of foodstuffs and raw materials to be repaid in goods over a period of several years.

Although the recovery of Europe as a large international trader was most important to the non-tropical agricultural countries of Latin America, the other groups in the region also had a great interest in that recovery. The recovery of Europe offered the possibility of reopening markets for the portion of their export surpluses not absorbed by the United States (Brazilian and Colombian exports of coffee, Cuban exports of sugar, Bolivian exports of tin and lead, Chilean exports of nitrate, etc.) It would also offer a greater freedom of choice for the selection of their necessary imports.

The European Recovery Program (ERP), adopted by sixteen European nations and providing for large-scale assistance from the United States, had both immediate and long term implications for the Latin-American countries. On the one hand, the off-shore purchases to be made according to the plan and to be financed by the United States might immediately contribute to the alleviation of the dollar shortage. On the other hand, to the extent that the Program shortened the period required for the economic recovery of Europe, it might facilitate an earlier resumption of large-scale trade with Europe on a normal basis. Although many Latin-American countries—among them Argentina, Chile, Brazil, Mexico and Uruguay—confronted at that time with an increasing deficit in current dollar accounts, were mainly affected by the short-run implications of the Program, for the region as a whole the long term effects of the Program were more important.

The Organization for European Economic Co-operation (OEEC) estimated in October 1948 that, out of the total amount of $US4,953 million of Program funds appropriated by the United States for the period April 1948-March 1949, about $US460 million would be needed to pay for Latin-American exports to European countries within the Program. Details of the specific commodities to be purchased in Latin America are given in table 101.

According to the report of the Economic Co-operation Administration[2] for 3 April 1948-31 March 1949, procurement authorizations in Latin America amounted to $442 million. During the same period Latin-American freight payments amounted to about $200 million, in accordance with the Program. Table 102 shows the classification of the purchases by commodities.

[1]Argentina's credits to Spain after the end of the war are not included in this description since they were a consolidation and enlargement of credits granted all along since 1939.

[2] Economic Co-operation Administration, *Procurement Authorizations,* 31 March 1949, Washington, D.C.

TABLE 101. COMMODITIES TO BE PURCHASED IN LATIN AMERICA THROUGH THE EUROPEAN RECOVERY PROGRAM
July 1948-June 1949

Estimated in millions of U.S. dollars

GRAND TOTAL	459.19
Food, feed and fertilizers	*262.95*
Bread grains	28.50
Fats and edible oils	64.10
Sugar	56.02
Meat	13.88
Feed stuffs	28.38
Other foodstuffs and feed stuffs	62.80
Fertilizers	9.27
Fuel	*2.54*
Oil and oil products	2.54
Raw materials and semi-finished products	*167.65*
Cotton	22.07
Non-ferrous metals	82.65
Iron ore, ferro-alloys and pig iron	3.69
Timber	1.31
Hides and skins	33.37
Non-manufactured wool	4.30
Other raw textiles	18.15
Other raw materials	2.11
Miscellaneous and unclassified	*26.05*
Tobacco	15.72
Other	10.33

Source: Organization for European Economic Co-operation, *Report to the Economic Co-operation Administration,* October 1948, Paris.

Purchases made in Latin-American countries through 31 March 1949 accounted for about 10.2 per cent of the total amount of procurement authorizations by the United States Economic Co-operation Administration. The OEEC estimate of October 1948 for commodities to be purchased in Latin America in the period July 1948-June 1949 was about 9.3 per cent. As compared with these earlier estimates, procurement authorizations through 31 March 1949 were higher for petroleum and petroleum products and particularly for sugar, but lower for other commodities—feed stuffs, cotton, tobacco and non-ferrous metals, and particularly for grains, fats and oils.

Table 103 shows the distribution of procurements by groups of commodities and area of origin.

The direct dollar earnings through the ERP of the twenty Latin-American republics during the twelve-month period ending 31 March 1949 will cover about half their net deficit in current account with the United States in the first nine months of 1948, of about $US765 million.

Two-thirds of the total amount of authorized procurements, that is to say $US195 million, is being spent in five countries—Chile, Cuba, Venezuela, Mexico and Brazil—to pay principally for non-ferrous metals,

TABLE 102. PROCUREMENT AUTHORIZATIONS, BY COMMODITY, IN LATIN AMERICA

3 April 1948-31 March 1949

Millions of U.S. dollars

GRAND TOTAL		442.0
Food, feed and fertilizer		*163.2*
Bread grains		—
Fats and oils		10.8
Soap, soap stock, and other fatty acids	2.3	
Soybeans	0.2	
Flaxseed	3.0	
Oilseeds, N.E.C.	5.3	
Coarse grains		—
Sugar and related products		110.7
Sugar, etc.	91.7	
Molasses, inedible	19.0	
Meat		12.3
Dairy products		0.1
Other	0.1	
Oilcake, meal and other feeds and fodders		10.6
Fertilizer		9.2
Nitrogenous	9.2	
Fruits and nuts, except peanuts		—
Vegetables and preparations		—
Miscellaneous agricultural products		9.5
Fuel		*141.2*
Petroleum and products		141.2
Coal and related fuels		—
Raw materials and semi-finished products		*131.1*
Cotton		0.3
Raw cotton except linters	0.3	
Nonferrous metals and products		70.1
Copper	50.1	
Zinc	2.2	
Lead	17.7	
Chemicals and related products		4.0
Medicinal and pharmaceutical preparations	0.9	
Alcohol	2.0	
Pesticides	0.1	
Other	1.0	
Miscellaneous		55.8
Iron and steel mill products	0.1	
Fabricated basic textiles	—	
Lumber and lumber manufactures	0.7	
Hides and skins and leather	30.9	
Non-metallic ores and concentrates	15.4	
Animals and vegetable fibres, except unfinished cotton and wool (Agr.)	9.5	
Miscellaneous and unclassified		*6.5*
Tobacco	4.7	
Misc. industrial commodities	0.1	
Misc. agricultural commodities	1.7	

Note: Totals shown are sums of unrounded figures, hence may vary slightly from totals of rounded amounts.

Source: Economic Co-operation Administration, *Procurement Authorizations*, 31 March 1949, Washington, D.C.

TABLE 103. PROCUREMENT AUTHORIZATIONS BY COMMODITY GROUP AND AREA OF ORIGIN

3 April 1948-31 March 1949

Millions of U.S. dollars

Commodity group	Total	Area of origin: United States	Canada	Latin America	Participating countries	Other countries
Food, feed and fertilizer	1,649.0	985.1	414.9	163.2	50.9	34.9
Fuel	692.8	307.2	0.1	141.2	110.0	134.4
Raw materials and semi-finished products	1,269.0	820.6	256.7	131.1	22.1	38.4
Machinery and vehicles	578.4	550.9	24.3	—	3.2	—
Miscellaneous and unclassified	170.0	157.6	3.0	6.5	2.3	0.6
	4,359.2	2,821.4	699.0	442.0	188.5	208.3
Per cent of total	100	64.7	16.0	10.2	4.3	4.8

Source: Economic Co-operation Administration, *Procurement Authorizations,* 31 March 1949, Washington, D.C.

sugar, petroleum, fertilizer, fats and oils, and hides and skins, while the remaining one-third is being distributed among ten countries. The $US75 million of procurements authorized prior to 1 December 1948, which are not distributed by countries, and the additional $US140 million authorized through 31 March 1949 are devoted to the purchase of sugar and petroleum, commodities which are being supplied by the same group of five countries.

Table 104 shows the distribution by commodities and country of origin of the procurements authorized for Latin America from 3 April to 30 November 1948.[1]

According to data in table 105, Latin-American exports to ERP countries during 1948 amounted to $US2,728 million, representing a net increase of value of $US353 million over 1947. The value of imports from ERP countries increased from $US1,054 million in 1947 to $1,433 million in 1948.

Latin-American exports to other European countries increased in the same period from $US213 million to $293 million and its imports from those countries from $US83 million to $134 million. Latin America had, during 1948, a favourable balance of $US1,454 million in the trade with Europe and of $1,295 million with ERP countries.

Since the total shipments from Latin America through the ERP, up to 31 December 1948, amounted to $US142.8 million[2] the balance

[1]ECA did not publish distribution of procurement by country of origin after 30 November 1948.

[2]Economic Co-operation Administration, *Seventh Report,* Washington, 19 January 1949.

TABLE 104. PROCUREMENT AUTHORIZATION IN LATIN

Cumulative 3 April-30 November 1948

Commodity group	Total	Country of origin: Chile	Cuba	Venezuela	Mexico	Brazil
GRAND TOTAL	302,655	53,159	44,074	37,450	30,627	29,289
Food and agricultural commodities	119,977	7,829	40,894	—	13,859	21,050
Sugar and related products	75,079	—	40,894	—	—	3,386
Fats and oils	10,887	—	—	—	3,164	6,883
Meat	9,113	—	—	—	4,921	3,020
Coarse grains and feeds, including oilcake and meal	8,470	—	—	—	1,676	4,254
Fertilizer	8,289	7,829	—	—	—	—
Rice	2,150	—	—	—	2,150	—
Tobacco	1,065	—	—	—	—	1,065
Cotton	300	—	—	—	—	—
Dairy products	100	—	—	—	—	—
Miscellaneous	4,522	—	—	—	1,948	2,443
Industrial commodities	182,678	45,330	3,180	37,450	16,768	8,239
Non-ferrous metals	64,965	44,492	—	—	16,173	—
Petroleum and products	63,720	—	—	37,060	453	—
Metallic ores and concentrates	32,350	—	—	—	—	1,071
Hides, skins and leathers	15,103	—	130	390	52	6,340
Chemicals and related products	4,532	800	2,000	—	—	14
Chemicals except medicinals	3,173	—	2,000	—	—	—
Medicinal and pharmaceutical preparations	1,359	800	—	—	—	14
Lumber and lumber manufactures	641	—	—	—	—	624
Fabrics and basic textiles	80	—	—	—	80	—
Primary iron and steel products	38	—	—	—	—	—
Electrical machinery and apparatus	10	—	—	—	10	—
Miscellaneous	1,240	—	1,050	—	—	190

Source: Economic Co-operation Administration, *Sixth Report,* 15 December 1948, Washington.

AMERICA BY COMMODITY AND COUNTRY OF ORIGIN

Thousands of U.S. dollars

Country of origin										
Bolivia	*Peru*	*Uruguay*	*Argentina*	*Colombia*	*Nicaragua*	*Paraguay*	*Domin. Rep.*	*Haiti*	*Ecuador*	*Latin America undistributed*
17,033	7,443	4,990	2,690	2,251	840	520	122	90	45	72,032
—	622	2,859	107	—	840	399	122	90	45	31,260
—	—	—	—	—	—	—	—	—	—	30,800
—	—	—	—	—	840	—	—	—	—	—
—	—	1,129	—	—	—	—	42	—	—	—
—	322	1,730	—	—	—	399	—	90	—	—
—	—	—	—	—	—	—	—	—	—	460
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	300	—	—	—	—	—	—	—	—	—
—	—	—	100	—	—	—	—	—	—	—
—	—	—	7	—	—	—	79	—	45	—
17,033	6,821	2,132	2,583	2,251	—	121	—	—	—	40,772
—	2,100	—	—	—	—	—	—	—	—	2,200
—	—	—	—	290	—	—	—	—	—	25,917
16,980	4,449	—	—	—	—	—	—	—	—	9,850
53	191	1,834	1,244	1,961	—	121	—	—	—	2,788
—	81	298	1,339	—	—	—	—	—	—	—
—	12	139	1,022	—	—	—	—	—	—	—
—	69	159	317	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	17
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—

Effective 1 November, fourth quarter procurement authorizations for purchases in Latin America are shown separately for Argentina and Brazil.

of about $US1,152 million in the trade between Latin America and ERP countries has been covered from other sources.

For this purpose there were available invisible earnings from Latin America, which might be roughly estimated at between $US50 and $70 million; earnings of dollars and hard currencies in the trade of ERP countries with the rest of the world; gold and foreign exchange reserves and resources available from liquidation of the remaining earlier foreign investments; and in addition, credits granted by Latin-American countries to some ERP countries under existing bilateral clearing agreements. The direct effect of purchases under the ERP on Latin-American exports to Western Europe has been very small.

The main factor appears to have been the increase of the exports of ERP countries to Latin America in 1948, amounting to $US379 million more than in 1947.

Thus, the direct effect of the European Recovery Program in the economic relations between Latin America and Western Europe has been rather limited and alleviated only slightly the problem of shortage of exchange of Latin-American countries; its indirect effects in making possible larger exports from ERP countries were more significant. The balance of payments position of most Latin-American countries, however, continued to deteriorate.

II. LONG-RUN EFFECTS ON TRADE

For the region as a whole, and mainly for the non-tropical agricultural countries, the long-run effect of European recovery leading to a return to traditional large-scale economic relations with Europe is, by far, the most important one. The restoration of the pre-war level of relationships should not only increase the volume of Latin-American exports, but also make possible for many countries in the region the importation of many necessary commodities which at present cannot be purchased because the currencies of potential supplier countries are scarce. The full development of trade between both regions at the earliest possible date obviously depends on the ability of Europe to recover its pre-war economic strength.

According to the national programmes developed by the sixteen European nations participating in the ERP, they expect by 1952-1953 that their industrial production will be 30 per cent above the pre-war level and 25 per cent above the 1948-1949 level (Western Germany excluded); agricultural production should be 15 per cent above the pre-war level and 25 to 40 per cent above the 1948-1949 level; and exports to the outside world should be 33 per cent over the pre-war level and 65 to 70 per cent above the 1948-1949 level.

The following analysis of the effects of European recovery on the Latin-American economy has been made with particular emphasis on

TABLE 105. LATIN-AMERICAN TRADE WITH EUROPE, 1938, 1947 AND 1948
Millions of dollars in current prices

Countries	Exports 1938	Exports 1947	Exports 1948	Imports 1938	Imports 1947	Imports 1948
United Kingdom	416	1,100	1,136	202	409	604
Iceland	—	3	6	—	—	1
Ireland	10	27	56	—	—	—
France	101	300	296	57	106	123
Netherlands	67	162	203	30	32	53
Belgium Luxembourg	60	157	190	54	110	157
Switzerland	20	115	152	20	122	110
Italy	40	130	256	43	99	214
Greece	3	15	—	3	—	—
Spain	7	136	175	4	39	31
Portugal	7	60	58	3	18	25
Turkey	1	5	5	2	1	1
Other Mediterranean	3	—	—	—	—	—
Denmark	23	43	60	9	6	9
Sweden	50	158	129	20	123	102
Norway	17	58	57	5	27	19
Finland	10	30	43	3	15	31
Germany	235	29[a]	119[a]	220	—	10[a]
Austria	19	3	3	4	1	5
Czechoslovakia	14	26	43	16	26	68
Poland	17	16	28	9	3	1
Romania	—	1	—	—	—	—
Hungary	3	4	4	5	—	1
Yugoslavia	3	—	—	2	—	—
Bulgaria	—	—	—	—	—	2
TOTAL EUROPE	1,130	2,588	3,021	731	1,137	1,567

Source: Economic Commission for Europe, *European Survey for 1948,* Geneva, 1949.
[a]United Kingdom and United States zones only.

South America, not only because data on the ERP plans deal separately with South America (the rest of Latin America being considered jointly with the United States and Canada in an item called "North and Central America") but also because the Latin-American countries located in North and Central America have traditionally traded mostly with the United States and are usually considered in the dollar area. Until 1939 South America traded principally with Europe; most European investments in Latin America were in that region. In total Latin-American-European trade South America accounted for about 85 per cent.

The *Interim Report on the European Recovery Program,* volume I, prepared by the Organization for European Economic Co-operation (OEEC), which summarized the country programmes, gives estimates for the ERP countries' imports from and exports to the outside world. These estimates are shown in tables 106 and 107.

In these tables, imports from South America[1] are estimated at $US2,100 million for the first year after the cessation of American aid

[1]The OEEC does not give separate figures for Latin America. South America represents roughly 85 per cent of Latin-American trade with ERP countries.

TABLE 106. SOURCES OF EUROPEAN RECOVERY PROGRAM COUNTRIES' IMPORTS FROM OUTSIDE WORLD

(Other than dependent overseas territories)

Thousand million U.S. dollars at 1948-1949 prices

	1938	*1947*	*1948-1949 Program*	*1952-1953 Program*
North and Central America	4.1	7.3	5.7	3.8
South America	1.7	1.7	1.7	2.1
Non-participating sterling area	2.9	2.0	2.9	3.3
Eastern Europe	3.0	0.9	2.1	2.2
Other countries	1.3	0.6		1.4
TOTAL	13.0	12.5	12.4	12.8
	Index numbers, base: 1938 = 100			
North and Central America	100	179	139	93
South America	100	100	100	122
Non-participating sterling area	100	69	99	116
Eastern Europe	100	30	49	73[a]
Other countries	100	46		108
TOTAL	100	96	95	99

Source: Organization for European Economic Co-operation, *Interim Report on the European Recovery Program,* vol. 1, Paris, 30 December 1948.

[a]The inclusion of Eastern Germany in Eastern Europe makes it difficult to compare imports in pre-war and post-war years. It has been assumed that, in 1938, 30 per cent of the imports of the participating countries from Germany came from Eastern Germany. Imports of Western Germany from Eastern Europe have been assumed to be 65 per cent of total German imports from Eastern Europe. No allowance has been made for inter-zonal trade.

TABLE 107. DIRECTION OF EUROPEAN RECOVERY PROGRAM COUNTRIES' EXPORTS TO OUTSIDE WORLD

(Excluding dependent overseas territories)

Thousand million U.S. dollars at 1948-1949 prices

	1938	*1947*	*1948-1949 Program*	*1949-1950 Program*	*1952-1953 Program*
North and Central America	1.45	1.05	1.25	1.45	2.1
South America	1.0	0.75	0.95	1.2	2.0
Non-participating sterling area	1.9	2.0	2.3	2.6	3.1
Eastern Europe[a]	2.5	0.75	1.7	2.1	2.0
Other countries	1.1	0.85			1.4
TOTAL	7.95	5.4	6.2	7.3	10.6
	Index numbers; base: 1938 = 100				
North and Central America	100	72	86	100	146
South America	100	75	95	120	200
Non-participating sterling area	100	104	121	136	165
Eastern Europe[a]	100	30	48	58	80
Other countries	100	77			127
TOTAL	100	68	78	92	133

Source: Organization for European Economic Co-operation, *Interim Report on the European Recovery Program,* vol. 1, Paris, December 1948.

[a]It has been assumed that in 1938, 35 per cent of the exports of participating countries to Germany went to Eastern Germany. Exports of Western Germany to Eastern Europe have been assumed to be 70 per cent of total German exports to Eastern Europe. No allowance has been made for inter-zonal trade. On this basis planned exports to Eastern Europe in 1952-1953 represent 30 per cent of the 1938 volume. Calculations on other equally plausible assumptions suggest, however, that they may represent one third more than the 1938 volume.

(1952-1953), that is, an increase of $US400 million, or 22 per cent over 1938 and 1947 figures, at 1948-1949 prices. Exports to South America are estimated at $US2,000 million for the same period (1952-1953); that would mean an increase of $US1,000 million (100 per cent) over the 1938 figure and about $US1,250 million or 166 per cent over the 1947 figure, both at 1948-1949 prices.

As can be seen from these tables, the rate of increase expected for both imports from and exports to South America is larger than that anticipated for other regions of the world. It will place the level of total trade between ERP countries and South American countries in 1952-1953 at a figure almost 50 per cent above the pre-war level, at 1948-1949 prices, whereas the total trade with the rest of the world will increase by only 5 per cent. The higher level of trade with South America is to be achieved by expanding exports to Latin America in considerably greater measure than imports from that area.

According to the national programmes, the trade accounts of participating countries with South America would be almost balanced by 1952-1953 and the unfavourable balance of about $US700 million in 1938 would be eliminated.

The expected increase of $US400 million in imports from South America is based on the assumption that the increases in purchases of certain commodities are to be greater than those of others which previously made up a larger percentage of total imports. A large increase in purchases of Latin-American cotton and non-ferrous metals, mainly copper, is forecast, while it is expected that there will be a considerable decrease in imports of fertilizer, oilseeds, food and cattle feed stuffs. The expected reduction in the imports of feed stuffs would set the level of imports of coarse grain at 11 per cent below pre-war and imports of oil cake on a still lower level. The change in the pattern of imports into Europe is to be the result mainly of increasing domestic production of commodities previously imported, or of substitutes for them, and of larger imports from overseas territories.

The estimated increase in exports to South America in 1952-1953 of about $US1,000 million in relation to 1938, according to the national programmes, will be achieved mainly through larger exports of manufactured goods, possibly electrical and mechanical engineering apparatus, machine tools, transport equipment, including heavy commercial and other vehicles, and agricultural machinery. It is also expected that there will be an increase in exports of ore and metals (iron ore, steel and products, non-ferrous metals including ore concentrates, unwrought metals, and scrap and semi-finished products), cellulose, pulp, paper and paper board, and chemical products, mainly synthetic fibres and dyestuffs. Finally, considerable emphasis has been put on increased exports of textile materials and products, particularly by the United King-

dom, which plans in 1952-1953 to export to the rest of the world at a rate double that of 1947 exports.

In connexion with the planned increase in imports from South America of $US400 million, the OEEC has noted that "taking account of the growing population, of industrialization, and of the tendencies for a number of South American products to find a market in the United States, the necessary supplies may not be available on this scale. It must be remembered that the programmes provide for reduced purchases of certain commodities and disproportionately large increases in others".[1] The amounts of cotton and non-ferrous metals available for export from South America may be far below the ERP programmed purchases. On the other hand, there may be available for export a larger volume than assumed by the ERP countries of other commodities, such as oilseeds and cattle feed stuffs. Crop failure due to adverse weather conditions could, however, cause a change in the South American export pattern.

The OEEC notes[2] that "to increase exports to South America (by 1952-1953 by 100 per cent as compared with 1938) . . . would mean a reduction of at least one half in the United States market in South America in 1947".

An increase in exports to South America over 1938 by 1952-1953 of $US1,000 million will call for many favourable circumstances. The level of total imports of South America which was reached in 1947 must be maintained. This, in turn, will depend on the maintenance of current levels of internal activity of Latin-American countries, on the availability of foreign exchange to pay for increased imports and, finally, on the possibilities of ERP countries' providing increased supplies of the types which will be needed. Diversification of production and industrialization in many South American countries, and especially in those traditionally more dependent on trade with Europe, would appear to call for a larger proportion of imports of capital goods and for a smaller proportion of consumer goods. The exports programmes of France and Italy to Latin America reflect modifications in the types of commodities to be exported in the light of structural changes which have taken place in South America. France estimated that out of a total export of $US190 million, $125 million would be accounted for by basic industrial products or by capital equipment goods. On the other hand, some other European countries appear to be planning large increases in their exports of consumer goods, such as textiles.

Substantial increases in European exports of capital goods to Latin-American countries will depend not only on the availability of such goods for export, but also on their prices, time of delivery and quality, as compared with similar exports available from United States sources.

[1]OEEC, *Interim Report on the European Recovery Program*, vol. 1, Paris, 30 December 1948, page 54.
[2]*Ibid.*

Because of their dollar shortage, some Latin-American countries have tended to increase their imports from Europe as far as possible. Such goods as are available only from the United States must necessarily be financed either through exports to the United States or from favourable balances of payments with Europe as in the pre-war period.

The national programmes of the ERP countries include also an estimate of the invisible items in the balance of payments with the rest of the world. According to that estimate, invisible items with South America will give a favourable balance to ERP countries in 1952-1953, in the amount of $US82 million as is shown in table 108.

TABLE 108. ESTIMATE OF INVISIBLE ITEMS IN THE BALANCE OF PAYMENTS OF ERP COUNTRIES WITH SOUTH AMERICA IN 1952-1953

Millions of U.S. dollars

Investment income	+ 62
Debt service	− 5
Tourism	+ 23
Transport	+ 69
Other invisible items:	
United Kingdom	−150
Italy	+ 80
Other ERP countries	+ 3
Balance of all European Recovery Program countries	+ 82

Source: Organization for European Economic Co-operation, *Interim Report on the European Recovery Program,* vol. 1, Paris, 30 December 1948.

The expected net increase in income from investments, estimated at $US62 million, will be received mainly by the United Kingdom ($51 million) and will be largely provided by the British oil companies in South America, particularly in Venezuela. The income from transport of $US69 million has been estimated on the assumption that by 1952-1953 the total tonnage of the merchant fleets of the ERP countries would approach the pre-war level. This estimate may be affected by the increase in the tonnage of the national merchant fleets of some Latin-American countries, such as Argentina and Brazil, which took place during the war.

In summary, according to the forecasts made in the national programmes, the ERP countries expect to equilibrate their balance of payments with South America in 1952-1953. Table 109 shows the breakdown of the above estimate by countries.

Until some more or less permanent equilibrium is reached in economic relations between South America and the dollar area, the former, and particularly the non-tropical agricultural countries within that region, will have to depend on an export surplus with other regions of the world in order to fill the dollar gap. Unless more extensive trade relations can be developed in the future with Eastern European countries, Asia and Africa, so as to enable South America to obtain there the

TABLE 109. ESTIMATES OF THE BALANCE OF PAYMENTS ON CURRENT ACCOUNT OF THE EUROPEAN RECOVERY PROGRAM WITH SOUTH AMERICA IN 1952-53

Millions of U.S. dollars at 1948-49 prices FOB

Austria	+ 0.6
Benelux	—72.3
Overseas territories	+ 2.0
Denmark	—27.0
France	+55.0
Overseas territories	— 2.0
Trieste	— 4.7
Greece	—13.1
Iceland	+ 0.6
Ireland	—47.7
Italy	+ 3.8
Norway	— 9.6
Portugal	+10.5
Overseas territories	+ 0.1
Sweden	+34.5
Turkey	— 4.5
United Kingdom	— 6.0
Western Germany:	
Bizone	+28.6
French Zone	— 4.2
	—55.2

Source: Organization for European Economic Co-operation, *Interim Report on the European Recovery Program,* vol. 1, Paris, 30 December 1948.

goods which at present, as in the pre-war period, are only supplied by countries in the dollar area, or unless such increases in trade can produce a surplus in currencies freely convertible into dollars, most of the South American countries will, as in the past, have to count on Western European countries to obtain such an export surplus. At the same time, as noted previously, ERP countries are planning to balance, roughly, their trade with South America. Eastern European countries and other regions of the world outside of Europe and the Western Hemisphere have had a very small share—less than 5 per cent—in the foreign trade of South America, which generally resulted in an export surplus only to the mineral-producing countries in South America.

APPENDICES

Appendix A

BRAZIL: PARTIAL INDEX OF INDUSTRIAL PRODUCTION

Year	*Heavy industry*					*Sugar and derivatives*			*Electricity*	*Cotton*	
	Steel	*Cement*	*Iron*	*Coal*	*Sub-total*	*Sugar*	*Alcohol*	*Sub-total*		*textiles*	*Total*
1937	76.8[a]	571.2[a]	98.1[a]	768.9[a]		604.8[a]	588.0[b]		1,718,377[c]	963,766[d]	
					Index numbers, base: 1937 = 100						
1938	120.3	108.2	124.4	118.9	118.3	108.3	138.8	111.4	107.4	87.7	99.8
1939	148.4	122.1	162.2	137.3	143.5	130.3	165.3	133.5	115.4	92.8	112.3
1940	184.4	130.5	189.0	175.2	172.9	146.4	198.0	151.6	126.1	87.2	119.0
1941	203.1	134.5	212.2	184.4	187.9	141.5	226.5	150.0	134.6	102.7	128.6
1942	207.8	131.7	217.1	232.5	197.7	137.5	251.0	148.9	146.8	110.9	134.6
1943	242.2	130.9	252.4	272.3	226.0	140.9	206.1	147.4	159.6	146.8	156.2
1944	287.5	141.8	297.6	250.0	254.0	153.8	208.2	159.2	178.0	143.5	162.7
1945	268.8	135.5	264.6	271.5	241.9	153.0	183.7	156.1	194.9	142.1	161.6
1946	446.9	144.7	376.8	248.6	346.2	178.8	195.9	180.5	214.0	137.9	179.1
1947	504.7	159.9	489.0	261.9	397.0	202.2	214.3	203.4	232.0	112.2	180.0
1948						230.6	285.7	236.1	257.9		

Note: The weights of the indexes are:

Heavy industry 10		*Sugar and derivatives 30*		*Electricity 10*	*Cotton textiles 50*
Cement	2	Sugar	27		
Pig iron	1.5	Alcohol	3		
Steel	5				
Coal	1.5				

These weights are based on the gross value of merchandise in 1946.

Source: Fundacion Getulio Vargas.

[a]Thousands of tons.

[b]Thousands of hectolitres.

[c]Thousands of kilowatt-hours. Represents the electricity generated in six principal cities.

[d]Thousands of lineal metres.

Appendix B

UNITED STATES: INDUSTRIAL INVESTMENTS IN LATIN AMERICA

	Industrial investments (million dollars)	*As per cent of direct investments*	*As per cent of credits and total investments*
Argentina	101.0	26.4	20.3
Bolivia	0.5	3.6	2.1
Brazil	66.4	28.1	19.8
Colombia	5.8	4.9	3.2
Costa Rica	0.7	2.3	1.9
Cuba	65.4	12.4	11.1
Chile	27.5	8.4	7.1
Ecuador	0.3	2.8	2.2
El Salvador	0.2	1.3	1.0
Guatemala	0.4	0.4	0.4
Haiti	0.2	1.4	1.1
Honduras	1.7	4.6	4.0
Mexico	22.3	7.8	5.3
Nicaragua	0.2	4.8	1.5
Panama	0.3	0.3	0.2
Paraguay	4.9	52.1	49.0
Peru	5.5	7.7	6.2
Dominican Republic	0.9	1.2	1.1
Uruguay	16.8		87.0
Venezuela	1.3	0.3	0.3
TOTAL	322.3	11.8	9.4

Source: Census of American-Owned Assets in Foreign Countries, U. S. Secretary of the Treasury, Washington, D.C., 1947.

Appendix C

EXCHANGE RATES FOR CONVERTING EXTERNAL TRADE IN TERMS OF NATIONAL CURRENCIES OF NINETEEN LATIN-AMERICAN COUNTRIES INTO U. S. DOLLARS, 1937-1947

U. S. cents per unit of national currency

		1937	*1938*	*1939*	*1940*	*1941*	*1942*	*1943*	*1944*	*1945*	*1946*	*1947*
Argentina (peso)	Export	32.80	31.27	29.65	30.00	31.10	28.10	27.80	28.90	29.60	29.40	29.30
	Import	30.97	30.33	26.35	27.40	21.30	21.00	21.70	22.50	26.00	25.20	25.10
Bolivia (boliviano)	Export	29.25	29.03	28.36	28.58	28.64	28.88	28.79	28.61	28.40	28.08	
	Import	26.69	27.79	29.93	21.72	26.74	26.80	26.83	26.77	30.15	30.15	
Brazil (cruzeiro)	Export	6.83	5.68	5.42	5.30	5.32	5.34	5.34	5.36	5.37	5.33	5.34
	Import	6.30	5.69	5.24	5.05	5.07	5.09	5.09	5.11	5.13	5.17	5.34
Chile (peso oro)	Export, Import	(20.65)										
Colombia (peso)	Export	56.70	55.96	57.06	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1
	Import	55.65	55.96	57.06	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1
Costa Rica (colón)	Export, Import	(converted at par value)										
Cuba (peso)	Export, Import	(converted at par value)										
Dominican Republic (peso)	Export, Import	(converted at par value)										
Ecuador (sucre)	Export	8.57	7.08	6.74	6.23	6.67	6.95	7.09	7.13	7.41	7.41	7.46
	Import	8.57	7.08	6.74	6.23	6.67	6.95	7.09	7.13	7.41	7.41	7.41
El Salvador (colón)	Export, Import	40.01	39.91	39.88	39.90	39.96	40.04	40.01	39.97	39.95	40.00	40.00

Appendix C (Continued)

		1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
Guatemala	Export	(.....	.....	.....	.....	.....	100.0	.....	.....	.....	.....	.....)
(quetzal)	Import	99.01	99.01	99.01	99.01	99.01	99.01	99.01	99.01	99.01	99.11	99.26
Haiti	Export / Import	(.....	.....	.....	.....	.....	20.00	.....	.....	.....	.....	.....)
(gourde)												
Honduras	Export	(.....	.....	.....	.....	.....	50.00	.....	.....	.....	.....	.....)
(lempira)	Import	(.....	.....	.....	.....	.....	49.01	.....	.....	.....	.....	.....)
Mexico	Export / Import	27.78	22.12	19.30	18.52	20.6	20.6	20.6	20.6	20.6	20.6	20.6
(peso)												
Nicaragua	Export / Import	(.....	.....	.....	.....	.....	converted at par value	.....	.....	.....	.....	.....)
(córdoba)												
Paraguay	Export / Import	40.00	35.84	31.75	30.21	30.03	30.03	30.03	32.36	31.95	32.05	32.05
(guaraní)												
Peru	Export	(25.26	22.38	18.75	16.28	15.40	15.40	15.40	15.40)	15.40	15.40	15.40
(sol)	Import									15.40	14.95	13.33
Uruguay	Export	55.90	64.14	60.64	65.83	65.83	65.83	65.83	65.83	65.83	65.83	65.83
(peso)	Import	55.74	56.98	49.95	52.66	52.66	52.66	52.66	52.66	52.66	52.66	52.66
Venezuela	Export	30.30	31.31	32.40	32.40	32.00	31.30	31.60	31.90	31.80	31.40	31.80
(bolívar)	Import	30.12	31.35	31.40	31.40	30.70	29.80	29.80	29.80	29.80	29.80	29.80

Appendix D

THE TWENTY LATIN-AMERICAN COUNTRIES: TOTAL EXPORTS, 1937-1947

Millions of current U. S. dollars

Note: The data relate to f.o.b. exports of merchandise only, unless otherwise stated. Merchandise, as defined herein, includes silver in all forms but excludes gold bullion and specie, issued bank notes and other specie.

Trade category: "General exports" are exports of domestic goods plus all re-exports. "Special exports" are exports of domestic goods plus re-exports of imported goods that have undergone transformations, repair or supplementary treatment.

Conversion of national currencies into U.S. dollars: The following countries publish their trade statistics in both national currencies and U.S. dollars: Bolivia, Costa Rica, Ecuador, Panama, Uruguay.

In the following countries the national currencies are at par with or bear a fixed relationship to the U.S. dollar. Accordingly the conversion of the trade statistics of these countries from national currencies to U.S. dollars presented no difficulty: Cuba, Dominican Republic, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Panama.

Chile publishes its trade statistics in "pesos oro" (gold pesos) which are converted into U.S. dollars at the fixed rate of 20.65 U.S. cents per one "peso oro".

For the remaining countries the following rates were considered appropriate for the conversion of total trade into U.S. dollars: Argentina: weighted rates based on the official rates used in the imports and exports of the various classes of goods. Brazil: imports, free rate. Exports, free rate adjusted for the quota of export proceeds which were legally required to be converted at the official rate during the period 1937-1946. Colombia and Paraguay: official rate. Mexico: free rate. Peru: exports, official rate. Imports, official rates with minor adjustments for 1936 and 1947. Venezuela: imports, free rate. Exports, free rates adjusted for petroleum, coffee and cacao, each of which has a special rate.

	Trade category	*1937*	*1938*	*1939*	*1940*	*1941*	*1942*	*1943*	*1944*	*1945*	*1946*	*1947*
Argentina[a]	Special	758.0	437.9	466.5	428.3	455.5	502.7	609.5	682.2	739.3	1168.1	1562.3
Bolivia	General	36.3	27.2	33.1	49.4	60.4	65.4	81.4	77.4	80.3	73.6	80.6
Brazil[b]	Domestic	347.8	289.3	304.3	263.2	358.1	400.6	466.3	574.5	655.4	971.7	1131.0
Chile[c]	Special	192.6	139.3	136.4	140.3	158.6	178.2	179.1	194.9	205.1	216.7	279.1
Colombia	General	86.3	80.8	77.9	71.9	76.2	97.6	124.8	129.7	140.6	200.9	254.9
Costa Rica	General	10.8	9.3	8.5	7.0	9.8	10.2	12.2	10.4	11.5	14.3	23.0[1]
Cuba[d]	General	186.1	142.7	147.7	127.3	211.5	182.4	350.6	427.1	409.9	475.9	746.5
Dominican Republic[e]	General	17.8	14.6	18.3	17.9	16.4	19.8	36.1	60.1	43.4	66.5	82.9

Appendix D (Continued)

	Trade category	*1937*	*1938*	*1939*	*1940*	*1941*	*1942*	*1943*	*1944*	*1945*	*1946*	*1947*
Ecuador	General	13.9	11.8	11.2	10.4	13.2	20.2	27.8	33.2	27.9	44.1	46.2
El Salvador	General	14.8	10.3	12.1	10.4	10.0	17.4	21.6	22.2	21.0	25.4	39.7
Guatemala	General	17.6	18.0	18.6	11.9	14.4	20.4	20.1	23.8	30.4	36.7	52.0
Haiti[f]	General	9.0	6.9	7.3	5.4	6.7	8.6	10.6	16.1	17.1	22.8	31.6
Honduras[g]	Special	7.1[h]	9.1	8.6	8.8	8.5	3.6	8.7	11.5	13.7	17.0	20.0
Mexico	General	211.3	147.0	141.3	137.5	132.6	162.7	224.4	211.9	251.5	318.2	405.8
Nicaragua[i]	General	6.2	4.3	4.8	3.7	4.6	5.9	7.7	7.8	6.8	11.0	13.3
Panama	Domestic	4.0	3.7	3.4	4.0	4.2	2.2	1.9	2.9	4.5	6.8	8.7
Paraguay[c]	Special	8.4	7.5	7.3	6.0	8.0	8.7	10.6	14.0	22.0	26.5	21.1
Peru[j]	Special	92.1	75.1	70.6	64.8	74.5	74.7	70.7	84.2	105.2	151.3	154.4
Uruguay	Special	78.2	62.1	62.9	66.4	70.8	57.8	100.0	97.6	122.0	152.8	154.7
Venezuela[j]	General	253.8	273.1	303.2	273.5	334.6	218.1	217.4	355.4	350.0	454.3	785.2
TOTAL Latin America		2352.1	1770.0	1844.0	1708.1	2028.6	2057.2	2581.5	3036.9	3257.6	4454.6	5893.6

Source: Original data from the *Monthly Bulletin of Statistics,* United Nations, and from the official statistical publications of the countries concerned.

[a]Excluding a small amount of silver specie and including unrefined gold.
[b]Including non-banking gold.
[c]Excluding silver bullion and specie.
[d]Excluding a small amount of silver and including gold bullion.
[e]Excluding silver specie.
[f]Years ending 30 September of the year stated.
[g]Year beginning 1 July of the year stated.
[h]Annual rate based on exports in the first eleven months of the fiscal year.
[i]Including gold specie.
[j]Including gold.

Appendix E

THE TWENTY LATIN-AMERICAN COUNTRIES: TOTAL IMPORTS, 1937-1947

Millions of current U. S. dollars

Note: The data relate to c.i.f. imports of merchandise only, unless otherwise stated. Merchandise, as defined herein, includes silver in all forms but excludes gold bullion and specie, issued bank notes and other specie. For information concerning the conversion of national currencies into U.S. dollars see Appendix D.

Trade category. "General imports" are imports directly for consumption plus imports into warehouse.
"Special imports" are imports directly for consumption plus imports which have been withdrawn from warehouse.

	Trade category	*1937*	*1938*	*1939*	*1940*	*1941*	*1942*	*1943*	*1944*	*1945*	*1946*	*1947*
Argentina[a]	Special	482.4	443.1	352.6	320.7	271.9	267.6	204.4	226.6	300.0	587.6	1343.1
Bolivia	General	15.8	18.9	17.3	20.4	27.7	33.2	39.2	37.4	40.4	51.4	59.6
Brazil[b]	Domestic	334.8	295.6	261.7	250.7	280.1	239.0	317.1	415.4	448.7	673.6	1216.9
Chile[c]	Special	88.5	103.0	84.7	104.4	108.4	128.4	131.4	144.3	156.4	196.9	266.0
Colombia	General	94.4	89.1	104.6	84.6	97.1	60.0	83.8	99.8	160.6	230.1	363.2
Costa Rica	General	11.9	12.6	16.9	16.8	17.8	12.3	20.4	21.5	26.9	33.0	48.1[1]
Cuba[d]	General	129.6	106.0	105.9	103.9	133.9	146.7	177.4	208.6	238.9	307.2	519.9
Dominican Republic[e]	General	11.7	11.3	11.6	10.5	11.7	11.5	14.4	18.5	18.1	27.7	53.4
Ecuador	General	11.3	10.5	10.0	10.8	10.0	13.9	15.5	23.6	24.0	35.2	43.1
El Salvador	General	10.4	9.1	8.8	8.1	8.3	8.6	11.9	12.3	13.5	20.9	36.8
Guatemala	General	20.7	20.7	18.8	15.6	15.6	13.5	17.6	20.5	23.1	35.9	56.9
Haiti[f]	General	9.2	7.6	8.2	7.9	7.4	8.5	9.8	16.0	13.2	15.9	31.5
Honduras[g]	Special	9.3[h]	9.5	9.9	10.1	10.9	10.0	13.1	14.9	19.2	28.8	35.6
Mexico[i]	General	170.5	109.2	121.1	123.9	188.4	155.0	177.3	277.7	330.2	543.1	660.7
Nicaragua[j]	General	5.6	5.1	6.4	7.1	10.4	6.8	13.5	10.2	12.0	15.0	20.8
Panama[i]	General	21.8	17.6	20.4	22.7	32.9	37.9	40.2	38.3	45.6	56.0	75.8
Paraguay[c]	Special	8.9	8.2	7.0	7.9	6.4	9.0	11.1	13.5	17.5	21.1	21.8

Appendix E (Continued)

	Trade category	*1937*	*1938*	*1939*	*1940*	*1941*	*1942*	*1943*	*1944*	*1945*	*1946*	*1947*
Peru[k]	Special	59.4	58.2	48.0	51.9	55.1	51.3	69.2	79.2	84.7	120.9	145.6
Uruguay	Special	65.3	61.6	51.5	54.9	63.1	63.7	63.8	72.4	97.1	148.4	215.3
Venezuela[l]	General	91.5	97.3	102.3	97.7	88.4	64.3	66.2	111.0	179.7	293.7	429.8
TOTAL Latin America		1653.0	1494.2	1367.7	1330.6	1445.5	1341.2	1497.3	1861.7	2249.7	3442.4	5643.9

Source: Original data from the *Monthly Bulletin of Statistics,* United Nations, and from the official statistical publications of the countries concerned.

[a]Excluding a small amount of silver specie and including unrefined gold.

[b]Including non-banking gold.

[c]Excluding silver bullion and specie.

[d]Excluding a small amount of silver and including gold bullion. Imports f.o.b.

[e]Excluding silver specie and including non-banking gold. Imports f.o.b.

[f]Years ending 30 September of the year stated.

[g]Years beginning 1 July of the year stated.

[h]Based on exports in the first eleven months of the fiscal year.

[i]Imports f.o.b.

[j]Including gold specie. Imports f.o.b.

[k]Including gold.

[l]Including gold. Imports f.o.b.

Appendix F

THE TWENTY LATIN-AMERICAN COUNTRIES: TOTAL IMPORTS AND EXPORTS EXPRESSED IN U.S. DOLLAR EQUIVALENTS, 1937-1947

Argentina. The Economic Commission for Latin America (ECLA) has used the United Nations series for imports and exports.

Bolivia. ECLA has used the Banco Central's U.S. dollar series which it publishes in the *Boletín del Banco Central de Reserva.*

Brazil. ECLA has used the United Nations import series. ECLA has, however, adjusted the United Nations export series as follows: Beginning in 1937 exporters were legally obligated to turn in 30 per cent of their proceeds at the official rate. The remainder was converted at the free market rate. Beginning 28 February 1946 this rate was reduced to 20 per cent. Four months later the official rate was abolished. Accordingly, the following "weighted" export rates were used in converting cruzeiros to U.S. dollars for 1937-1946.

1937	6.83	1940	5.30	1943	5.34	1946	5.33
1938	5.68	1941	5.32	1944	5.36	1947	5.34
1939	5.42	1942	5.34	1945	5.37		(free rate)

Chile. ECLA has accepted the United Nations series for imports and exports except for two minor changes in 1937 and 1938, resulting from ECLA's use of 20.65 cents per "peso oro" as the proper exchange rate for the period.

Colombia. ECLA has used the United Nations series for imports and exports.

Costa Rica. Costa Rica publishes its trade figures in U.S. dollars. These figures differ slightly from those shown by the United Nations through the period 1946, due mainly to rounding. The difference in the export figures for 1947, however, are substantial, e.g., the *Costa Rican Bulletin* shows $23 million, the United Nations $21.6 million. ECLA has taken the figures published by Costa Rica.

Cuba. The best information available indicates that the trade of Cuba in national currency should be converted into U.S. dollars at par. It is recognized that the Cuban peso did fall considerably below the U.S. dollar in 1939 through 1941. However, the decline was important only in non-trade transactions. The Cuban customs officials have always recorded their trade statistics at par value. Accordingly the figures ECLA proposes to use for imports are slightly different from those of the United Nations for the years 1937 and 1938 and 1942 to 1947 and differ considerably for both imports and exports for the years 1939 through 1941.

Dominican Republic. ECLA has used the United Nations series for imports and exports.

Ecuador. Ecuador also publishes its import and export figures in U.S. dollars. According to the information contained in the *Boletín del Banco Central de Ecuador,* August 1945, page 253, the import series of the United Nations and the Banco are the same, except for minor differences from rounding in 1944, 1946 and 1947. In the case of exports, however, differences are substantial. The Banco Central converts exports from national currency to U.S. dollars at the official rate. ECLA has used the Banco series.

El Salvador, Guatemala and Haiti. ECLA has used the United Nations series for imports and exports.

Honduras. Imports and exports in lempiras are published in the *Memoria de Hacienda, Crédito Público y Comercio* of Honduras. They relate to fiscal years beginning 1 July of the year stated. Both the imports and exports exclude gold and coin. The figures are as follows:

	Imports	*Exports*
	Thousands of lempiras	
1938	19,407	19,734
1939	20,170	19,314
1940	20,509	20,237
1941	22,313	18,984
1942	20,519	8,752
1943	26,696	18,925
1944	30,395	24,266
1945	39,152	28,219
1946	58,860	35,004

ECLA has converted these figures into U.S. dollars at the following official rates of exchange for the years 1937-1947: exports at 50 U.S. cents to one lempira; imports at 49.01 U.S. cents to one lempira.

Mexico. ECLA has used the United Nations figures, with minor modifications for the years 1937-1940. ECLA employed the following exchange rates as published in the *International Financial Statistics* for imports and exports:

	U.S. cents per peso
1937	27.78
1938	22.12
1939	19.30
1940	18.52

Nicaragua and Panama. ECLA has used the United Nations series.

Paraguay. ECLA has converted the imports and exports from guaraníes to U.S. dollars at official rates given in the *International Financial Statistics.* It is known that virtually all foreign trade transactions of Paraguay are carried on at the official rate.

Peru. ECLA and United Nations figures for exports differ slightly in 1937, 1938, 1939, 1940 and 1945 due to differences in the exchange rates used. The import figures differ for the years 1937, 1938 and 1939 for the same reasons. The ECLA figures for imports for the years 1946 and 1947 differ from those of the United Nations for the following reason: In 1946, 92 per cent of the total value of imports was converted at the official rate, the remainder at the free rate. In 1947 the total value of imports converted at the official rate dropped to 72 per cent. ECLA has accordingly used a "weighted" rate for imports for 1946 and 1947.

Uruguay and Venezuela. ECLA has used the United Nations series.

Appendix G

THE TWENTY LATIN-AMERICAN COUNTRIES: EXPORTS EXPRESSED IN REAL TERMS, 1937-1947

Index numbers, base: 1937 = 100

	1938	*1939*	*1940*	*1941*	*1942*	*1943*	*1944*	*1945*	*1946*	*1947*
Argentina	59	85	70	63	54	56	62	61	68	70
Bolivia	99	107	138	155	149	156	149	146	127	121
Brazil	125	132	103	111	82	84	101	109	136	129
Chile	94	85	91	101	105	97	100	102	93	95
Colombia	104	95	108	82	85	104	108	113	120	119
Costa Rica	96	80	70	87	71	78	61	66	74	88
Cuba	94	101	83	123	74	149	173	143	136	174
Dominican Republic	102	113	101	106	59	102	159	95	113	118
Ecuador	104	88	84	80	86	115	118	98	102	114
El Salvador	80	84	84	63	79	86	93	85	71	92
Guatemala	106	102	91	89	97	86	94	114	112	131
Haiti[a]	101	114	78	96	80	90	116	110	102	124
Honduras[b]	137	134	138	127	50	91	135	136	150	157
Mexico	96	89	80	86	79	78	75	81	83	105
Nicaragua	105	152	174	194	206	198	203	190	188	200
Panama	100	92	94	81	83	32	36	60	93	96
Paraguay	92	110	85	108	108	109	101	150	156	85
Peru	93	85	78	91	73	67	72	79	94	70
Uruguay	115	122	131	114	66	124	132	153	147	166
Venezuela	105	110	92	114	73	90	125	160	193	218
All countries	90	99	86	92	74	84	96	100	109	116

Source: Economic Commission for Latin America. The index numbers have been computed from the export statistics contained in the official publications of the countries concerned. The data relate to exports of merchandise f.o.b. except in the case of nitrate for Chile which is valued at f.a.s. Gold exports are excluded throughout except for Nicaragua where it is the largest single export.

Note: The index numbers of exports expressed in real terms are designed to show movements in the aggregate values of exports in each of the twenty Latin-American countries after elimination of the effect of price changes. These indexes are therefore not to be confused with the index numbers of the nominal value of exports (i.e. exports at current prices) nor with the index numbers of physical volume of exports (i.e. total tonnage of exports).

The index numbers in this table have been constructed by multiplying the actual quantities of exports for each of the years 1937-1947 by "constant" prices in the base period 1937. These constant prices, called "unit values", have been obtained from the recorded figures of the individual items in the trade returns in 1937, by dividing the value of each item by its quantity. It is defined symbolically by

$$\frac{\Sigma \text{ Po Qn}}{\Sigma \text{ Po Qo}}$$

where Qo and Qn are quantities of the individual commodities in 1937 and the given year respectively and Po are the unit values for 1937.

Inasmuch as the principal exports of Latin America are agricultural commodities and/or non-agricultural raw materials and these items are generally reported in both quantities and values for each of the years under consideration, it was found possible to include in these indexes for each of the years 1937-1947 commodities which accounted for more than 75 per cent of the total exports from the Latin-American countries.

An average of the percentages of total exports included in the country indexes for each of the years 1937-1947 is summarized in the following table:

AVERAGE PERCENTAGE OF TOTAL EXPORTS REPRESENTED IN THE COUNTRY INDEXES, 1937-1947

Above 90 per cent: Bolivia, Colombia, Dominican Republic, Peru, Venezuela.

85 to 89 per cent: Costa Rica, Cuba, El Salvador, Guatemala, Haiti.

80 to 84 per cent: Brazil, Chile, Honduras, Nicaragua, Uruguay.

75 to 79 per cent: Mexico, Panama.

70 to 74 per cent: Argentina.

Except for Argentina in 1942-1946 and Panama in 1943-1945 and 1947, the coverage of each country index for any year was not more than five percentage points below the bottom figure of the group in which the country was shown.

[a]Years ending 30 September of the year indicated.

[b]Years beginning 1 July of the year indicated.

Appendix H

THE TWENTY LATIN-AMERICAN COUNTRIES: TWENTY-FIVE PRINCIPAL EXPORTS IN PRE-WAR AND POST-WAR YEARS

Arranged in order of their importance in value to the total exports in 1946

	Volume of exports (Thousand metric tons)				*Value of exports (Million U.S. dollars)*				*Value of exports as per cent of total exports from the twenty countries*			
	1937	*1938*	*1946*	*1947*	*1937*	*1938*	*1946*	*1947*	*1937*	*1938*	*1946*	*1947*
Total exports of the twenty Latin-American Republics	..	..	..	..	*2,352.1*	*1,770.0*	*4,454.6*	*5,873.0*	*100.0*	*100.0*	*100.0*	*100.0*
Total of the twenty-five commodities	..	..	..	..	*1,902.6*	*1,450.5*	*3,189.4*	*4,510.1*	*80.8*	*81.9*	*71.5*	*76.7*
Coffee (Total)	*1,272*	*1,554*	*1,517*	*1,472*	*268.7*	*229.8*	*597.5*	*748.4*	*11.4*	*13.0*	*13.4*	*12.7*
Of which (*per cent of total*)												
Brazil	57	66	61	60	58	57	58	55				
Colombia	20	16	22	22	21	22	26	26				
El Salvador	5	4	3	4	5	4	3	4				
Guatemala	4	3	3	4	4	5	3	4				
Venezuela	3	2	3	2	4	4	3	2				
Crude petroleum (Total)	*30,579*	*31,455*	*53,430*	*60,681*	*281.9*	*300.9*	*434.7*	*749.0*	*12.0*	*17.0*	*9.8*	*12.8*
Of which (*per cent of total*)												
Colombia	8	8	5	4	7	7	6	4				
Venezuela	82	85	94	94	82	86	93	95				
Sugar[a] (Total)	*3,410*	*3,271*	*4,375*	*6,236*	*147.1*	*115.3*	*399.4*	*703.9*	*6.3*	*6.5*	*9.0*	*12.0*
Of which (*per cent of total*)												
Cuba	77	78	83	86	86	86	79	84				
Peru	9	8	6	4	6	5	11	7				

[a]Raw and refined sugar.

Cotton[b] (Total)	*356*	*423*	*601*	*408*	*96.2*	*77.8*	*242.5*	*260.2*	*4.1*	*4.4*	*5.4*	*4.4*
Of which (*per cent of total*)												
Brazil	66	70	65	67	67	70	67	66				
Peru	23	16	20	12	23	17	21	13				
Meat[c] (Total)	*797*	*767*	*625*	*726*	*113.5*	*113.2*	*177.1*	*226.2*	*4.8*	*6.4*	*4.0*	*3.9*
Of which (*per cent of total*)												
Argentina	73	75	74	88	81	78	69	83				
Brazil	11	9	9	5	9	8	12	8				
Uruguay	14	14	12	5	10	12	16	7				
Wool (Total)	*181*	*226*	*280*	*255*	*97.1*	*85.3*	*166.2*	*176.8*	*4.1*	*4.8*	*3.7*	*3.0*
Of which (*per cent of total*)												
Argentina	64	67	74	67	58	56	63	54				
Uruguay	23	23	21	28	26	32	31	40				
Hides[d] (Total)	*295*	*268*	*225*	*274*	*89.2*	*57.6*	*144.8*	*196.7*	*3.8*	*3.3*	*3.3*	*3.3*
Of which (*per cent of total*)												
Argentina	52	55	60	52	51	51	52	51				
Brazil	23	21	16	31	23	21	24	29				
Uruguay	9	10	12	9	9	13	15	10				
Copper[e] (Total)	*483*	*444*	*464*	*480*	*133.0*	*87.2*	*129.3*	*175.6*	*5.7*	*4.9*	*2.9*	*3.0*
Of which (*per cent of total*)												
Chile	79	79	81	76	78	78	81	82				
Mexico	10	9	11	17	11	10	12	11				

[b]Including linters.
[c]All edible meat, frozen, salted, canned, etc.
[d]Raw and tanned hides.
[e]Metal content.

Appendix H (Continued)

THE TWENTY LATIN-AMERICAN COUNTRIES: TWENTY-FIVE PRINCIPAL EXPORTS IN PRE-WAR AND POST-WAR YEARS

	Volume of exports (Thousand metric tons)				*Value of exports (Million U.S. dollars)*				*Value of exports as per cent of total exports from the twenty countries*			
	1937	*1938*	*1946*	*1947*	*1937*	*1938*	*1946*	*1947*	*1937*	*1938*	*1946*	*1947*
Maize (Total)	*9,103*	*2,781*	*2,352*	*2,556*	*196.7*	*59.2*	*124.3*	*212.3*	*8.4*	*3.3*	*2.8*	*3.6*
Of which (*per cent of total*)												
Argentina	99	95	94	92	99	95	92	93				
Woven cotton fabrics (Total)	*1*	—	*18*	*28*	*0.7*	*0.2*	*89.4*	*100.3*	—	—	*2.0*	*1.7*
Of which (*per cent of total*)												
Brazil	99		78	60	99	96	42	67				
Mexico	—		14	35	—	2	54	30				
Wheat (Total)	*3,925*	*1,985*	*1,387*	*2,284*	*158.2*	*59.0*	*89.0*	*197.6*	*6.7*	*3.3*	*2.0*	*3.4*
Of which (*per cent of total*)												
Argentina	99	98	100	100	99	97	100	100				
Uruguay	1	2	—	—	1	3	—	—				
Tobacco[t] (Total)	*58*	*54*	*96*	*64*	*17.1*	*15.7*	*67.9*	*46.8*	*0.7*	*0.9*	*1.5*	*0.8*
Of which (*per cent of total*)												
Brazil	63	49	56	54	35	31	39	43				
Cuba	19	21	9	8	61	62	44	41				
Linseed oil (Total)	—	—	*148*	*213*	—	—	*64.6*	*135.1*	—	—	*1.5*	*2.3*
Of which (*per cent of total*)												
Argentina			99				99					

[t]Excluding cigars, cigarettes and processed tobacco.

Cocoa (Total)	*174*	*207*	*196*	*171*	*29.0*	*21.3*	*54.0*	*92.0*	*1.2*	*1.2*	*1.2*	*1.6*
Of which (*per cent of total*)												
Brazil	59	62	66	58	54	57	64	61				
Dominican Republic	11	14	12	18	9	9	8	14				
Ecuador	12	9	8	12	15	13	10	15				
Venezuela	9	10	8	7	15	14	14	6				
Tin[e] (Total)	*26*	*26*	*38*	*34*	*22.0*	*17.3*	*52.0*	*54.6*	*0.9*	*1.0*	*1.2*	*0.9*
Of which (*per cent of total*)												
Bolivia	100	100	100	100	100	100	100	100				
Rice (Total)	*50*	*84*	*263*	*293*	*2.8*	*3.5*	*44.6*	*53.4*	*0.1*	*0.2*	*1.0*	*0.9*
Of which (*per cent of total*)												
Brazil	54	68	58	74	49	65	46	68				
Ecuador	2	24	26	23	2	22	34	28				
Lumber[g] (Total)	..	..	..	..	*5.9*	*6.6*	*44.6*	*57.5*	*0.3*	*0.4*	*1.0*	*1.0*
Of which (*per cent of total*)												
Brazil	..	..	..	..	59	50	72	78				
Mexico	..	..	..	..	1	1	11	8				
Bananas (Total)	*73*[h]	*77*[h]	*60*[h]	*66*	*30.6*	*29.9*	*43.2*	*53.9*	*1.3*	*1.7*	*1.0*	*0.9*
Of which (*per cent of total*)												
Brazil	13	13	9	10	5	5	7	8				
Colombia	11	13	4	5	13	17	5	8				
Guatemala	12	13	16	10	15	16	20	22				
Honduras	10	16	27	24	15	21	18	15				
Mexico	20	18	13	11	16	12	8	5				
Silver[e] (Total)	*3*	*4*	*2*	*2*	*48.0*	*50.7*	*41.9*	*42.5*	*2.0*	*2.9*	*0.9*	*0.7*
Of which (*per cent of total*)												
Mexico	73	75	68	70	74	74	70	71				
Peru	16	16	19	17	16	17	15	14				

[g]Unprocessed hardwoods and conifers.

[h]Millions of bunches.

Appendix H (Continued)

	1937	1938	1946	1947	1937	1938	1946	1947	1937	1938	1946	1947
Nitrate[1] (Total)	*1,612*	*1,573*	*1,409*	*1,668*	*39.1*	*31.5*	*37.2*	*35.6*	*1.7*	*1.8*	*0.8*	*0.6*
Of which (*per cent of total*)												
Chile	100	100	100	100	100	100	100	100				
Petroleum derivatives[1] (Total)	*2,634*	*1,798*	*2,820*	*2,298*	*38.8*	*22.0*	*33.3*	*38.5*	*1.6*	*1.2*	*0.7*	*0.7*
Of which (*per cent of total*)												
Mexico	80	74	31	24	69	52	23	15				
Venezuela	2	1	38	46	7	7	41	48				
Vegetable wax (Total)	*11*	*10*	*15*	*13*	*7.3*	*6.0*	*33.2*	*24.8*	*0.3*	*0.3*	*0.7*	*0.4*
Of which (*per cent of total*)												
Brazil	78	87	68	64	91	95	79	83				
Lead[e] (Total)	*317*	*322*	*220*	*238*	*40.8*	*30.9*	*32.5*	*60.8*	*1.7*	*1.7*	*0.7*	*1.0*
Of which (*per cent of total*)												
Mexico	82	78	76	84	82	78	83	79				
Peru	12	18	20	10	13	19	14	16				
Quebracho (Total)	*237*	*205*	*256*	*238*	*14.1*	*11.6*	*24.3*	*35.9*	*0.6*	*0.7*	*0.5*	*0.6*
Of which (*per cent of total*)												
Argentina	84	82	81	90	94	93	84	92				
Zinc[e] (Total)	*174*	*180*	*189*	*390*	*24.7*	*18.0*	*21.9*	*31.7*	*1.1*	*1.0*	*0.5*	*0.5*
Of which (*per cent of total*)												
Mexico	91	92	69	85	96	98	86	83				
Peru	9	8	31	15	4	2	14	17				

Source: Data have been obtained from the official statistical publications of the countries concerned. For the exchange rates used in converting the national currencies into U.S. dollars see note to Appendix D.

[1]Including a small amount of iodine.

[1]All petroleum derivatives.

Appendix I

LATIN-AMERICA: GROSS FOREIGN OBLIGATIONS, *1938-1948*

Millions of U.S. dollars at 1938 exchange rates

BREAKDOWN BY DEBTOR COUNTRY

	1938	*1948*	*Difference*
North and Central America	2519	2290	— 229
Costa Rica	65	76	+ 11
Cuba	855	768	— 87
Dominican Republic	58	74	+ 16
El Salvador	33	33	—
Guatemala	152	152	—
Haiti	24	22	— 2
Honduras	57	67	+ 10
Mexico	1207	823	— 384
Nicaragua	10	9	— 1
Panama	58	266	+ 208
South America	8084	5690	—2394
Argentina	3253	1318	—1935
Bolivia	157	138	— 19
Brazil	2081	1646	— 435
Chile	1152	988	— 164
Colombia	352	325	— 27
Ecuador	40	50	+ 10
Paraguay	58	70	+ 12
Peru	358	335	— 23
Uruguay	277	157	— 120
Venezuela	356	663	+ 307
	10603	7980	—2623

ACCORDING TO CURRENCY OF DEBTS

Currency	*1938*	*1948*	*Difference*
Sterling	4841	2584	—2257
Dollar	4370	4422	+ 52
Loans from U.S. Government and its agencies	18	357	+ 339
Loans from international institutions	—	48	+ 48
All other loans and investments	4352	4017	— 335
Other currencies	1392	974	— 418
	10603	7980	—2623

ACCORDING TO TYPE OF INVESTMENT

Type	*1938*	*1948*	*Difference*
Government loans	3127	2002	—1125
Railways	2414	826	—1588
Other investments	5062	5152	+ 90
	10603	7980	—2623

Principal sources: Public Debt, 1914-1946, United Nations; *The South American Journal* (London), annual investigations of British investments in Latin America, 1938 and following years; Sir R. Kindersley, periodical investigations into British foreign investments, published in the *Economic Journal; American Direct Investments in Foreign Countries,* U.S. Department of Commerce, 1936 and 1940; *Census of American Owned Assets in Foreign Countries,* U.S. Department of the Treasury, 1943; Cleona Lewis, *America's Stake in International Investments,* Washington, D.C., 1945, and *The United States and Foreign Investments Problems,* Washington, D.C., 1948.