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Preface

This book is the outgrowth of lectures at The American University of Washington, D. C., on the economic problems of Latin America. The manuscript has been made available to several fellow workers in this field who have expressed the opinion that it fills a real need, and at their suggestion it has been prepared for publication. It is also hoped that it may be of value to foreign traders, research workers, and others having an interest in international affairs.

Latin American economic development is here outlined on a topical basis rather than from the standpoint of the peculiarities of the economies of the twenty distinct republics. The author's experience has been that this approach gives the student a better orientation and enables him to take up more intelligently advanced studies or investigations in connection with individual countries or specific problems.

The book consists of an Introduction and four Parts. The Introduction aims to define the over-all position of Latin America in world economy. Part I is devoted to several basic concepts, such as the physical setting, population problems, and the general characteristics of economic development in Latin America. Part II takes up the major economic activities: agriculture; the mineral, forest, pastoral, and manufacturing industries; transportation and communications; and credit institutions. Part III is devoted to foreign commerce, its volume, composition, and direction, with special reference to the outlook and the possibilities of, and limitations on, the development of a larger inter-American trade. In Part IV the evolution of a Pan American commercial policy is outlined.

It has not been possible within the limits of this volume to give more than a cursory glance at several questions that deserve fuller treatment. One of these is labor. Students interested in this field are advised to consult the references given at the end of Chapter 10.

Selected references for further reading are given at the end of each chapter. No attempt has been made to compile exhaustive lists of references, but those books and articles which the author has found of special interest or value have been included. Other references will be found in the volumes cited.

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CHAPTER ONE

Introduction: Latin America as a Unit of Study

The term *Latin America* is here used to designate the twenty nations which lie south and southeast of the United States. Despite important differences as to size, race, language, climate, and stages of social and economic evolution, these countries have many common characteristics which justify consideration of them as a distinct regional group.

Common Characteristics. Physically these republics, ten of which lie in Middle America and ten in South America, form a continuous bloc. Historically, the entire area was once a part of the patrimony of the Crown of Castile (Spain and Portugal were united from 1580 to 1640), and the conditions of colonization in the various regions were fundamentally similar. Eighteen of the twenty countries have a common language, Spanish. Brazil has retained the Portuguese language, which is sufficiently similar to Spanish to constitute no serious barrier to communication between Brazilians and the peoples of the Spanish-speaking countries. Haiti, which was long under French control, is French-speaking.

A survey of the economic forces of Latin America as a whole, therefore, appears desirable — not only to serve as an introduction to or background for the investigation of the economies of the individual countries, but also to afford an understanding of the aggregate significance of the area in international economic and political relations. It should be borne in mind that Latin America is itself a part of a larger grouping comprising the Western Hemisphere, which is geographically, strategically, and historically a more significant unit than any one of its three parts — North, Middle, and South America. The processes of discovery, settlement, and political evolution of each of these regions have been part of a common historical process, the history of the Americas.[1] In

1 Herbert E. Bolton, *History of the Americas: A Syllabus with Maps* (new edition Boston: 1935), p. iv.

this connection, it must be realized that "Spanish America" does not stop at the United States border. A large part of the territory now constituting the United States was once a part of the Spanish colonial empire, and evidences of Spain's impress are still to be noted in the racial blends, language, monuments, and customs of the American people from Florida to California.[2]

Separate National States. On the other hand, it should not be forgotten that Latin America is composed of twenty distinct countries, which differ among themselves as much, say, as Spain differs from Rumania. During the three centuries that the greater part of Middle and South America remained under Spanish control, the policy of the metropolis, as well as the difficulties of transportation, prevented any great amount of intercourse among the different regions. During the colonial period the regions which formed various administrative units, such as viceroyalties, *audiencias, presidencias,* captain-generalcies, etc., acquired divergent sets of interests. Centrifugal forces had become so strong that when the break with the mother country came, in the early 1800's, the various geographic regions that had formed such administrative units set themselves up as separate national states, despite the efforts of Bolívar and others to forge them into a single great Spanish-speaking federation.

Early History. Despite its low density of population, Latin America is not a "new land," and the frequent references made to it as a "new frontier" are likely to be misleading. A large part of Latin America was originally settled a century or more before most of the present territory of the United States; its mines and forests and much of its best land have been exploited for four centuries.

Middle and South America occupied a relatively more important position in the world, economically and politically, during the sixteenth, seventeenth, and eighteenth centuries than during the nineteenth. The opening up of the resources of the present Latin American area came at a time when there was a great scarcity of gold and circulating media in Europe, and the flow of precious metals from the Americas induced an economic and social revolution on the Continent. The prodigious output of such mines as those at Potosí in South America and Real de Monte in Mexico gave rise to tales about fabulous wealth in the New World derived from the production of such metals. These legends have persisted down to the present, although the total annual value of gold and silver production in Latin America in the 1920's and 1930's was less than the value of coffee exports from Brazil alone.

Seventeenth and Eighteenth Century Development. During the seventeenth and eighteenth centuries the Caribbean was the

2 *See* map, Herbert E. Bolton, *History of the Americas,* p. 168.

scene of an intermittent struggle among the leading European powers — Spain, England, France, and Holland — for plantations, trading stations, and military outposts in the New World, in order to tap its wealth. During that period sugar was the leading plantation product, and many of the wealthiest individuals or families in Britain in the 1700's and in France somewhat later were sugar planters from the West Indies. The importance which France attached to the sugar islands is illustrated by the fact that in the Peace of Paris, at the end of the Seven Years' War, Choiseul, the French Minister of War and Marine, felt that his country was getting the best of the bargain when he succeeded in negotiating the exchange of Canada for Guadaloupe and Martinique, which had been captured by the British fleet. The willingness of the British to return the islands under this arrangement was attributed to the pressure of the British West Indian planters, who feared competition in the home market.[3]

Trade with the West Indies also occupied a pivotal position in the commerce of the British North American colonies. So important was this trade, which on the import side consisted principally of sugar, rum, and molasses, that the attempted enforcement of the Sugar Act by Great Britain helped lead to the War of Independence.

Nineteenth Century Decline. But the relative importance of the area declined during the first three-quarters of the nineteenth century. With the passing of the mercantilist era and the discovery of important new deposits of precious metals in the United States, Australia, and elsewhere, Latin America's output of these metals became less significant. Latin America also gradually lost its virtually monopolistic position during this period as a producer of sugar and cotton, as it did later with respect to cacao and rubber. Its economic development and population growth were delayed by the political upheavals which marked the first fifty years or so of the history of the independent Latin American republics, as well as by the nature of their social organization and the traditions and philosophy inherited from the colonial era. Consequently, the republics to the south could not keep pace with the gigantic strides of the North American colossus, either in the production of goods or in population increase.

Twentieth Century Resurgence. After a long period of gestation, the last quarter of the century witnessed an economic renaissance in Mexico and Brazil, and the beginnings of spectacular developments in Argentina and Chile, which had been poor and sparsely settled regions during the colonial period. About the turn

3 Lowell Joseph Ragatz, *The Fall of the Planter Class in the British Caribbean, 1763-1833* (New York: 1928), p. 112. F. W. Pitman, *The Development of the British West Indies, 1700-1763* (New Haven: 1917), opposite page 1.

of the century a revival also began in the Caribbean area, which within a generation re-established its position as the world's chief source of cane sugar and rose to second rank in the coffee trade. Two important new sources of wealth, bananas and petroleum, also helped to strengthen the economic position of the Caribbean region. The entire Latin American area profited from the outpouring of people and capital from Europe and the insatiable demands of the industrial nations for foodstuffs and raw materials.

Latin America's Place in the World. Individually the southern republics have not carried much weight in world politics, but the Latin American area has attracted the large industrial nations as a market, as a source of raw materials, and as a field for colonization and investment. It is the largest "neutral" area left in a world that has been mostly partitioned into colonies, dependencies, and zones of influence of the Great Powers. In most of the countries of Latin America the markets historically have been open to free competition by all nations on approximately equal terms. Latin America possesses an extensive variety of mineral and agricultural products which are of increasing importance to the industrial nations and vital to the efficient operation of the armies and navies of the Great Powers. Furthermore, it is the only region left which has extensive areas in the Temperate Zone suitable to large-scale colonization by European and Asiatic peoples.

As they increase in wealth and population, the republics of Latin America will undoubtedly have increasing influence in world affairs. Recent events have made the people of the United States conscious as never before of the political and economic significance of the regions to the south and of the contributions that they can make to the building of the greater America of the future.

GENERAL REFERENCES

Histories of Latin America

Chapman, Charles Edward. *Colonial Hispanic America: A History.* New York: 1933.

——. *Republican Hispanic America: A History.* New York: 1937

Munro, Dana Gardner. *The Latin American Republics.* New York: 1942.

Rippy, J. Fred. *Historical Evolution of Hispanic America.* New York: new edition, 1942.

Wilgus, A. Curtis. *The Development of Hispanic America.* New York: 1942.

——, and Raul d'Eça. *Outline-History of Latin America.* New York: 1941.

Williams, Mary Wilhelmina. *The People and Politics of Latin America.* New York: new edition, 1938.

Part One

Some Basic Concepts

CHAPTER TWO

The Physical Setting

LOCATION AND WORLD COMMUNICATION

Eastward Swing. The location of Latin America is of considerable significance as regards its political and economic relationships with other parts of the world, and it merits careful consideration at the outset. Whereas North America extends far to the northwest in such a way as to form a bridge to Asia, South America swings far to the southeast, particularly at its central bulge along the Equator, which brings it close to Europe and Africa. All of South America except small strips along the northwestern and southwestern coasts lies east of the latitude of New York. The great seaports of the east coast of South America are 500 miles nearer to the Straits of Gibraltar than to New York and 1,000 miles nearer to Gibraltar than to New Orleans. They are only 250 miles farther from Cherbourg and Southampton than from New York and are almost 200 miles nearer to those ports than to New Orleans. By air, Natal, Brazil, lies 1,865 miles from Dakar, French West Africa, and the island of Fernando Noronha, off the coast of Brazil, is only 1,525 miles from the Cape Verde Islands.

Importance of Panama Canal. Before the opening of the Panama Canal, on August 16, 1914, most of the shipping lines serving the west coast of South America operated from Europe, passing around Cape Horn, although there were some direct lines from California and some merchandise from the eastern seaboard of the United States was transported overland across the Isthmus of Panama to make connection with the west coast lines. The opening of the Canal greatly increased trade between the United States and the west coast of South America. The Canal shortened the route between the Atlantic ports of the United States and those of Chile and Peru, making the distance to be traveled approximately 2,500 miles less between these ports than between Peruvian and Chilean ports and the ports of the English Channel and the North Sea.

Extent of Geographic Unity of Western Hemisphere. An idea of the position of the Americas in relation to the Europe-Africa-Asia land mass may best be gained by looking at a globe from a point directly above the location of the North Pole. Geopolitically, the Western Hemisphere forms "an island realm surrounded by the Atlantic, the Pacific, and the Arctic oceans." [1] The development of aviation and land transportation is tending to bring the American nations into closer relationship with one another. The geographic unity of North, Central, and South America, however, remains illusory in some respects.[2]

In the past Mexico was the only Latin American country with overland connections by rail and highway for commercial intercourse with the United States and Canada. The completion, in 1942, of a railway bridge over the Suchiate River, which forms the Mexico-Guatemala frontier, has made feasible overland shipments from the United States to Guatemala and El Salvador, although a transfer is necessary from the standard-gauge National Railways of Mexico to the narrow-gauge system of the International Railways of Central America. At the present rate of progress, the Inter-American Highway from Canada to the Panama Canal may be expected to be opened to traffic within a few years. A large part of the Pan American Highway in South America has also been completed, but there will be considerable delay before the section connecting the Canal Zone with the northern terminus of the Highway, in Colombia, is finished.

Communication Chiefly by Water. Despite the growing importance of road and air transportation, the commercial movement between the various Latin American republics may be expected to continue as in the past to be chiefly by water. Even in the cases of the countries having common frontiers, barriers interposed by mountains, swamps, deserts, and jungles, as well as the existence of extensive areas of sparsely settled territory, make overland communications costly and difficult. The northern tier of South American countries (Colombia, Venezuela, and the Guianas) is cut off from the rest of the continent by mountain ranges and dense jungles or *selvas*. These formidable barriers extend along the Equator from the knot of mountains at the Ecuador-Colombian border to the Atlantic at the mouth of the Amazon River.

Development of Aviation. The development of aviation is, however, of great significance, both from a strategic standpoint and in connection with the evolution of the historic concept of continental solidarity. It is true that the eastern and northern industrial centers of the United States are closer to western Europe than to

1 Nicholas John Spykman, *America's Stake in World Politics*, p. 43.

2 Cf. Eugene Staley, "The Myth of the Continents," *Foreign Affairs* (April, 1941).

the southern end of South America and, furthermore, that the expansion of air services has tended to develop a sense of unity throughout the entire world. Nevertheless, in view of the land bridge via Central America and the steppingstones of the West Indies, it may be said that geography definitely favors air connections between the United States and Middle and South America rather than between Europe and South America.

SURFACE FEATURES

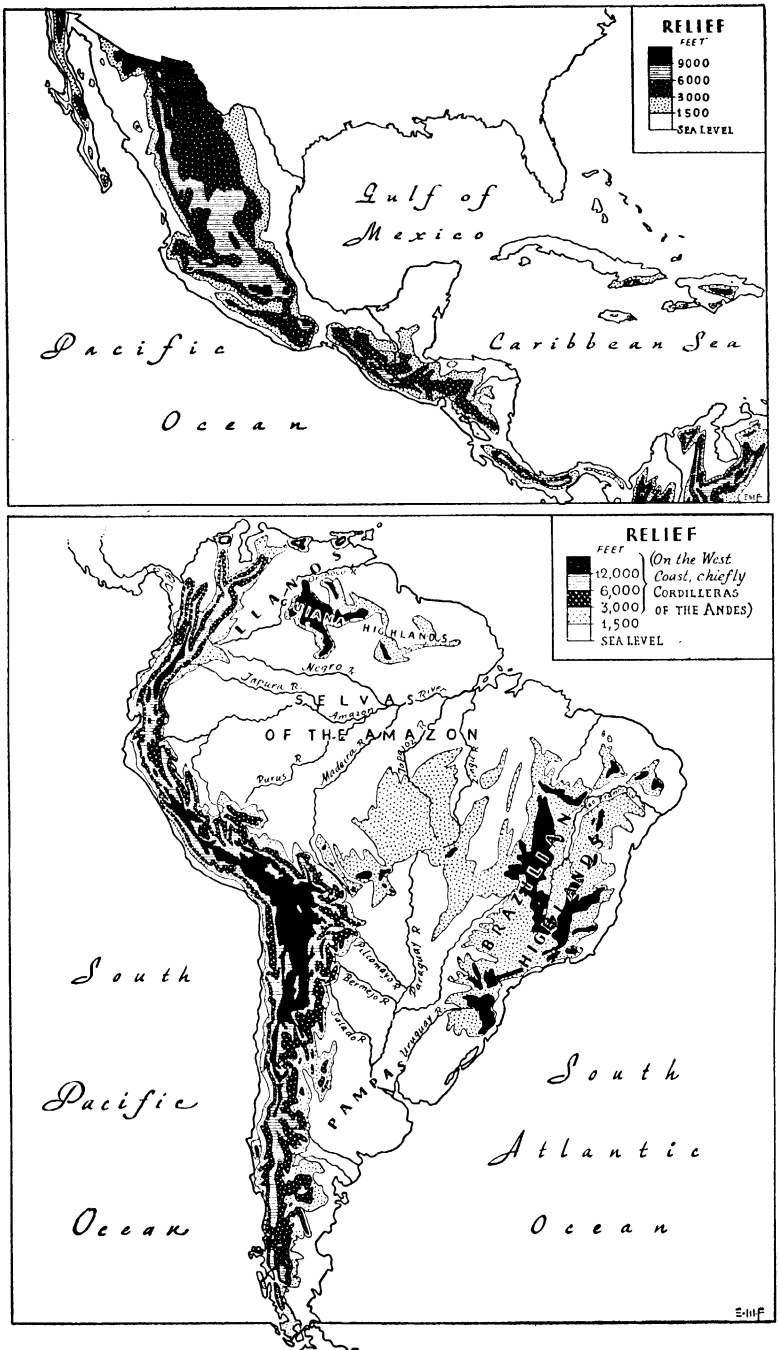
The Andes. The dominant physical feature of Latin America is the great mountain barrier which extends, with various irregularities, from northern Mexico to the southernmost tip of South America. The Andes, in South America, are said to be the most prominent continuous mountain system on the globe.[3] Although the Andes are not structurally a continuous chain, they present an unbroken barrier without any usable passes lower than 10,000 feet above sea level.

The Central American-Antillean System. In Middle America, the Cordilleras are less uniform. There are three low passes — in Mexico (at Tehuantepec), in Nicaragua, and in Panama. The geologic structures and surface forms found in the United States extend into Mexico down to a latitude of about 20° N., where they are terminated by an east-west zone of great volcanoes. The region between latitude 20° N. and the borders of Colombia is made up of two distinct geologic regions. The first extends southward to the lowlands of Nicaragua. Its structures have a predominantly east-west trend, and pass under the waters of the Caribbean to reappear in Cuba, Hispaniola, Puerto Rico, and the Virgin Islands. This "Central American-Antillean system" is connected with South America by two chains of volcanic ridges and peaks — one through the West Indies, and the other through El Salvador, southwestern Nicaragua, Costa Rica, Panama, and western Colombia.

Principal Highlands and Plains. The surface features of South America in a general way resemble those of the North American continent, but a larger part of the total area of South America is occupied by highlands and plateaus. The principal highland regions, other than the Andes, are the Guiana highlands, which lie between the Orinoco and the Amazon regions, and the Brazilian highlands, which occupy a large part of eastern and southern Brazil.

Both in Middle America and South America the coastal plains are for the most part very narrow, since the mountains come down close to the sea. The principal exceptions are the Yucatan peninsula and the delta of the Río de la Plata and the pampa adjoining it.

3 Jones, *South America*, p. 16.


RELIEF
FEET
9000
6000
3000
1500
SEA LEVEL
Gulf of Mexico
Pacific Ocean
Caribbean Sea
RELIEF
FEET
12,000
6,000
3,000
1,500
SEA LEVEL
(On the West Coast, chiefly CORDILLERAS OF THE ANDES)
LLANOS
HIGHLANDS
Negro R.
Japura R.
SELVAS
Amazon River
OF THE AMAZON
Purus R.
Madeira R.
Tapajos R.
Xingu R.
BRAZILIAN HIGHLANDS
Paraguay R.
Pilcomayo R.
Bermejo R.
Salado R.
PAMPAS
Uruguay R.
South Pacific Ocean
South Atlantic Ocean

In the interior of South America there is a great central plain running north and south to the east of the Andes. Except for the fact that the Orinoco plains are separated from the Amazon basin by highlands, this plain is continuous throughout its length. It is widest in the Amazon basin. It is narrow in the central part of the continent between the spurs of the Andes on the one side and the plateaus and hilly upland regions of western Brazil on the other.

Drainage and Coastal Frontage. As in the United States, drainage in Latin America is principally into the Atlantic Ocean, and the principal commercial centers are on the east coast. In Mexico and Central America, as in South America, there is a very narrow coastal lowland on the Pacific side of the mountain ranges. Only five of the Latin American countries — El Salvador, Ecuador, Peru, Bolivia, and Paraguay — are without some frontage on the Atlantic. Even Chile, with its long coast line on the Pacific, touches the Atlantic at the Straits of Magellan. Paraguay, Peru, and Bolivia have river ports on streams which empty into the Atlantic. El Salvador has no water outlet to the Atlantic, but by rail it has connection with the Caribbean port of Puerto Barrios, Guatemala.

Principal River Systems. The four principal river systems in South America are the Magdalena, the Orinoco, the Amazon, and the Río de la Plata. The Orinoco and the Río Negro, a tributary of the Amazon, are interconnecting through the Casiquiare Canal, a natural phenomenon which provides a connecting channel for the two great river systems. It is an interesting fact that the headwaters of the Paraguay River, which flow into the Paraná and thence into the Río de la Plata estuary, are less than 150 miles from navigable portions of the Guaporé River, a tributary of the Mamoré, which flows into the Madeira and thence into the Amazon. An old and now little-used trail leads from the ruins of the village of Mato Grosso on the Guaporé River to the village of São Luiz de Caceres on the Paraguay River — a reminder that at an earlier period a greater volume of traffic moved between the interior streams than at the present time.

CLIMATE

Unfavorable Tropical Conditions. The tourist, enchanted by the climate and scenery of the more picturesque spots in Latin America, is apt to get a false impression of the beneficence of the climate from an economic point of view. Actually, Middle and South America are among the least favored of the great land areas from the standpoint of climate.[4] Whereas the main portions of the

4 *Ibid.*, p. 49.

three great Northern Hemisphere continents lie in the Temperate Zone, about three-fourths of Latin America is situated in the Tropics. Part of the area located in the tropical belt, it is true, has climates tempered by high altitudes, so that climates in the "mathematical Tropics" are by no means uniform. But these qualifications have little effect on the economic significance of the location of the greater part of the Latin American territory. The broadest portion of South America, including the great "bulge" of Brazil, lies near the Equator and has tropical climate; the thinly tapering remainder extends to the far south, where the opposite extreme of climate prevails and intense cold prevents progress. The principal economic developments in Latin America have occurred in the temperate regions of Argentina (around Buenos Aires), southern Brazil, and central Chile, and in the cool tablelands of Mexico and northern South America.

Unfavorable Distribution of Rainfall. Distribution of rainfall also is unfavorable. South America has the unenviable distinction of having the greatest expanse of territory with rainy tropical climate.[5] A large part of the area with overabundant rainfall is that section occupied by the rain forest of the Amazon basin. There is also very heavy precipitation in southern Chile and on the northeastern and northwestern coasts of the continent. In Middle America, annual rainfall averages over 100 inches along the greater part of the coastal belt (except that of the Yucatan peninsula) from Tampico, Mexico, southward to the Panama Canal.

On the other hand, some large areas are rendered unproductive agriculturally by inadequate precipitation. Desert conditions prevail in the greater part of the coastal region of Peru and in northern Chile, as well as in most of the Argentine Patagonia, and drought conditions are endemic in some other parts of South America. In Mexico rainfall is inadequate in most of the cool highland regions, where the major portion of the population is concentrated. Periods of drought, when the rivers are dried up, are followed by torrential rains, which cause destructive floods. In addition to these conditions, Mexican farmers must reckon with unseasonable temperatures. Corn yields are adversely affected in the plateau areas by cool nights, and frosts have been known to occur in August, even at relatively low altitudes.

RESOURCES AND POTENTIALITIES

Variety of Resources and Products. With an aggregate area more than two and one-half times that of the United States, the Latin American republics embrace a great variety of climates,

5 *Ibid*, p. 30.

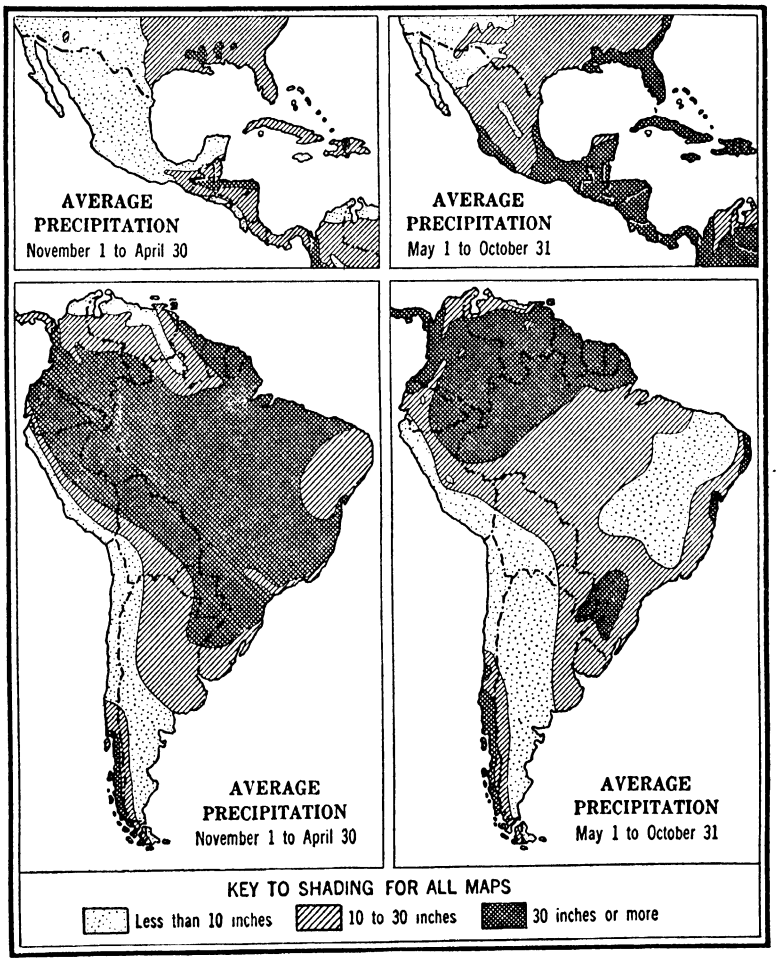


Fig. 2. Rainfall Map of Latin America

Courtesy of Farrar & Rinehart, Inc.

scenery, and natural resources. They furnish a large proportion of the world's supply of silver, nonferrous metals, and petroleum; and they rank among the major surplus food-producing areas for such staples as cereals, meats, coffee, sugar, and cocoa. The importance of this region to the world economy is therefore evident. A word of caution is needed here, however, in view of the popular tendency to speak and write of Latin America in superlative terms. Much of the literature on the subject expresses an unscientific attitude as regards the extent of the resources of Latin America and the costs and difficulties inherent in their exploitation. For example, a leading historian refers to "the almost unbelievable natural wealth of Mexico."[6] That country has long been likened to "a beggar sitting on a mountain of gold," an analogy which reflects not only the persistence of the beliefs of the mercantilist era but also the impression made on the visitor to Mexico by the spectacular natural beauty of the country, its variety of climates within a short range, and the diversity of production in regions separated by short distances.

Need for Realistic Appraisal. On the other hand, some recent writers have tended to swing to the opposite extreme, taking a decidedly pessimistic view as to future possibilities for development in Latin America.[7] Undoubtedly, there are resources in Latin America yet to be developed. A realistic approach to the problem of determining the extent of these resources and the possibilities they offer for the future is to be made only by taking into consideration all the factors, both favorable and unfavorable.

The fact that the Latin American republics embrace an area much larger than the United States does not necessarily mean that they have more usable land and resources, since Middle and South America are in many respects less favored by Nature than is North America. Mention has already been made of Latin America's relatively unfavorable climate. An investigation of its soils and natural vegetation also reveals certain handicaps.

Waste Areas. Much of the land area is a virtual waste, owing to the mountainous character of a great portion of it, to the desert conditions prevailing in some localities, and to excessive rainfall in other areas. Some visualize great future possibilities for the vast interior plains of South America as grazing lands. There is considerable question, however, as to the extent to which the greater part of these regions could be further utilized than at present for livestock-raising. Obstacles are presented by their relative inacces-

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6 Herbert Ingram Priestly, *The Mexican Nation* (New York: 1923), p. 14.

7 H. Foster Bain and Thomas Thornton Read, *Ores and Industry in South America*, published for the Council on Foreign Relations, 1934, and Frank Tannenbaum, *Whither Latin America?*

sibility, the existence of a great variety of insects and other parasites, and the fact that alternating seasons of flood and drought reduce the area available for pasturage. Furthermore, the grasses of the savannas are low in food value. They provide satisfactory pasturage only at the beginning of the rainy season when the young green shoots come up and when they are found in the stagnant waters of receding floods. When the dry season starts, these grasses become brown, hard, and inedible, and during most of the year the herds in these regions barely avoid starvation.

Productive Areas. There are, of course, some fairly extensive regions, such as the Argentine humid pampa, that are exceptionally fertile and have the additional advantage of proximity to the sea. In southern Brazil there is a large expanse of fertile, rolling lands that are well connected with seaports by a network of railways. Smaller areas, including pockets of valley lands and piedmont regions, are especially well adapted for raising such crops as coffee, sugar cane, and cacao.

Forest Resources. It would be difficult to evaluate the forest resources of Latin America in comparison with those of the continents of the Northern Hemisphere, owing to the distinctive character of Latin America's regional flora. The area produces a variety of hardwoods, which have been valued since earliest colonial times as dyewoods and for use in cabinet-making. The quebracho forests of Argentina and Paraguay produce woods valued chiefly for their tanning properties, but the timber is also used for construction and for making railroad ties. The forests of Latin America also yield a great variety of gums, essences, and vegetable oils that enter extensively into international trade. Softwoods, which provide the best construction timbers and the raw materials for the manufacture of wood pulp, are relatively scarce in Latin America, although there are some stands of softwoods in Mexico, Central America, southern Brazil, and Chile.[8]

Mineral Resources. Latin America produces an extensive variety of minerals, but it is deficient in the one mineral which has been of most significance in the industrial evolution of western Europe and the United States — coal. While there are scattered deposits of coal, it is generally of poor quality and not suited to coking. On the other hand, Latin America has extensive petroleum and water power resources.

TRANSPORTATION

Mountain Obstacles. In Latin America transportation has always presented serious problems. The mountainous character of

8 Jones, *South America*, Chapter IV, "Natural Vegetation."

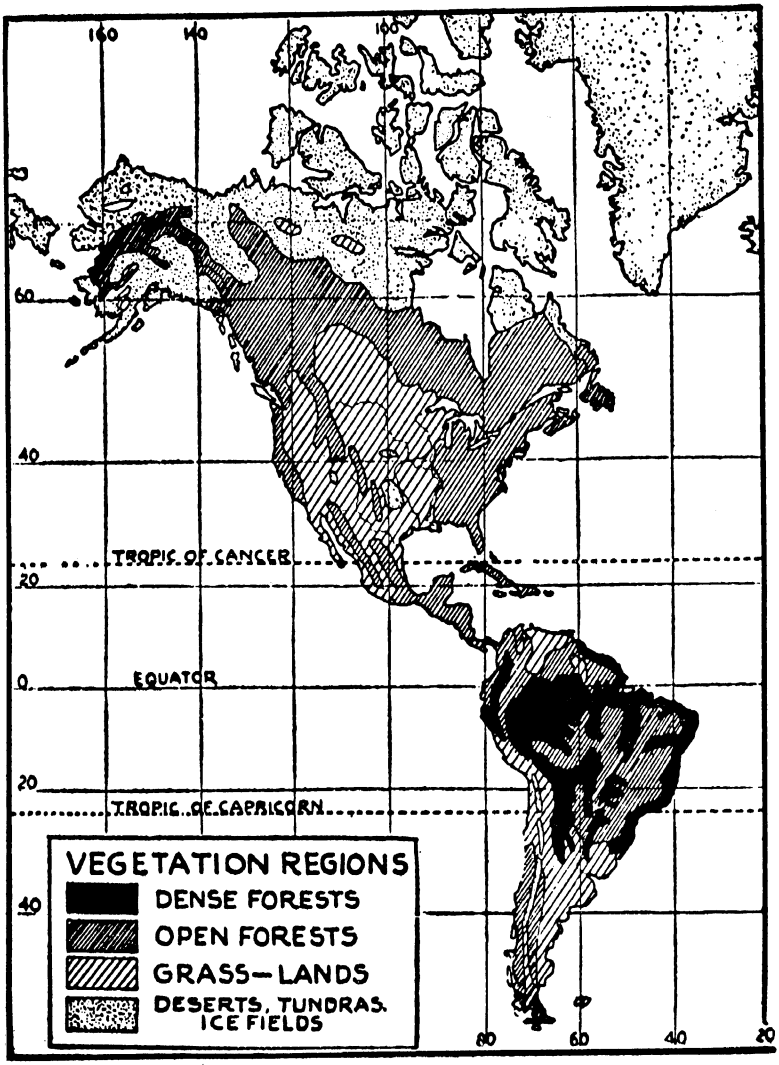


Fig. 3. Western Hemisphere Vegetation

Reproduced with permission from *The New World Atlas and Gazetteer*, published by P. F. Collier and Son Corporation, New York, 1921.

much of Latin America and particularly the proximity of high ranges to the sea are great obstacles to the development of transportation. On the west coast of South America this is strikingly apparent in the case of the railways. The Central Railway of Peru is forced to ascend to an altitude of 15,680 feet at a distance from the coast of only 106 miles. The Southern Railway of Peru crosses the divide at 14,688 feet, the Arica-La Paz Railway at 13,986 feet, and the Antofagasta-Bolivia Railway at 12,970 feet. Between 5 and 35 degrees south latitude there is no pass in the Andes at an elevation of less than 11,000 feet.[9]

Although the mountains on the east coast of South America are not so lofty as the Andes, the Serra do Mar, which extends along the coast of southern Brazil not far from the shore line, also has presented an obstacle to the construction and maintenance of railways and highways from tidewater to the interior.

Likewise, in Mexico and Central America the construction of railways and highways has been complicated by the nature of the terrain. The basin of the Río de la Plata is the only sizeable region in Latin America where the topography favors railway construction. There are today many parts of Latin America where wheeled vehicles are still unknown, and from time immemorial a large part of the merchandise has been carried to market by pack animals and on the backs of human beings.

Shortcomings of Rivers. Latin America has two river systems which are more extensive than any in North America, but most of the rivers fail to provide as satisfactory an integration with the sea and populated areas as do the rivers of the Northern Hemisphere. In comparison with those of Europe and North America the rivers of Middle and South America have decided shortcomings from the standpoint of transportation. The Amazon, for example, has widely fluctuating waters, and the courses of its tributaries are interrupted by rapids and falls. Furthermore, it flows through a tropical area which is little suited to settlement by people of European origin. The Río de la Plata serves a region that is more important commercially, but it is shallow and requires constant dredging. In Mexico the principal rivers traverse the subtropical regions of the southeast, where the population is scant.

SUMMARY

Although every nook and cranny of Latin America has probably been explored at one time or another by the conquistadores and the hosts of missionaries, prospectors, merchants, and adventurers who came after them, only small sections have been appraised in the

9 Clarence Jones, *Commerce of South America* (New York: 1928), p. 12.

light of modern scientific knowledge. In citing the various handicaps to development which are presented by certain of Latin America's physical features, it is by no means intended to minimize the great possibilities for further development which undeniably exist. Rather, the purpose is to emphasize the need for careful and scientific investigation of all the factors involved, in order that there may be avoided a repetition of serious mistakes which have frequently resulted from generalizations based on inadequate knowledge of various regions.

GENERAL REFERENCES

Bain, H. F., and T. T. Read. *Ores and Industry in South America.* New York: 1934.

Bradley, J. R. *Fuel and Power in Latin America.* Trade Promotion Series No. 126. Washington, D. C.: 1931.

Denis, P. *Amérique du Sud.* Vol. XV of *Géographie universelle.* Paris: 1927.

McBride, George McCutcheon. *The Land Systems of Mexico.* Chapter II, "The Geographical Setting," pp. 5-24. New York: 1923.

Nicholas, John Spykman. *America's Strategy in World Politics: The United States and the Balance of Power.* New York: 1942.

Shepherd, William Robert. *Historical Atlas.* New York: 1926.

Simpson, Eyler N. *The Ejido: Mexico's Way Out.* Chapter IX, "Land and Water — Basic Considerations," pp. 131-161. Chapel Hill: 1937.

Sorre, M. *Mexique et Amérique Centrale.* Vol. XIV of *Géographie universelle.* Paris: 1928.

Tannenbaum, Frank. *Whither Latin America?* New York: 1934.

Wilgus, A. Curtis, ed. *Colonial Hispanic America.* Vol. IV. of *Hispanic American Studies.* Chapter II, "Geographical Background of the Colonial Period in Caribbean America." Chapter III, "Geographical Background of the Colonial Period in South America." Washington, D. C.: 1936.

Zimmerman, Erich W. *World Resources and Industries.* New York: 1933.

Also see extensive geographic references in Clarence Jones, *South America,* and Preston James, *Latin America.*

Economic Geographies

Carlson, Fred A. *Geography of Latin America.* New York: revised edition, 1942.

James, P. E. *Latin America.* New York: 1942.

Jones, Clarence F. *South America.* New York: 1930.

Platt, Robert S. *Latin America, Countrysides and United Regions.* New York: 1943.

Shanahan, E. W. *South America.* New York: 1927; 2nd edition, 1929.

Smith, Joseph Russell, and M. Ogden Phillips. *North America.* New York: 1940.

Whitbeck, R. H., Frank E. Williams, and William F. Christians. *Economic Geography of South America.* New York: 3rd edition, 1940.

CHAPTER THREE

Population: Distribution and Ethnic Composition

DISTRIBUTION OF POPULATION

Low Population Density. In comparison with other parts of the world most of the Latin American countries are sparsely settled. Their aggregate population is slightly less than that of the United States. South America is less densely populated than any other continent except Australia. Concentration is high in the West Indies and Central America; in Haiti the population density probably exceeds that in Denmark and in France, and is approximately equal to that in Switzerland, while El Salvador is more densely populated than Spain.

Concentration in Coastal Areas. The population map of South America[1] shows that the bulk of the population is concentrated around the fringes of the continent, leaving great open spaces in the interior, particularly in the valley of the Amazon and its tributaries. The population density of Brazil is 13 per square mile, but three-fourths of the inhabitants are found in an area within 100 miles of the seacoast. In South America there are no great urban centers in the interior of the continent like Chicago and Saint Louis in the United States. São Paulo, the chief industrial center of Brazil, is located only 50 miles by rail from the coast. Rosario, Argentina, 188 miles by rail from Buenos Aires, is located on the broad Paraná River, which is an extension of the estuary of the Río de la Plata. Excepting Lima, which with the port of Callao comprises virtually one city, the capitals and chief cities of the west coast are located in the cordillera and on the plateaus which fringe the coast. Asunción, Paraguay, 1,200 miles up the Paraguay River, and Manaus, Brazil, located on the Amazon 925 miles from Para,

1 Maps 1 and 2 in James, *Latin America;* Figure 8 in Platt, *Latin America;* Figure 1 in Whitbeck, Williams, and Christians, *Economic Geography of South America;* and Figure 42 in Jones, *South America.*

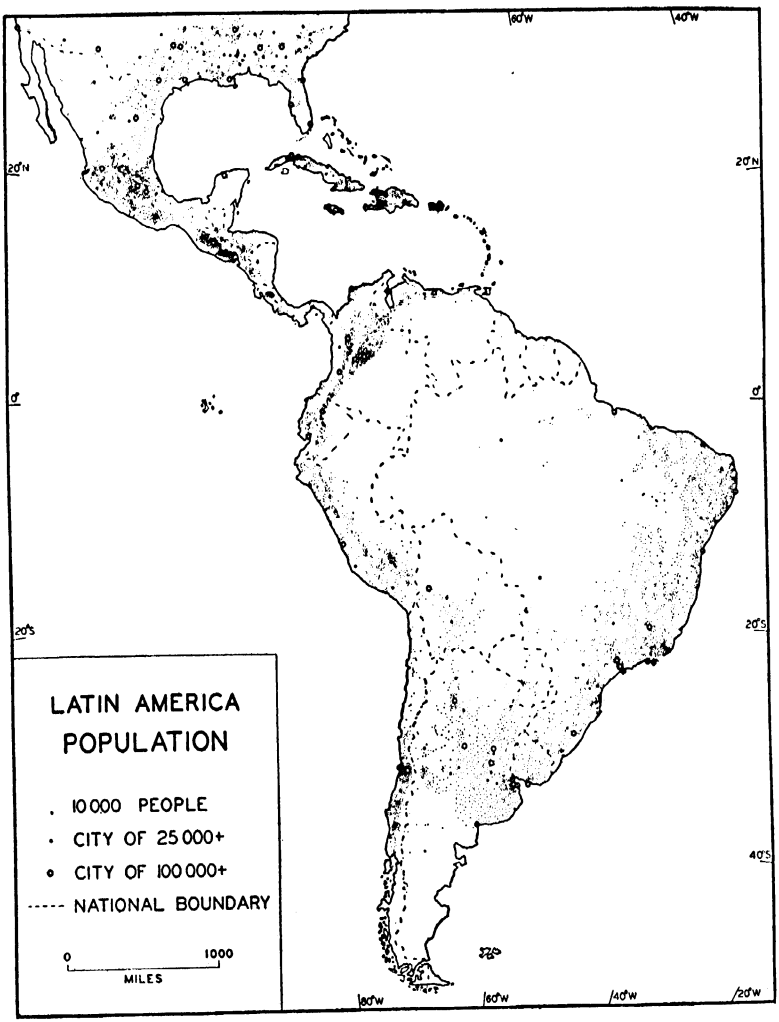


Fig. 4. Distribution of Population

Reproduced with permission from *Latin America*, by Robert S. Platt, published by McGraw-Hill Book Company, New York, 1942.

each with a population slightly less than 100,000, are the principal interior cities, if we exclude Bogotá, Colombia, and the capitals of the west coast countries.

MEXICO AN EXCEPTION. In Central America, the population is concentrated[2] in the cool highlands which skirt the Pacific coast, but in Mexico the pattern of settlement is different, since the most favorable climatic conditions are found in the *mesa central,* or great central plateau, and adjoining regions. Over half of the Mexican territory has an altitude of over 3,000 feet, and the most densely populated centers lie between 4,500 and 8,000 feet.

Capitals at High Altitudes. Half of the Latin American capitals are located at altitudes high enough to affect the climate materially, namely; La Paz, 12,300 feet; Quito, 9,350; Bogotá, 8,579; Mexico City, 7,480; Guatemala City, 4,884; San José de Costa Rica, 3,850; Tegucigalpa, 3,500; Caracas, 3,419; San Salvador, 2,115; and Santiago de Chile, 1,840. Most of the other capitals are seaports. São Paulo, the third largest city, is situated at an altitude of 2,500 feet.

Urban Concentration. Despite the predominantly agricultural character of Latin America, there is a marked tendency toward urban concentration. There are four cities with a population of over a million (Buenos Aires, Rio de Janeiro, Mexico City, and São Paulo), four with a population ranging from 500,000 to one million (Santiago de Chile, Montevideo, Habana, and Rosario), and about 40 cities with a population ranging between 100,000 and 500,000. In some countries a surprisingly large proportion of the population is clustered around the capital or chief cities. In Uruguay, the 1900 census showed 30 per cent of the total population of 915,647 in the capital, Montevideo. In 1937, out of a total population of slightly over 2,000,000, Montevideo had 34 per cent, but there were no other cities claiming more than 30,000 inhabitants. Likewise in Argentina, Buenos Aires and its industrial suburbs embrace nearly one-third of the total population of the republic, and Buenos Aires ranks as the third largest city of the Western Hemisphere. The growth of the secondary Argentine cities has been less striking, but there are 36 cities with 25,000 or more inhabitants; Rosario, the second city, has slightly over a half-million. Brazil is the only Latin American country having two cities with over a million inhabitants each. In addition to Rio de Janeiro, with 1,750,000, and São Paulo, with 1,170,000, there are 12 other cities having over 100,000 inhabitants. In Chile and Mexico, the tendency towards urban concentration is less marked. Santiago de Chile has a population of 828,000, and Valparaiso, 250,000, out of the total of

2 *See* Map 144 in James, *Latin America.*

4,600,000. The Mexican census of 1930 showed 24 cities with a population of 25,000 or more; Mexico City had a population of slightly over a million. Monterrey, the second city from the standpoint of commercial and industrial importance, now has a population of only about 150,000.

EXCEPTIONS. Although there is a general tendency toward urban concentration in Latin America, geographers have noted four areas of expansive settlement where the population is growing by natural increase and pushing out into new farming regions. These areas are the highlands of Costa Rica, the highlands of Antioquia in Colombia, the three southern states of Brazil, and middle Chile.[3] Each of these regions has a high net rate of increase of population, without any important immigration. It is interesting to note that the population in the first three of these areas is of unmixed European ancestry and is predominantly European in the fourth case (Chile).

ETHNIC COMPOSITION

There are great variations in the ethnic composition and in the cultural heritage of the different areas of Latin America. These differences, which had become sharply apparent before the end of the colonial period, have subsequently been modified or accentuated by the effects of immigration and amalgamation. Studied in conjunction with the physiographic characteristics of the various regions, they provide the key to the divergent courses of economic and social evolution in the several countries.

Racial Admixture. Social and economic evolution in Latin America followed somewhat different lines from those in the temperate regions of North America. In the case of the latter area colonization was predominantly by family groups, whereas in most regions of Latin America soldiers, prospectors, priests, and members of religious orders formed the spearhead of settlement. In the highland regions from Mexico to Chile, where the Spanish conquerors found populous Indian communities with highly developed social organizations and advanced skills in agriculture and the arts, a large degree of racial admixture soon took place. In Brazil and the Antilles, where the natives were less numerous and less advanced, they were quickly decimated, as a result either of contracting contagious European diseases or of the harsh treatment received at the hands of the invaders. In these regions imports of Negro slaves began early in the sixteenth century. Imports into Spanish America probably amounted to around one million by the time of independence. In Brazil, it was estimated that there were about

3 Preston James, *Latin America*, pp. 828-830.

2,000,000 Negroes and mulattos in 1822, and that about 1,500,000 Negro slaves were brought in from that time up to 1850, when the Brazilian Government passed a law against slave-trading.[4]

Racial Statistics. Owing to statistical deficiencies, it is possible to give here only the following rough estimates as to the relative strength of the various elements of the population at present: White, 43,000,000, or 33 per cent of the total; Indian or mestizo, 48,000,000, or 38 per cent; Negro or mulatto, 28 per cent; Asiatic, 1,250,000, or 1 per cent. Inhabitants of predominantly European stock are numerically the principal element only in Argentina, Uruguay, east central and southern Brazil, middle Chile, and Costa Rica. The Indian element is strongest in those countries where a large part of the total area is situated at high altitudes, which include most of those which border the Pacific Ocean from Mexico to Peru. In Paraguay it is estimated that about 45 per cent of the population is Indian and another 45 per cent, mestizo. The African strain is most evident in the Antilles, along the north coast of South America, and in eastern Brazil.

Racial Problems. It is not possible to apply these distinctions very closely, however, since the basis of classification varies in different countries. Usually a person is classified as "Indian" if his dress, abode, and manners conform to Indian traditions, even though some persons thus classified may have comparatively little Indian blood. Frequently persons with only a small amount of European blood are classified as "white" on the basis of education or of social or official standing. There has always been a considerable amount of class stratification in Latin America, with distinctions based more on caste or birth than on race or color. During the colonial era a sharp distinction was made between the "peninsulares" or "chapetones," persons born in the Hispanic peninsula, and the "creoles," persons of Spanish blood born in the Americas, even though both were of European stock. There were, however, some distinctions which were made purely on a racial basis. For example, mestizos were not permitted to receive degrees.[5] Also, partly as a means of making social distinctions and partly as a defense measure, mestizos, Indians, Negroes, and mulattos were prohibited from having horses of their own.[6] Racial problems have played an important part in Latin American history. In the sixteenth century there were many who refused to recognize Indians as rational beings even after the Pope had declared that they possessed souls, and for the most part Indians were treated as slaves or serfs. In

4 Lawrence F. Hill, "The Abolition of the African Slave Trade to Brazil," *Hispanic American Historical Review* (May, 1931), p. 174.

5 Chapman, *Colonial Hispanic America*, p. 189.

6 "Recopilación de Real Cédula de 4 de Junio de 1687," cited in José L. Cossio, *Las antiguas leyes españolas* (Mexico: no date), p. 21.

Brazil the *bandeirantes* made a business of rounding up frontier tribes to be sold as laborers on the large estates or in the mines. In regions where hostile tribes were encountered, as in Chile, Argentina, and parts of Mexico, the Indians were pushed back or exterminated. Today the racial problem is still a vital issue in many of the Latin American countries — a considerable amount of legislation has been passed which recognizes the special position of the Indian population, and most, if not all, of the republics discriminate in their immigration and colonization regulations against races which cannot be readily assimilated.

MEXICO AS AN EXAMPLE. During the colonial period the white aristocracy controlled church, state, and commerce. This situation continued practically without change during most of the nineteenth century, despite the fact that a number of the Latin American countries were under mestizo dictators for considerable periods of time. It was the generally accepted belief among the ruling elements that progress could be made only by eliminating the native institutions, which they regarded as backward, and hastening Europeanization through immigration. In Mexico, for example, Díaz, although himself a mestizo, apparently believed, during most of his long period of administration, that his country's future progress depended upon removal of ancient Indian landmarks and institutions which might constitute obstacles to the founding of a modern state, and upon the gradual effacement or amalgamation of the indigenous population which would result from an influx of immigrants. During the latter years of his regime there were evidences that Díaz had changed his attitude and had come to feel that it was neither possible nor desirable to effect a rapid transformation by such measures. One Mexican writer has suggested that his refusal to choose Limantour for the Vice-Presidency, which would, of course, have put the latter in line for the succession, was probably due to the aging dictator's growing distrust of the white and foreign elements and to his having become convinced that the future of Mexico lay with the mestizo.[7] One definite result of the Mexican revolution and of the social upheavals in various other Indio-Hispanic countries since 1910 has been the development of a self-conscious nationalism on the part of the mestizo classes, who have become convinced that the future progress of their nations depends on them.

The word "mestizo," or its equivalent, has become obsolete in some Latin American countries, because distinct national types have emerged, and the continued use of the term is misleading. It is significant that Mexico did not include in the 1930 census the racial index used in previous censuses.

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7 Andrés Molina Enríquez, *Los grandes problemas nacionales* (Mexico: 1909), p. 312.

NATIONALITIES OF IMMIGRANTS

Spanish and Portuguese Predominant. Practically all European racial strains have gone into the Latin American melting pot. Spain and Portugal, as the proprietary powers over extensive domains during three centuries, made the largest contributions to this melting pot and left the greatest impress on the languages, customs, and institutions of the Latin American area.

During the greater part of the colonial era the Spanish and Portuguese Crowns attempted to reserve their American possessions to their own subjects. The restrictions imposed to accomplish this, however, were evaded, so that even before the colonies won their independence and opened their doors to immigrants from all nations, there had been an influx of many nationalities. The intruders were especially numerous in the Caribbean area and in the Río de la Plata provinces. A census taken in 1744 in Buenos Aires revealed the presence of a scattering of English, French, Italians, and Portuguese.[8] The Dutch and the Jews were numerous in northern Brazil, and during the reign of Charles V, German colonists were sent to Venezuela by the Welsers of Augsburg. English or Scottish merchants were in every port, and Irish Catholics entered the Americas after preliminary residence in Spain. It is a curious fact that the persons holding positions as viceroys of Mexico, Peru, and Chile at the end of the colonial period were of Irish birth. After the accession of the Bourbon line to the Spanish throne in 1700, some French entered the colonies. The French had previously set up some colonial establishments in the Caribbean, and in 1697 Spain was forced to recognize French claims to the western portion of Hispaniola (now Haiti), which remained a French colony until 1804.

Eighteen republics were formed out of the lands previously subject to the Crown of Castile. These countries now have an estimated total population of around 80,000,000, or about 62 per cent of the total for Latin America. The Castilian tongue is the basis of the official languages of these countries, although it has undergone modifications in accent and in vocabulary, just as the English language has in the United States. About 7 per cent of the population of Latin American countries speak Indian dialects. Brazil, the one Portuguese-speaking republic, has approximately half the population of South America, or 35 per cent of the total population of Latin America. French is the official language of Haiti.

Dangers of Small National Groups. The melting pot has produced better results in some countries than in others. Some have developed fairly homogeneous populations, but in others there

8 *Tercer Censo Nacional* (Buenos Aires: 1916), Vol. I, p. 199.

are numerous national and racial groups that have not been assimilated. Under the peacetime conditions of the nineteenth century, the diversity of talents and skills brought into the Americas by immigrants of various nationalities was generally considered an asset. It was not until the First World War that the countries of the Western Hemisphere began to realize the dangers inherent in admitting groups of peoples which could not be readily assimilated. The shock of a second world conflict has now fully awakened the American republics to the dangers of admitting immigrants who tend to maintain themselves in self-conscious national groups, and has resulted in the enactment of measures designed to bring about a greater degree of economic, political, and social unity within their borders.

Variations in Assimilation. Some immigrant groups have been more readily assimilated than others. There has been some variation in the readiness with which fusion has taken place even in the cases of groups of immigrants of Latin origin, which have comprised around three-fourths of the total number entering Latin America since independence. The number of Italian immigrants entering the area since then has totaled about 2½ million, and Spanish immigrants about 2 million. More Italians have entered Argentina and Brazil than immigrants of any other nationality, and they have also been well represented in most of the other Latin American countries. As a rule they have merged quickly with the local population, and such exceptions as have occurred have usually been due to the attempts of the Italian Government to keep a hold on its nationals under the continental rules, which base citizenship on the nationality of the parents, rather than to the group activities of the immigrants themselves. Spanish immigrants of the lower classes are also readily nationalized, but affluent Spanish merchants, landowners, and industrialists, more conscious of the ties with their homeland, tend to form distinct groups centering around clubs and their benevolent and cultural activities.

Attitude of Native-born Brazilians. Under the Empire, native-born Brazilians exhibited considerable antagonism toward new arrivals, and this attitude still persists to some extent. Such antipathy as the native-born Brazilians may entertain today toward immigrants, however, is felt more with respect to those comparatively few newcomers who enter into commercial competition with them in the cities, than to the majority, who engage in manual labor in the towns and rural areas. It is estimated that 80 per cent of the Portuguese immigrants and between 70 and 75 per cent of the Italian and Spanish immigrants entering Brazil have been illiterate.[9] Most of these immigrants are of peasant origin, and

9 Douglas O. Naylor, *International Migrations* (New York: 1931), Vol. II, p. 163.

have readily found employment on the large estates, such as the coffee fazendas. Likewise, in Argentina most of the Italian immigrants are employed by the *estancias* as laborers or share croppers.

French Immigrants. French immigrants have been less numerous. They have retained their identity to a greater degree than the other immigrants of Latin origin, owing to the fact that a larger proportion of them were on a higher cultural and economic level than the majority of the arrivals from the other Mediterranean countries.

Non-Latin Immigrants. The proportion of immigrants from non-Latin countries has risen sharply since the First World War. In Argentina it amounted to only 13 per cent of the total before 1914 but had reached 30 per cent by 1926 and 48 per cent by 1938. In Brazil there was a sharp decline during the 1930's in the number of Italian and Spanish immigrants entering the country. Slavic immigrants, principally Polish, have continued to enter both countries in large numbers, and the influx of immigrants from the Baltic countries and from Rumania has been fairly heavy. Next to immigrants of the Latin races, the Slavs (Russian, Poles, Czechs, and Yugoslavs) have comprised the largest proportion of the total number of arrivals in Latin America since the First World War. Since the Slavs (other than Russians) did not begin to arrive in important numbers until the beginning of the twentieth century, however, they are still less numerous than the German element. German-speaking immigrants from Switzerland, the German states, and Austria began to arrive in some of the Latin American countries early in the nineteenth century, and considerable numbers entered during the decades preceding the First World War. Small numbers of them are found in the principal cities throughout Latin America, engaged in various types of activity, but the majority have settled in compact agricultural groups, in southern Brazil, southern Chile, and northern Argentina. In these agricultural colonies the German language and customs have been retained by the immigrants and their numerous descendants, and it is estimated that there are now about 900,000 German-speaking persons in Brazil, 236,000 in Argentina, 30,000 in Chile, and a few thousand in each of the other republics, making a total of around one and a quarter million.

Although the German element is found chiefly in the agricultural communities and tributary towns of southern Brazil and Chile, Germans are well represented in many lines of activity in other Latin American countries. Before the recent world war, they were active in operating shipping lines, and many important importing and exporting firms were German-owned, particularly firms handling such imported lines as hardware, machinery, electrical equipment, and chemicals, and those exporting such commodities as

coffee, cacao, hides, rubber, and minerals. There are a considerable number of German-owned agricultural properties, such as coffee *fincas,* in Latin America, especially in Mexico and Guatemala. Also, German immigrants have been active in starting small manufacturing industries.

Chinese Immigrants. Large numbers of Chinese coolie laborers entered Peru and Cuba during the nineteenth century (and Brazil on a smaller scale), but many of these were later repatriated. During the present century there has been an influx of them into Cuba, Mexico, and Panama, but for the last decade or two most Latin American countries have applied restrictions against this type of immigrant, or have made treaties with the Chinese Government which provide that that government shall refuse to issue passports valid for these countries to any of its citizens except such persons as students and merchants who would not remain in Latin America.

Japanese Immigrants. Japanese emigration to Latin America was negligible before 1907. It reached its peak in the decade 1924-1934. Brazil has received most of the 230,000 Japanese now in Latin America, but Peru has around 22,000, and Mexico and Argentina about 5,000 each. There are a few hundred Japanese in Cuba, Chile, Paraguay, and Panama. Japan was the country chiefly affected by the Brazilian quotas introduced in 1934. All of the Latin American countries restrict the entry of Oriental races, either directly or indirectly, and some exclude them altogether.

Most of the Japanese in Brazil are concentrated in the State of São Paulo, where they have become extensive property owners and are an important element in the production of cotton, potatoes, rice, and tea. There are several thousand in the vicinity of the city of São Paulo, where they grow vegetables for the city market. Japanese farmers produce more than half of the cotton output of the State of São Paulo.

Measures for Securing Unity. The governments of several of the Latin American republics, concerned over the existence within their borders of compact settlements of foreign-language groups whose home governments have aggressively undertaken to enlist their political loyalties, have taken steps to combat the dangers inherent in their nationalistic sentiments. They have undertaken to bring the schools, churches, clubs, and cultural societies of these groups under stricter control and, furthermore, have amended their immigration regulations so as to prevent the formation of such foreign enclaves in the future. Brazilian legislation, for example, restricts the number of immigrants of the same nationality who may settle in any locality and requires that at least 30 per cent of the residents of each district be Brazilian or Portuguese. Mexico, like-

wise, has legislation governing the settling of immigrants which is designed to prevent concentrations of settlement that might prove troublesome.

GENERAL REFERENCES

Behrendt, Richard F. "Germans in Latin America," *The Inter-American,* Vol. II, No. 4 (April, 1943), pp. 19-23 and 37.

Cohen, J. X. *Jewish Life in South America. A Survey of Jewish Communities for the American Jewish Congress.* New York: 1941.

Diffie, Bailey W. "Some Foreign Influences in Contemporary Brazilian Politics," *Hispanic American Historical Review,* Vol. XX, No. 3 (August, 1940), pp. 402-429.

Foreign Policy Association. *Problems of the New Cuba.* Chapter II, "Population Elements." Chapter IV, "Family Organization and Standard of Living." Chapter V, "Public Health." New York: 1935.

James, Preston E. *Latin America.* Chapter 1, "General Introduction," pp. 1-17. Chapter 33, "General Conclusions," pp. 825-837. Also end maps (Nos. 1, 2, and 144) and other population maps listed (pp. xiv-xviii).

Jones, Chester Lloyd. *Caribbean Backgrounds and Prospects.* Chapter II, "Racial Factors." Chapter III, "Health Problems." New York: 1931.

——. *Guatemala.* Chapter 19, "Population." Also Chapters 20-22, "Social Life." Minneapolis: 1940.

——. *Mexico and Its Reconstruction.* Chapter II, "The Population of Mexico." Chapter XVII, "Colonization." New York: 1921.

Jones, Clarence F. *South America.* Chapter VI, "The People of South America — Major Problems." New York: 1930.

Lumsden, E. W. H. "Immigration and Politics in Latin America," *The Inter-American Quarterly,* Vol. II, No. 4 (October, 1940), pp. 64-73.

Maack, Reinhard. "The Germans in South Brazil — A German View," *The Quarterly Journal of Inter-American Relations,* Vol. I, No. 3 (July, 1939), pp. 5-23.

Mulhall, M. G. *The English in South America.* Buenos Aires: 1878.

Munro, Dana G. *The Five Republics of Central America.* Chapter I, "The Country and the People." Chapters III-VII on individual countries. New York: 1918.

Normano, J. F., and Gerbi, Antonello. *The Japanese in South America.* New York: 1943.

Redfield, Robert. *Topoztlan, A Mexican Village.* 1930.

Royal Institute of International Affairs. *The Republics of South America.* New York: 1937.

Schwarz, Ernst. "The Jews of Latin America," *The Inter-American Quarterly,* Vol. 3, No. 3 (July, 1941), pp. 18-26.

Szyszlo, Vitold de. "Polish Settlers in Latin America," *The Inter-American Quarterly,* Vol. 3, No. 4 (October, 1941), pp. 76-81.

Wilcox, Walter F., ed. *International Migrations,* 2 vols. New York: 1931.

CHAPTER FOUR

Population: Immigration and Natural Increase

Limited Vital Statistics. What is the outlook for population increase in Latin America? The question is an important one, since the size of the population and the rate of increase vitally affect the economic prospects of the area. In seeking the answer, we are handicapped by serious deficiencies in demographic data. Some Latin American countries have never taken a census. Conditions have never been favorable for the collection of vital statistics in Latin America, owing to such factors as racial diversity, illiteracy, the high rate of illegitimacy, poor communications, inadequate technical services, and the widespread fear that the information sought might be used to the disadvantage of the persons furnishing it.

NATURAL INCREASE

Comparison with United States since 1790. From the limited amount of data available, however, it is possible to draw some general conclusions regarding population trends. It is obvious that the population of Latin America as a whole has grown much less rapidly since independence than that of the United States since 1790. The number of inhabitants in Spanish and Portuguese America toward the end of the eighteenth century was around 20 million, but of this total only about one-fifth were Europeans or of European descent. The white population was therefore approximately the same as that of the United States at that time. The first United States census, taken in 1790, showed a population of approximately 4 million. During the last 150 years the population of the United States has increased 33-fold, while in Latin America the increase has been only 6-fold. The difference is explained by the fact that not only was there a greater flow of immigration into the United States but also the natural increase in population was greater in the United States during the nineteenth century. In some areas of Latin America the rate of increase has exceeded the average rate

of increase in the United States. Such has been the case in the former provinces of the Río de la Plata, which were very sparsely settled up to the middle of the nineteenth century but have since received a heavy influx of immigrants.

Comparison with United States since 1900. Since about 1900, and particularly following the First World War, the rate of population growth in the United States has slowed down appreciably. Since 1920 the mean annual growth rate in the United States and Canada has been considerably lower than in the countries of Latin America for which data are available. According to calculations of the late Dr. Raymond Pearl, a leading authority on population problems, covering the major areas of the Western Hemisphere for the period 1920-1935, the weighted mean annual growth rate in the United States and Canada was 1.25, as compared with 1.88 for the Caribbean and Central American countries, and 2.43 for South America.[1]

Comparison of Brazil with United States. A comparison of the rates of growth in the United States and Brazil during the last half century is given here as of special interest because of the importance of the two countries. During the decade 1890 to 1900, the population of Brazil increased 21 per cent as against a gain of 26 per cent in the United States, but during the next 20 years the percentage increase in the United States was only 39 per cent as compared with 79 per cent in Brazil, and during the two decades from 1920 to 1940 the United States population increased 27 per cent as against 36 per cent in Brazil. Brazil's 192-per cent gain in population during the half-century since 1890 amounts to nearly four times the 52-per cent increase which the United States had during that period.

Comparison with Present Rates. From an examination of what data are available on the population growth in Latin America, it would appear that the present rate of natural increase is greater there than in the United States. It may be, however, that what appears to be a marked gain in population by natural increase is merely the result of including some of the Latin American countries' recent records which are more nearly complete and accurate than those of earlier censuses.[2] Latin America is by no means a homogeneous area with reference to population characteristics, and the rate of increase and the age structure of the population vary greatly in different areas.

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1 Raymond Pearl, "A Comparative Examination of Certain Aspects of the Population of the New World," *Human Biology*, Vol. XXI (September, 1940), pp. 359-402.

2 Compare remarks by Forrest E. Linder, *Population and Population Statistics of the Caribbean Area*, Department of Commerce, Bureau of the Census, Vital Statistics—Special Papers, Vol. 12, No. 31 (July 24, 1941), p. 563.

Birth and Death Rates. Both the birth and death rates are much higher in Latin America than in the United States or Europe.. In the Caribbean area, for example, the mean birth rate is 33.2, or almost double the 1939 rate for the United States, and the death rate for the Caribbean is 19.2 as compared with 10.6 in the United States.[3] Doctor Linder, vital statistician for the United States Bureau of the Census, finds no evidence to show that either the birth rate or the population-growth rate is declining appreciably in the Caribbean.[4] But the crude rate of natural increase is greater on the mainland than in the islands. As regards Colombia, one of the larger mainland countries, the latest census indicates that at the rate of increase which prevailed between 1918 and 1938 the population will have doubled itself by 1948 (within a period of 30 years) despite a negligible amount of immigration.[5]

Declining Rate in Argentina. On the other hand, the growth rate is declining in some of the South American countries. In Argentina, the rate of natural increase has fallen sharply, and the age structure is becoming less favorable to reproduction, which is in line with the trend in the United States and Europe. The natural increase in recent years has been less than 13 per thousand, as compared to a rate of 20.6 in the years 1910-1913. The increase by migration has also declined from 23.5 per year per 1,000 inhabitants in 1910-1913 to only 1.6 per year per 1,000 inhabitants in 1931-1939.[6]

IMMIGRATION

Early Open-Door Policy. Let us now consider the effects of immigration upon population growth in Latin America, and the outlook for further increases from that source. When the colonies achieved their independence, they had before them the example of the rapidly expanding United States, whose open-door policy on immigration was generally followed. But their efforts to attract immigrants were largely nullified during the first half-century after independence by disturbed political conditions. The modern period of immigration began after 1850. The Argentine constitution of 1860 required the Federal Government and the provinces to foster immigration and forbade the Federal authorities to debar foreigners who came to work the land, improve industry, or carry on a profession. The dictum of Alberdi that "to govern is to populate" has been generally adopted by the Argentine authorities. Argentina

3 *Ibid.*, pp. 563 and 564.

4 *Ibid.*, p. 564.

5 Antonio Suarez Rivadeneira, "Revelaciónes del Censo," *Anales de Economía y Estadística*, Tomo III, número 6 (Octubre 25, de 1940), Boletín de la Contraloría General de la República, pp. 30-31.

6 Alejandro E. Bunge, *Una Nueva Argentina* (Buenos Aires: 1941), Chapters I and IV.

has received the largest number of immigrants of any of the Latin American republics. From 1857, when systematic records were first started, through 1938 there entered the country a total of 6,742,206 persons, 3,573,049 of whom remained.[7] Brazil received 4,603,494 immigrants from 1820 to 1937.[8] Comparable data for emigration are not available, but assuming the same proportion as in Argentina, the net migratory balance may be placed at 2,400,000. The statistics of the other Latin American countries do not provide an adequate basis for establishing an exact balance of immigration and emigration, but some estimates are available. During the last half-century, it is estimated that Uruguay has received about a half-million immigrants[9] and Cuba about the same number.[10] Chile received only about 70,000 European immigrants between 1850 and 1930.[11]

It may be estimated roughly that Latin America has received 8 or 9 million immigrants since independence, while in the United States net increase from immigration has amounted to 26½ million.

Subsidies and Other Aids. The success of the immigration policies of Argentina and Brazil has been due in no small measure to the subsidies granted to immigrants and to the organized propaganda and recruiting services maintained in Europe. In both countries the Federal or local governments have refunded the passages of a great number of immigrants, lodged them at State expense for a short period after their arrival, permitted their effects to enter duty-free, organized placement services and enacted protective legislation, and paid transportation expenses to the localities where the immigrants were to reside.

Unfavorable Factors in Some Countries. Most of the other republics have also enacted measures designed to tap part of the westward flow of European migrants, but local conditions have been less favorable than those in Argentina and Brazil. In addition to climatic handicaps, the nature of their political and social structures has been an obstacle, since it has forced new arrivals to compete with native Indian, mestizo, or mulatto populations having a low standard of living. Because of these factors, most foreigners entering these countries have been either persons with capital to invest or those seeking opportunities in the skilled crafts, in retail or wholesale trade, in industry, in banking, or in speculative ventures.

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7 Eduardo A. Coghlan, "La Inmigración en la Argentina en el Decenio 1929-1938," *Revista de Economía Argentina*, Ano XXII, Tomo XXXIX, No. 264 (Junio 1940), p. 182. The figures do not include persons who enter or leave by land frontiers. In the terms of the immigration law, immigration and emigration refer only to overseas migration by second and third class passage.

8 *Brazil* (New York: November, 1939), p. 16.

9 Simon G. Hanson, *Utopia in Uruguay* (New York: 1938), pp. 9 and 209. During the quarter-century 1879-1903 the average net immigration was 4,000 annually, and from 1900-1930 the annual net immigration was 15,000.

10 Cf. Foreign Policy Association, *Problems of the New Cuba* (New York: 1935), p. 27.

11 Adolfo Matthei, *La agricultura en Chile* (Santiago: 1939), p. 44.

Factors Affecting Future Prospects. What are the prospects for large-scale immigration after the Second World War? These prospects depend partly upon human factors and partly upon the availability of lands suitable for colonization. The human factors include both the attitude of the Latin American peoples and governments, and the pressures or restraints imposed upon the inhabitants of relatively over-populated areas of the world. During the war immigration dwindled to a mere trickle. It is not possible to foresee what types of colonists will seek new homes in the Americas after the conflict, or whether the local authorities will be disposed to admit some of the groups most anxious to enter.

Restrictions on Immigration. Most Latin American countries have long prohibited or restricted the entry of persons in various categories, on the basis of such factors as race, health, literacy, or occupation. For example, all the Latin American republics have taken steps to curb the entry of persons of Asiatic races. Brazil for a time permitted Japanese to enter in large numbers but, in 1934, applied quota restrictions.

Since 1930 one country after another has imposed restrictions on immigration. There is reason to believe that the era of virtually unrestricted immigration has ended and that a more selective rather than an open-door policy will generally be followed henceforth. It is recognized that under present world conditions there is no longer an expanding market for the foodstuffs and raw materials of the New World, and that hereafter immigrants should be selected from the standpoint of their adaptability to a more diversified economy. Furthermore, it is realized that it is becoming increasingly difficult to find immigrants of suitable types who are willing to face the hardships of the frontier-like existence under nineteenth century conditions which would be their lot in many areas in Latin America.

Change in Types of Immigrants. Even before 1930 there had been a decided change as regards the types of immigrants that were being received. Prior to the First World War a higher proportion of the immigrants had been agriculturists and had come either from the Latin countries (Italy, Spain, Portugal, and France), or from central and northern Europe. But in recent decades a growing percentage has come from eastern Europe, the Near East, and the Orient. Some of these later arrivals have also engaged in agriculture, particularly the Poles and the Japanese, but others have remained in the cities, where they have gone into retail trade, peddling, small industry, and speculative activities.

Restrictions on Employment of Immigrants. In order to protect local workers, professional men, and small businesses against competition resulting from the activities of the latter types of immi-

grants, all Latin American countries since 1930 have tightened up their immigration regulations and have also enacted measures to restrict the employment of aliens. These measures usually prescribe the proportion of nationals that must be maintained in the total personnel of an enterprise. In some countries it is required that the personnel of all enterprises shall include a certain percentage of nationals; in others such regulations apply only to certain specified enterprises. The percentage of nationals specified in such legislation ranges from 50 per cent in Cuba to 90 per cent in Mexico. Similarly, certain kinds of industry, business, or professions have been reserved exclusively to nationals, although exceptions are sometimes made in cases where the services of technicians or other specially trained persons are required and cannot be supplied by nationals.

Quota Restrictions. Brazil, Mexico, and Peru now apply quota restrictions similar to those in the United States. The Brazilian regulations, adopted in 1934, admit annually from each country 2 per cent of the number of its nationals admitted during the previous 50 years. In 1938 these regulations were liberalized to permit the Immigration Council to raise to 3,000 the annual quotas which do not reach that number, provided, however, that at least 80 per cent of the quota is comprised of farmers or technicians in rural industries. Furthermore, all limits on Portuguese immigration were removed. The State of São Paulo suspended its subsidies to foreign immigrants from 1927 until 1935, when they were renewed.

COLONIZATION: AREAS SUITABLE FOR EUROPEANS

The physical characteristics of Latin America make it less suitable for colonization than is sometimes assumed. As previously indicated, large areas are not suitable for cultivation, and white settlers find the climatic conditions in much of the region very trying.

Brazil. Although there may be further relaxation of immigration restrictions after the war, it is unlikely that Latin America will open its doors to any considerable numbers of persons of non-European stock. This discussion, therefore, will be confined to the subject of areas suitable for settlement by Europeans. After extensive field investigations, officials of the International Labor Office have concluded that only in Brazil can immigrants find "fertile land in great quantities at prices sufficiently low to enable them to become owners of their holdings in a short space of time without contributing any other capital than their own power to work." [12]

12 *International Labor Review*, Vol. XXXV, No. 3 (March, 1937), p. 352.

Argentina. In Argentina, on the other hand, there is comparatively little vacant land except in the sub-tropical Chaco, and opportunities for further settlement would have to be provided by following one of the three following methods: (1) By extending the margin of cultivation through putting some of the present grazing lands into agricultural production; (2) by bringing about more intensive cultivation; or (3) by developing industry.

CHANGES IN LAND USAGE. The first method, involving changes in land usage, would present complex problems of marketing and soil suitability. Argentina has considerable possibilities for an expansion of the livestock industries provided that a market becomes available for the increased production of meats and hides. Also, there are areas that could well be devoted to the cultivation of fruit. Some see great potentialities in the Chaco, which extends into Paraguay and Bolivia. The Argentine Chaco has an area about equal to the State of Ohio. It is a flat, lowland region, suitable in various areas for the cultivation of such crops as corn, cotton, citrus fruits, and yerba maté. The greater part of the land in the Chaco and in adjoining territories is owned by the Government, which makes it available to settlers at low prices and on easy terms. The immigrants of various nationalities, principally from eastern Europe, that have entered the area nearly all have a low standard of living. In 1936 the governor of the Chaco territory came to the United States and recruited a number of farm families from the southern States to send to the Chaco. The idea was that they would be able to instruct the Argentine farmers in the best methods of growing cotton, but the experiment was not a success and the newcomers did not remain. Climatic conditions in the Chaco are not very favorable, and numerous insect pests add greatly to the discomfort and difficulties of settlers. It is claimed by some that the best lands of the area have already been colonized.

MORE INTENSIVE CULTIVATION. Considerable progress has already been made along the line of developing more intensive cultivation, which has been mentioned as the second possible method of opening the way for further settlement in Argentina. In recent decades much has been done to promote diversification of crops. Large estates have been subdivided and lands near centers of population have been cultivated more intensively.

INDUSTRIALIZATION. The third possibility as a means of providing for the support of a larger population, and one on which Argentina is counting, is industrialization. There are undoubtedly great potentialities in the development of industry, but the growth of manufacturing is limited by the market. Argentina cannot at present expect any large export market for manufactures, and the domestic market may be expected to expand only in line with the

expansion that may be made in the agricultural, pastoral, and extractive industries.

Chile. In Chile, as in Argentina, outlets for a larger population must be provided through the colonization of lands in the south, the subdivision and more intensive use of lands in the central zone, and the maximum development of manufacturing within the limitations imposed by the market and other factors. It is interesting to observe that during most of the nineteenth century Chile outranked Argentina in wealth and influence and, until about 1880, in population, but the lack of large areas suitable for settlement and the social structure of the country prevented the mass immigration which has been the basis of Argentina's rapid rise.

Peru. The principal sources of wealth in modern Peru, aside from its mines, are the irrigated valleys of the Pacific coast, where cotton and sugar are grown. The Peruvian government is promoting the further expansion of irrigation, but some investigators report that more than two-thirds of all the land on the coast to which it is economically possible to bring water is already under cultivation.[13] There is room for development and improvement in the livestock industry. With the increasing use of the airplane for passenger and cargo service, and with the highway over the Andes completed, considerable hope is entertained regarding the potentialities for development of the Montaña region east of the Andes. There are still, however, formidable obstacles to be overcome before this area can be said to offer any important prospects for colonization by European peoples.

Colombia and Venezuela. Colombia and Venezuela have been relatively unsuccessful in attracting immigrants in recent times. During the colonial era the region occupied by these countries was a strategic center of the Spanish domains, but it has since lost some of its earlier importance. Both Colombia and Venezuela have large areas which support a very sparse population, but the difficulties in the way of further settlement appear sizeable. More than half of Colombia's territory consists of the eastern plains, which are shut off from the remainder of the country by the Andes barrier. The population of this region is only about 300,000, out of a total population of 8,800,000. The savanas of the Orinoco and the luxuriant rain forests of the Amazon may someday support a great population, but the possibilities of their intensive utilization in the near future appear slight. Likewise in Venezuela the great interior plains have failed to come up to expectations as grazing lands, and the development of all regions except those where petroleum or precious metals have been discovered has been retarded because of unfavorable climatic conditions and diseases.

13 E. P. Keeler, "Agriculture in Peru," *Foreign Agriculture* (June, 1938), p. 278.

Mexico. Mexico from the earliest days of independence has endeavored to stimulate European immigration, but the results have not been impressive. The only successful attempt to attract agricultural settlers on a large scale — colonization by the Anglo-Americans in Texas — resulted in the loss of a large part of Mexico's territory. This experience strongly colored subsequent policies of Mexico with respect to colonization. President Diaz, while retaining some restrictions on settlement, again opened up national lands to colonization. A few European colonists were attracted and a substantial number of United States citizens. The latter played a considerable part in the development of winter vegetable industries on the west coast of the country and in the State of Tamaulipas, and initiated new agricultural and industrial enterprises in other parts of Mexico. The effect of Diaz' pursuit of this policy was to intensify among the Indian and mestizo elements a feeling of mistrust of his administration, and it was one of the factors that eventually led to its overthrow.

Mexico's population and immigration policies following the revolution have not been entirely consistent, but the effect of the agrarian and antiforeign legislation has been to discourage foreign settlement. The largest group of immigrants entering Mexico since the adoption of the 1917 Constitution has been comprised of Syrians and Jews from eastern Europe, about 15 to 20 thousand of whom entered the country between 1924 and 1927, when restrictions were applied. In the 1930's Mexico began placing severe restrictions on the entry of foreign workers, technicians, and salesmen. Industrial enterprises needing services which could be supplied only by bringing in specialists from abroad have been required to obtain a special permit in the case of each specialist brought in and to agree to train Mexican apprentices, at company expense, to take over the work later on.

Under the General Population Law of 1936 immigration is restricted to persons that intend to engage in agriculture, industry, or the development of exports. Furthermore, a substantial investment in such enterprises is required of them. Persons entering under false pretenses are subject to fine and expulsion.

Population Policy. In recent years less emphasis has been placed on immigration and more on internal colonization and repatriation of Mexicans from the United States. In a semiofficial study of population policy issued by the dominant political party, Gilberto Loyo contrasts the new orientation with that of the prerevolutionary period.[14] He states that in the past the rulers of Mexico favored a rapid increase of population through immigration for two reasons — to increase the white population and to develop

14 Gilberto Loyo, *La política demográfica de México* (1935).

the natural resources. "Our statement of the problem," he adds, "is different: populate in order that Mexico may integrate itself; populate in order that a strong Mexican nationality may be formed and that the modern Mexican state shall not be negligible." [15] This exposition also takes into account the need for a larger purely Mexican population in the northern states, where costly irrigation projects have been carried out, in order to establish nuclei capable of resisting the southward push of the Anglo-American peoples and culture. It is recognized that the slowing down of population growth in the United States has diminished the pressure, but the view is expressed that the danger has not been entirely removed.[16] The author favors the encouragement of larger families through taxes on celibacy, special honors to mothers, instruction in the schools, and opposition to Malthusianism. It is perhaps significant that the author studied in Italy.

Dominican Republic. Mexico is not the only Latin American country that is interested in the settlement of frontier regions as buffers against the population pressure of adjoining countries. This was doubtless one of the motives which impelled the Dominican Republic to admit 2,000 Spanish refugees, and to offer to receive up to 100,000 Jewish refugees for settlement on the 27,000 acres of land at Sosua donated by President Trujillo. Although the Dominican Republic has three times the area of neighboring Haiti, it has only half as large a population as the latter.

THE SOSUA SETTLEMENT. The Sosua settlement has attracted attention as a possible prototype for experiments in assisting immigration after the war, and also as a test for white agricultural colonization in the Tropics. The contract for settlement was made by the Dominican Republic Settlement Association (known as "Dorsa"), which was incorporated in the United States and is supported by donations from United States sources. It is recognized that it will be difficult for the colonists to repay their loans and maintain a decent standard of living (1) unless they can mechanize and industrialize their operations and (2) unless they can produce crops with a high unit value that would find a ready market in the United States. Possible money crops of which plantings have been started on the advice of specialists of the United States Department of Agriculture include lemon grass, citronella grass, and ilang-ilang, which produce essential oils for perfumes and drugs. Since the majority of the settlers are city-bred and find it hard to adapt themselves to agricultural pursuits, it remains to be seen whether most of them will continue to engage in farming in

15 *Ibid.*, p. 23.
16 *Ibid.*, pp. 48-49.

the Dominican Republic or will eventually make their way to the commercial centers of the continent.

The report of a survey conducted under the auspices of the Brookings Institution on refugee settlement in the Dominican Republic[17] expressed a somewhat pessimistic view regarding its possibilities. It stressed the fact that the refugee settlers are encountering many difficult problems in trying to adapt themselves to farm life under strange climatic conditions, and pointed out that their opportunities will be limited by the small amount of arable land available, by the low standard of living of the majority of the inhabitants of the Dominican Republic, and by the uncertain future of most major branches of tropical agriculture.[18]

GENERAL OUTLOOK

White Colonists in the Tropics. The success of United States engineers and doctors in overcoming the health hazards which blocked early efforts to construct the Panama Canal, and the progress made in eradicating yellow fever from parts of the Americas have encouraged the belief that through the applications of modern science, the vast empty tropical areas of South America will eventually be opened up to large-scale settlement by peoples of European stock.[19] But the magnitude of the problems presented by climatic conditions should not be underestimated. Not only are the debilitating effects of heat, humidity, and monotony on the human organism to be reckoned with but also the vast amount of effort required to cope with the prolific vegetable and animal life found in tropical climates. Up to now the economic ventures of Europeans in the tropical regions have served to create places for a limited number of persons in the higher income brackets, rather than to prepare the way for mass colonization.

Resumption of Mass Immigration Improbable. On the basis of the foregoing observations, it appears that there is little likelihood of the resumption of mass immigration into Latin America, although changes in the world political situation might bring it about. Lands suitable for colonization by unorganized European family groups are becoming scarcer; and all of the Latin American countries have become more exacting with respect to the types of immigrants they will admit. Furthermore, it is becoming harder to find immigrants who are willing to face the sort of hardships that were endured by pioneers of earlier generations. Even if a program of assisted immigration is worked out, it will take care

17 The Brookings Institution, *Refugee Settlement in the Dominican Republic* (Washington, D. C.: 1942).

18 *Ibid.*, p. 343.

19 A. Grenfell Price, *White Settlers in the Tropics* (New York: 1939).

of hardly more than a fraction of the mass immigration of other days.

Bilateral Agreements for Colonization. Typical of the new approach to this problem are the agreements concluded by Argentina in 1937 with Switzerland, the Netherlands, and Denmark, whereby Argentina agreed to keep those countries informed as to settlement opportunities in Argentina, and to set up with each country a mixed technical commission to study specific settlement plans. Before the outbreak of war in Europe the Swiss-Argentine commission approved plans for settlement in the Territory of Chubut. Venezuela in 1938 created a Technical Institute for Immigration and Land Settlement, on the advice of International Labor Office experts, to undertake planned immigration of selected nationalities.

Effects of the War. It must be recognized that these speculations may be upset by unexpected developments in Europe. After a long and exhausting war, there may be large numbers of people in Europe desirous of seeking a new start elsewhere, and some large settlement projects, financed by the United States or by international groups, may result in an important movement. On the other hand, the national leaders might find it desirable to keep the peoples of the Continent at home, where they would be available as soldiers, industrial workers, and producers of fodder and foodstuffs. The prewar policy of Italy was to settle farmers in North Africa and Ethiopia and to promote internal colonization with a view to attaining a greater degree of self-sufficiency.

General Conclusion. In the light of known resources and technology, and of the established policies of the various republics, the conclusion appears warranted that a steady growth in population may be expected, but not large-scale immigration such as occurred in Latin America in the nineteenth century. This conclusion, of course, is not based on the actual physical capacity of the area to accommodate and support a greatly increased population. Doubtless the population pattern in the temperate regions would change rapidly in the event that aggressive foreign powers with large surplus populations should obtain a foothold. Likewise, the sparsely populated areas in the tropical regions would probably be quickly filled up if they were opened to Asiatic and other races accustomed to the adverse climatic conditions of the Tropics and to a very low standard of living. There is, of course, a possibility that the discovery of new resources or new uses for existing ones might provide greatly increased wealth and the basis for greatly increased population.

GENERAL REFERENCES

Bowman, Isaiah. *Limits of Land Settlement.* New York: 1937.

——. *The Pioneer Fringe.* New York: 1931.

Cody, Morrill. "Refuge in the Chaco," *The Inter-American,* Vol. II, No. 7 (July, 1943), pp. 11-13 (*re* the Mennonites).

Maurette, Ferand, and Enrique Siewers. "Immigration and Settlement in Brazil, Argentina, and Uruguay," *International Labour Review.* I (Brazil). Vol. XXXV, No. 2 (February, 1937), pp. 215-247; II (Argentina and Uruguay). Vol. XXXV, No. 3 (March, 1937), pp. 352-383.

Munro, Dana G., and associates. *Refugee Settlement in the Dominican Republic.* Washington, D. C.: 1942.

Nyhus, Paul O. "Colonization in the Argentine Chaco," *Foreign Crops and Markets,* U. S. Department of Agriculture, Vol. XXXII, No. 25, pp. 793-800. Washington, D. C.

Price, A. Grenfell. *White Settlers in the Tropics.* New York: 1939.

Rasmussen, Wayne D. *Colonia Tovar, Venezuela,* Agricultural History, Vol. XVII (July, 1943), pp. 156-166.

Schwartz, Ernst, and Johan C. Le Velde. "Jewish Agricultural Settlement in Argentina: The ICA Experiment," *Hispanic American Historical Review,* Vol. XIX, No. 2 (May, 1939), pp. 185-203.

Siewers, Dr. Enrique. "The Organization of Immigration and Land Settlement in Venezuela," *International Labour Review.* I. Vol. XXXIX, No. 6 (June, 1939), pp. 764-772. II. Vol. XL, No. 1 (July, 1939), pp. 32-55.

CHAPTER FIVE

Chief Characteristics of Economic Development in Latin America

In this chapter an attempt will be made to identify the common elements in the Latin American economies that determine the position of the region as a whole in relation to world economy. Despite great variations among the Latin American countries with respect to types of principal products and degree of economic importance, there are certain fundamental similarities arising out of geographic factors and the course of historical evolution.

High Degree of Economic Specialization. Historically the Latin American economies have been characterized by a high degree of economic specialization. Although some of the countries have made considerable headway with diversification of production in recent decades, most of them still depend upon a limited number of products as the main source of national wealth, as evidenced by the nature of their exports. Single products account for around 90 per cent of the total value of exports from Venezuela (petroleum), from El Salvador (coffee), and from Bolivia (tin). A few mineral products comprise the bulk of the exports from Peru (61 per cent), Chile, (84 per cent), and Mexico (75 per cent). In Uruguay pastoral products (principally wool, hides, and meat) account for 80 per cent of the total value of shipments abroad. Even in Brazil, which has the largest area of any republic in the Western Hemisphere and possesses a great variety of natural resources, over 72 per cent of the total value of exports during the decade 1923-1933 was accounted for by one product, coffee.

ADVANTAGES AND DISADVANTAGES. The Latin American countries with sparse population and extensive land area have followed the usual course of regions with such conditions in tending towards extensive cultivation and a considerable degree of specialization in cash or export crops. Such concentration on one or a very limited number of products which can readily be prepared for shipment and for which there is a strong demand abroad provides the quickest

and easiest means by which a country can accumulate capital with which to pay for the development of transportation facilities and the construction and embellishment of its chief cities and ports. According to classical economic theory, the combination of such economic specialization and geographical division of labor should result in the optimum per capita return. But a high degree of specialization is fraught with dangers, especially when the monetary returns from exports comprise a large proportion of the national income, as is the case in most of the Latin American countries. The position of highly specialized countries is especially precarious in wartime, when there is danger of being cut off not only from their markets for exports but from sources that supply necessary imports. In Latin America excessive specialization has also tended to perpetuate the feudal structure of society inherited from the colonial era and has prevented the development of a middle class.

Predominance of Primary Production. In all Latin American countries primary production predominates over secondary production; that is, the principal economic activities—those of the mines, oil fields, ranches, and plantations — are extractive. Manufacturing industries are relatively undeveloped in most of the countries and have only recently attained a position of some importance in several of the larger of them. Such manufacturing industries as there are in Latin America produce primarily for the domestic market. The predominance of a "raw-materials economy" is clearly evidenced by the nature of the exports, which consist principally of a few staple products. Twenty-two commodities or groups of commodities account for all except about 6 per cent of the total value of exports from the twenty Latin American republics (*see* Table 3). These export items may be grouped under four main headings: Minerals (40 per cent of total), food products (40 per cent), fibers (10 per cent), and miscellaneous products (10 per cent). The largest single item of export is petroleum and its derivatives. The next export in importance is coffee, followed by gold, silver, copper, meats, sugar, and wool. Other important exports of lesser magnitude are cotton, wheat, corn, various industrial metals, sodium nitrate, bananas, cocoa, and hard fibers.

Undeveloped State of National Markets. The organization of internal marketing and the development of national transportation systems have received relatively little attention in Latin American countries. Their efforts in the past have been directed mainly towards getting available surpluses to world markets. This has been due in large measure to the fact that geographic factors and the course of historic development have been such as to hinder the attainment of national political and economic unity and to discourage efforts to facilitate internal marketing. Recent develop-

ments in transportation and communications, at considerable cost, are bringing outlying regions into closer contact, and while there are yet many obstacles to be overcome, progress is being made in organizing domestic markets.

Low Purchasing Power. Per capita purchasing power is relatively low in Latin America. Although it is not possible to give exact comparisons, since the only available data are rough estimates that have been made from statistics compiled on different bases, it may be stated that the per capita income in most Latin American countries is less than $100 per year as compared with $600 in the United States. In a few of the countries it amounts to about half the per capita income in the United States.

In view of the limited domestic demand for many of the staple products of Latin America, the larger portion of them are exported. The economic significance of Latin America to the rest of the world, therefore, has been its position as a producer of large export surpluses of pastoral, agricultural, forest, and mineral products.

Large Export Trade. Table 4 shows the percentage of world production and export of certain raw materials and foodstuffs supplied by the Latin American republics in 1938. In only a few cases (principally coffee and bananas) does Latin America *produce* more than half of the world output. Since the domestic consumption of staple products, however, is comparatively small in Latin American countries, they have obtained a large share of the world's export trade in a number of commodities. For example, Latin America produced only 11 per cent of the world's corn in 1938, but 74 per cent of the corn moving in international trade came from Latin America, and mostly from one country — Argentina. In the case of wheat, Latin America's share in production was 8 per cent and in exports, 29 per cent.

Diversification of Production. Increasing emphasis on diversification of production has substantially reduced the significance of the specialization which formerly prevailed generally in the economies of Latin American countries and which still characterizes those of a number of them.. Diversification has been along three principal lines: Production of basic foodstuffs to supply domestic needs, the development of new agricultural export commodities, and the encouragement of industrialization. A substantial measure of success has been achieved, especially since about 1930, along each of these lines, particularly in Brazil and the Caribbean countries.

Complexity of Economic Structures. An examination of the foreign trade statistics of the American republics indicates the

continued predominance of raw materials and foodstuffs in the export trade, but it also reveals the increasing complexity of their economic structures. It is inaccurate to state, as is frequently done, that the foreign trade consists exclusively of an exchange of the raw materials of the Latin American countries for the manufactured goods of other nations. The Latin American countries are large importers of foodstuffs, raw materials, and semimanufactures, as well as of finished manufactures, although the latter type of manufactures comprises from 40 to 80 per cent of the total value of imports in most of the countries.

Semimanufactures, the raw material of local manufacturing plants, comprise a fairly large proportion of the total imports of some of the countries. For Argentina, for example, the percentage is 31.5, for Brazil it is 16.4, and for Chile it is 27.4. Machinery and other capital goods are the largest items in the import trade (*see* Table 5).

SEMIMANUFACTURES AND MANUFACTURED FOODSTUFFS. The larger part of Latin American exports go out in crude or in simply worked form (wheat, bananas, and iron ore, for example). But a substantial and increasing proportion of exports, such as copper bars, canned meats, sugar, and petroleum products, undergo a considerable amount of processing. An analysis of the Latin American exports, on the basis of the official classifications used by the United States Government, shows that a surprisingly high percentage of them should be classified as "semimanufactures" or as "manufactured foodstuffs." In the case of Chile, for example, well over half of the total value of exports, including electrolytic and standard copper bars, gold bars, and sodium nitrate, are semimanufactures. Chile also exports small quantities of manufactured foodstuffs, such as wines, and jerked or salted meats. Mexico, Peru, Colombia, and Ecuador are other countries which ship out a substantial proportion of their mineral exports in semimanufactured form. Cuba furnishes the outstanding example of an exporter of manufactured foodstuffs, since approximately 80 per cent of its exports consist of "raw" or refined sugar and other sugar-cane products. In addition, Cuba exports manufactured tobacco (cigars). From 15 to 20 per cent of the exports of the countries of the Río de la Plata basin go out in the form of manufactured foodstuffs, principally preserved meats. There are also some important semimanufactures, such as quebracho extracts, oil of petigrain, and animal by-products.

FEW FINISHED MANUFACTURES EXPORTED. On the other hand, finished manufactures other than foodstuffs are relatively insignificant. Finished manufactures made by machine methods probably do not exceed 2 per cent of the total of all exports, although the proportion may run higher for certain countries. Some of the

principal exports of manufactures include cotton goods from Brazil, glassware from Chile, and binder twine and cordage from Mexico and Cuba.

The distribution by economic classes of the foreign trade of several leading industrial nations may be cited here by way of comparison and contrast. Prewar Germany, a highly industrialized nation deficient in raw materials, presented just the reverse of the Latin American situation, since foodstuffs and raw materials normally accounted for around 90 per cent of that country's total imports, while manufactures comprised from 65 to 80 per cent of the total value of exports. Coal and wood pulp were the leading crude and semimanufactured products.[1]

Of Japan's exports in 1935, 58 per cent were finished manufactures and another 30 per cent, semimanufactures, while the two leading import groups were raw materials (61 per cent) and semimanufactures (19 per cent).[2]

The United States occupies a unique position, since it is at once a leading industrial nation and a producer of surplus food products and raw materials, but the relative importance of manufactures in the export trade has gained considerably since before the First World War. For the years 1931-1935, United States exports consisted of 30.2 per cent crude materials, 3.9 per cent crude foodstuffs, 8.8 per cent manufactured foodstuffs, 14.5 per cent semimanufactures, and 42.6 per cent finished manufactures. Imports for the same years were: crude materials 28.9 per cent; crude foodstuffs, 15.6 per cent; manufactured foodstuffs, 13.7 per cent; semimanufactures, 18.7 per cent, and finished manufactures, 23.0 per cent.[3]

Persistence of Handicrafts and Indian Customs. In most of the countries traversed by the Cordillera and Andes ranges, from Mexico down to Peru, a large proportion of the population still retains a predominantly Indian way of life. Most of the necessaries are supplied by native handicraft, and there is a large degree of self-sufficiency among villages or regions. Corn, the staff of life in Latin American countries, is grown on small plots by primitive methods and ground on a stone quern. Hats, sleeping mats, baskets, and toys are made by hand from rush or palm leaves. Much of the spinning and weaving is also done by hand. Pottery is made from local clays.

Despite the simplicity of their economy, rural communities, even among the most remote mountain settlements, are usually part of an elaborate marketing organization, which includes the peddler,

1 *Statistisches Jahrbuch für das Deutsche Reich;* League of Nations, *International Trade Statistics.*

2 U. S. Department of Commerce, Trade Information Bulletin No. 836, *Expansion of Japan's Foreign Trade and Industry* (1937), p. 57.

3 U. S. Department of Commerce, Trade Promotion Series No. 198, *Foreign Trade of the United States, Calendar Year 1938,* Part I, Table 7, p. 24.

the professional trader, and street bazaars in market towns. There is a considerable amount of barter, and, just as in Texas or Vermont, persons bringing eggs or other produce to town may accept credit with a merchant in lieu of cash, although instances in which values are not reckoned in monetary terms are probably quite rare. Competent investigators have found that money is in general use in the Indian villages of Latin America. In Guatemala,[4] for instance, a country with a predominantly Indian population, professional merchants, carrying their burdens in a *cacaxtle,* or wooden frame, on their backs, cover considerable territory either on foot or by bus.[5]

The idyllic picture painted by some writers of Indians working for the sheer joy of making and exchanging the products of their handicraft for other commodities is based on romanticism rather than facts. Large portions of the population in most Latin American countries lack the means, and in some cases the inclination, to buy many of the objects which enter into international trade. Such things as phonographs and sewing machines, however, are to be found in Latin America in the most unexpected places; imported machetes are in general use even among the most humble; and aniline dyes have generally replaced native vegetable and animal dyes. Cotton and woolen fabrics, imported or made by machine methods within the country, are tending to replace the handmade fabrics.

Dependence on Foreign Enterprise and Financing. The Latin American countries have relied to a large extent upon foreign enterprise and financing to provide transportation facilities and to develop their natural resources. They have been passive, rather than active, in the great trade and financial movements of the nineteenth and early twentieth centuries. British investments began immediately after the Latin American countries established their independence. The British built the principal railways in most of the South American countries and also were the leaders in developing ports, steamship lines, communication facilities, and public utilities in the principal cities. They also invested in agricultural properties and mines in Mexico. There was a rapid expansion in investments by United States interests during the 1920's, and at the end of that decade it was estimated that they totaled around 5 billion dollars. Total British investments at that time were about as great. Substantial amounts of French capital had been invested in railways, mines, and industrial enterprises, and smaller investments had been made by Germans, Belgians, Dutch, Swedes, Swiss, Italians, and Canadians.

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4 Robert Redfield, "Primitive Merchants of Guatemala," *Quarterly Journal of Inter-American Relations* (October, 1939), p. 49.

5 Chester Lloyd Jones, *Guatemala* (Minneapolis: 1940), p. 319.

Some of the Latin American countries have made foreign investments in their sister republics — notably Argentina (in Brazil and Paraguay), and Chile (in Bolivia), but on balance they owe substantial amounts abroad. At present they are in what Cairnes termed the third stage of international borrowing, where interest payments on old loans exceed new borrowing, and consequently, there is annually an excess of exports.[6] This situation may temporarily be reversed at times, as in Brazil in the years 1939-1941, when considerable refugee capital entered from Europe and there were new loans and investments from the United States.

GENERAL REFERENCES

Anonymous. "Export-Import Bank Loans to Latin America," *Foreign Policy Reports,* Vol. XVII, No. 7 (June 15, 1941).

Bratter, Herbert M. "Foreign Exchange Control in Latin America," *Foreign Policy Reports,* Vol. XIV, No. 23 (February 15, 1939).

Elliott, A. Randle. "European Colonies of the Western Hemisphere," *Foreign Policy Reports,* Vol. XV, No. 11 (August 15, 1940).

——. "The Resources and Trade of Central America," *Foreign Policy Reports,* Vol. XVI, No. 12 (September 1, 1941).

Hediger, Ernest S. "Impact of War on Mexico's Economy," *Foreign Policy Reports,* Vol. XIX, No. 7 (July 15, 1943).

——. "Agricultural Cooperation in the Americas," *Foreign Policy Reports,* Vol. XIX, No. 13 (September 15, 1943).

Trueblood, Howard J. "Raw Material Resources of Latin America," *Foreign Policy Reports,* Vol. XV, No. 10 (August 1, 1939).

——. "War and United States-Latin American Trade," *Foreign Policy Reports,* Vol. XV, No. 18 (December 1, 1939).

——. "Trade Rivalries in Latin America," *Foreign Policy Reports,* Vol. XIII, No. 13 (September 15, 1937).

——. "Economic Defense of the Americas," *Foreign Policy Reports,* Vol. XVI, No. 10 (August 1, 1940).

——. "Progress of Pan American Cooperation," *Foreign Policy Reports,* Vol. XV, No. 4 (February 15, 1940).

——. "The Havana Conference of 1940," *Foreign Policy Reports,* Vol. XVI, No. 13 (September 15, 1940).

Whidden, Howard P., Jr. "New Horizons in International Air Transport," *Foreign Policy Reports,* Vol. XIX, No. 8 (July 1, 1943).

Wilde, John C. de. "Economic Projects for Hemisphere Development," *Foreign Policy Reports* (March 1, 1942).

——. "Wartime Economic Cooperation in the Americas," *Foreign Policy Reports,* Vol. XVIII, No. 4 (February 15, 1942).

See also **Reference Works listed for Chapter 1.**

6 J. E. Cairnes, *Leading Principles of Political Economy* (London: 1874), pp. 431-437.

Part Two

The Major Economic Activities

CHAPTER SIX

Mineral Industries

Importance of Mineral Wealth. The mineral wealth of Latin America, the magnet that first attracted European colonization to that part of the globe, is still the basis of the principal economic activity in about half of the Latin American countries. As has already been pointed out, about 40 per cent of the aggregate value of Latin American exports is made up of mineral products. The percentage runs much higher for a number of the countries, amounting to about 86 percent for Bolivia and Venezuela, 83 per cent for Chile, 75 per cent for Mexico, and 62 per cent for Peru. In the cases of Colombia and Ecuador minerals account for about one-third of the value of exports.

Historically, the centers of the mining industry have been in the high mountain regions extending from Mexico through Middle America and down the Andean range in the western part of South America. The mineral exports of Brazil, which at one time was the leading gold- and diamond-producing country of the world, are at present relatively unimportant, although there has recently been renewed interest in the development of its diversified mineral resources. In more recent times, since the beginning of the twentieth century, rich petroleum deposits have been opened around the rim of the Gulf of Mexico and the Caribbean Sea, and also in Argentina, Peru, and Ecuador. Although there are deposits of both metallic and non-metallic minerals in the regions of the Río de la Plata basin and the Antillean republics, the mineral industries there have had comparatively little development, except in Cuba.

Despite the importance of the mineral industries in Latin America, a comparatively small number of persons—possibly not more than 2 per cent of the population—are directly engaged in mining and metallurgical activities. Indirectly, however, through the funds derived from taxes and profits, a much higher proportion of the population gains its livelihood from the mineral industries. In Chile, at the height of the nitrate boom, taxes on nitrate and iodine supplied as much as 67 per cent of the federal revenue. And when oil production reached its peak in Mexico, the taxes on

petroleum alone accounted for one-third of the federal revenues in that country, not including the amounts derived from mining, which also were considerable. In Venezuela the petroleum industry is the chief source of revenue.

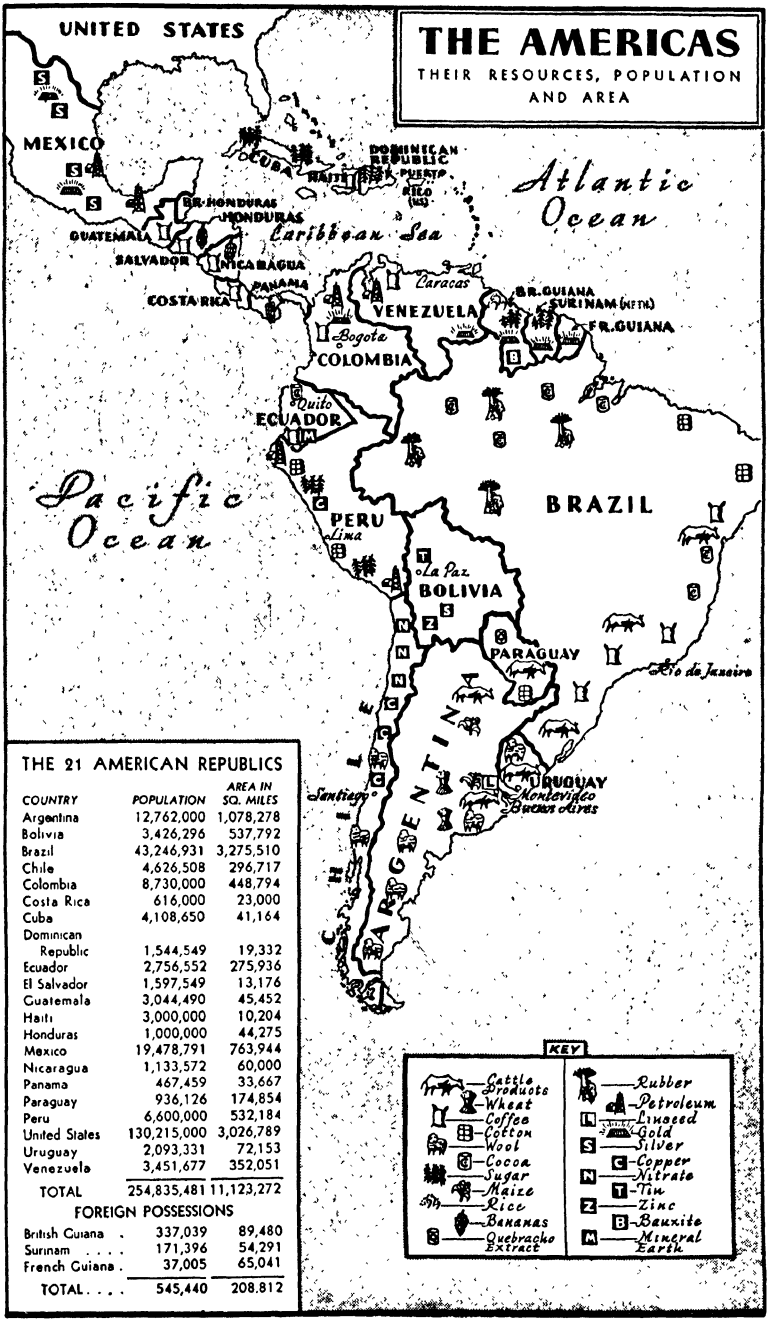
STAGES OF DEVELOPEMENT

Colonial Era: Precious Metals. The mineral industries of Latin America have passed through three or four distinct stages of development. During the colonial era mining was confined almost exclusively to the extraction of precious metals, while the iron, steel, and mercury needed for the exploitation of the mines were imported for the most part from Europe. In preconquest days copper was utilized by the Aztecs and other peoples in Latin America; later, the Spanish settlers in the Viceroyalty of Peru (which also included the area now occupied by the countries of Chile and Bolivia) worked the deposits to a limited extent for local use.

In the colonial era the mines of the New World produced gold and silver in quantities which were for those days fabulous. During the sixteenth century the Potosí district, loctated in the territory of the present republic of Bolivia, was the most important silver-producing region in the world. Later Mexico, or New Spain as it was then called, took the lead and by the end of the colonial period was producing two-thirds of the world's silver.[1] Except during the last quarter of the nineteenth century, when the United States was in first place, Mexico has continued to lead as a silver-producing country. During the seventeenth century, Colombia was the principal gold-producing country, but yielded first place to Brazil during the eighteenth century. Since the discovery and development of gold deposits in California, South Africa, and Russia, the gold produced by the Latin American countries has amounted to only about 7 per cent of the world production of this metal . The aggregate amount of silver produced in Latin America is 43 per cent of the world total, of which Mexico's output alone accounts for 30 per cent.

The consumption of metals in Latin America is very low in comparison with that in the United States or in the industrialized nations of Europe. Consequently most of the output of the Latin American mines has been exported. During the colonial era, as a rule only citizens of Spain or Portugal were permitted to operate mines, and the stream of gold and silver was canalized to the mother country. The colonies normally were not permitted to trade with other nations until near the end of the colonial period. After independence there was an influx of foreign capital and of technicians

1 Alexander von Humboldt, *Essai politique sur le royaume de la Nouvelle-Espagne* (Paris: 1811), Vol. III, p. 346.



THE 21 AMERICAN REPUBLICS

COUNTRY	POPULATION	AREA IN SQ. MILES
Argentina	12,762,000	1,078,278
Bolivia	3,426,296	537,792
Brazil	43,246,931	3,275,510
Chile	4,626,508	296,717
Colombia	8,730,000	448,794
Costa Rica	616,000	23,000
Cuba	4,108,650	41,164
Dominican Republic	1,544,549	19,332
Ecuador	2,756,552	275,936
El Salvador	1,597,549	13,176
Guatemala	3,044,490	45,452
Haiti	3,000,000	10,204
Honduras	1,000,000	44,275
Mexico	19,478,791	763,944
Nicaragua	1,133,572	60,000
Panama	467,459	33,667
Paraguay	936,126	174,854
Peru	6,600,000	532,184
United States	130,215,000	3,026,789
Uruguay	2,093,331	72,153
Venezuela	3,451,677	352,051
TOTAL	254,835,481	11,123,272
FOREIGN POSSESSIONS		
British Guiana	337,039	89,480
Surinam	171,396	54,291
French Guiana	37,005	65,041
TOTAL	545,440	208.812

Fig. 5. Resources of the Americas

familiar with the methods used in Europe in the exploitation of the industrial metals, which had been neglected during colonial days. Since these industrial metals were produced chiefly for foreign consumption, it is natural that a large part of the development work should have been carried out by foreign enterprises. The recent tendency toward nationalization in Latin America is in part a reflection of nascent industrialization and increasing domestic consumption of metals.

Nineteenth Century: Industrial Metals. The development of the industrial metals during the nineteenth century marked the second stage in the evolution of the mineral industries in Latin America. Soon after the colonies attained independence, copper mining came into prominence in Chile and, somewhat later, in Peru and Bolivia. Chile was the leading copper-producing country of the world for a few decades until surpassed by the United States in 1882. Toward the end of the century the output of other metals in Latin America, particularly lead and tin, also gained importance, as did several nonmetallic minerals, such as nitrates in Chile and coal in Chile and Mexico.

During the colonial period and the first three-quarters of the nineteenth century, simple mining and reduction processess were used. In 1557 the "patio," or amalgamation process, of treating ores with mercury was discovered at Pachuca, Mexico, and was used until the end of the nineteenth century. The first reverbatory furnace used for copper smelting in Latin America was built in Chile in 1842. During the colonial era ores were brought up out of the mines in rawhide bags on the shoulders of the workmen. Attempts to introduce English machinery into Mexico soon after independence failed in most instances, owing to transportation difficulties and revolutionary disturbances.

Since 1880: Industrialization of Mining. The construction of railways to the mining centers from the ports of entry during the last two decades of the century prepared the way for the third stage in the evolution of the mineral industries—the industrialization of mining and the treatment of ores that formerly would have been considered too poor to warrant handling. New chemical and mechanical processes for treating complex ores also were developed, principally by American engineers. The construction of railways and the installation of costly machinery required large investments of foreign capital, as well as the services of technicians from abroad versed in the new processes.

The modern development of Mexico's mining and metallurgical industries began during the last quarter of the nineteenth century. Americans introduced the technology that had been developed in the United States and played a prominent role, and French interests

also had a hand in it, particularly in the development of copper mining in Lower California.

In Peru the mining of copper ores did not receive a great deal of attention until after 1890, when there was completed a railway from Lima to Oroya, which ascended in places to an elevation of 12,000 feet above sea level. Large-scale mining was made possible by the formation, in 1902, of the Cerro de Pasco Company, which obtained the capital and technical resources required to secure ample ore reserves, constructed additional railway lines and power plants, and erected a smelter. The operations of this company have subsequently been extended, until today, with its complex but highly integrated activities, it is an outstanding example of an efficient modern mining enterprise. There are five separate mining camps sending a steady flow of ores to the central smelter at Oroya, where silver, gold, copper, lead, zinc, and bismuth are produced. Light and power are furnished by a steam plant and three hydroelectric plants. The company operates 110 miles of railway and the necessary shops. A Cottrell plant and a smokestack 555 feet high were completed in 1940 to eliminate the smoke nuisance and to recover lead, bismuth, arsenic, tin, and other products. The various products manufactured by the company at Oroya include sulphuric acid, carbide, lead products, brick, and oxygen.

Similarly, in Chile large-scale operations in the copper industry have been developed by American interests since 1904, when William Braden organized a company to work El Teniente, a mine located 50 miles southeast of Santiago. The Guggenheims obtained control of El Teniente a few years later, and in 1911 organized a new company to develop the Chuquicamata property, situated in the north, which is today the greatest copper mine in the world. These operations produced large profits during the First World War, and in 1916 a subsidiary of the Anaconda Copper Company was formed to develop the deposits at Potrerillos. About $35,000,000 was spent over a period of ten years before the first copper was produced at Potrerillos, now the third largest producer in Chile. Both Chuquicamata and Potrerillos are located in the arid northern states at altitudes of around 10,000 feet. Water must be brought by pipe lines from considerable distances, and power is generated at steam plants located at Pacific coast ports 87 and 75 miles, respectively, from the mines.

Since 1910: Petroleum. The most significant development in the Latin American minerals field since about 1910 has been the rise of the petroleum industry, which may be considered as the fourth stage in the evolution of the Latin American mineral industries. Petroleum and its derivatives constitute the most valuable group of exports from Latin America, and they are also being consumed to an increasing extent in the producing countries. Seven

Latin American countries produce petroleum in commercial quantities (*see* section, "Fuels," pp. 73-76).

THE PRECIOUS METALS

The output of gold and silver in Latin America has been stimulated since 1934 by the gold- and silver-buying policies of the United States Government. Deposits of both metals, particularly gold, are rather widely distributed throughout Latin America. Latin America is no longer a dominant factor in world gold production, but the foreign exchange derived from the sale of domestically mined gold is of considerable significance in the economies of some of the smaller countries. In Nicaragua, for example, gold has become the most important single item of export. As the economic depression intensified after 1930, gold mining received increasing attention, owing both to the higher value of gold and to the desperate need of some countries to find new sources of income. The Chilean Government, faced with widespread unemployment in the nitrate industry, assisted thousands of workers to undertake gold washing. A substantial proportion of the gold purchased in Latin America is derived from placer operations, but the larger share comes from vein mining. Gold is frequently found in ores whose chief value lies in their content of copper, silver, or other metals.

Mexico ranks first among the silver-producing countries of the world. Peru is the second greatest silver-producing country of Latin America and ranks fourth in world production of this metal. Other Latin American countries producing silver include Bolivia, Honduras, Argentina, Chile, Colombia, Ecuador, and Brazil.

With the enactment of the Silver Purchase Act by the United States and the devaluation of the dollar through the raising of the price paid for gold, the United States has replaced the Far East as the great sink of the precious metals.

IRON AND FERROALLOYS

Iron. Iron is used more extensively throughout the world than any other metal. Although Latin America may be said to be just entering the iron age, and although its iron deposits have played a comparatively minor role so far in the development of the area, these deposits may be considered first among those of the industrial metals because of their potential significance.

BRAZIL. Brazil is believed to possess the largest reserves of iron ore in the world. The principal deposits, and the only ones that have been worked to any extent, are located in the State of Minas

Gerais. The reserves in this State have been estimated to be as follows:

1,500,000,000 tons of compact hematite with over 65 per cent iron.

3,500,000,000 tons of itabirite ore with 50 to 60 per cent iron.

10,000,000,000 tons of low-grade ores with 30 to 50 per cent iron.

The hematite deposits in the State of Minas Gerais are distributed over an area 100 miles long and 60 miles wide, with a general southwest trend starting from the Itabira do Matto Dentro district. Although these deposits have been carefully studied and extensively developed since the beginning of the twentieth century, the tonnage that has been mined is relatively insignificant. This reserve of high-grade ore was attracting increasing attention in Europe during the period between the two world wars, but large-scale exportation has been hindered by export taxes and by inadequate transportation. The Itabira district lies about equally distant — 225 miles in a straight line — from the port of Rio de Janeiro to the south and Vitória to the east. Fuller exploitation of this district awaits the extension of the Vitória e Minas Railroad from Drummond. Since the beginning of the war several thousand tons of ore a month have been moved out by truck to Drummond and thence by rail to Vitória. On March 3, 1942, the governments of Brazil, the United Kingdom, and the United States signed an agreement for the development of the Itabira mining properties, rehabilitation of the Vitória e Minas Railroad, and expansion of the ore-loading facilities at the port of Vitória. Subsequently, the Brazilian Government obtained control of the mining and railroad rights and organized a new company, the Companhia Vale do Rio Doce, to carry out this project, aided by funds advanced by the Export-Import Bank of Washington. Under the aforementioned agreement, the United Kingdom and the United States each agreed to purchase 750,000 tons of iron ore annually.

Heretofore most of the iron ore used in Brazilian iron and steel works, as well as the greater part of the ore exports, have come from the Casa de Pedra mine (5 miles northeast of Congonhas do Campo), which has a maximum annual output of 700,000 tons. Exports from this region move over the Central do Brasil Railway. The northern iron-ore belt extends from Itatiaiussi to Sabará (about 40 miles) and toward Santa Barbara to the east; this section will supply the new Volta Redonda steel mill. Exports of iron ore from Brazil have followed an upward trend, increasing from 183,000 long tons in 1937 to 391,000 in 1939; in 1940, however, they declined to 222,000 tons. Practically all production of iron ore is

concentrated in the State of Minas Gerais. In 1938 the output of this State nearly tripled as compared with 1937, increasing from 333,000 to 967,000 long tons. In 1939, however, production declined to 734,000 long tons and was approximately the same in 1940.

There are a number of companies in Brazil producing pig iron from local ores, using charcoal as the carbon element. Production of pig iron in Brazil in 1941 amounted to 209,000 metric tons, most of which was produced in the State of Minas Gerais. The large plant now under construction at Volta Redonda is expected to more than double this production.

CHILE. Iron-ore deposits are plentiful in Chile and are confined to a well-defined belt, which occupies, roughly speaking, the western third of the provinces of Coquimbo and Atacama, usually within 20 miles of the coast, and extends north into the Province of Antofagasta. Many attempts have been made to exploit these deposits, not only for export trade but for local production of pig iron. In 1910 a French company acquired the iron-ore deposit at Tofo and built an aerial ropeway from the mine to the port of Cruz Grande, and installed a blast furnace at Corral near Valdivia. They produced 4,800 tons of pig iron in 1911 at a great loss, and suspended operations. In 1913 they leased the Tofo mines to the Bethlehem Steel Company, and today these are the only iron-producing mines in Chile. Upon leasing these properties, the Bethlehem Steel Company formed the Bethlehem Chile Iron Mines Company and started to develop the Tofo iron-ore deposit for large-scale mining and transport operations. This necessitated the building of loading docks and a port; also a power plant at Cruz Grande; a 15-mile normal-gauge railway from the port to the mine at 2,300 feet above sea level; and a crushing plant and storage bins at the mine, as well as the preparation of the mine for low-cost mining, loading, and haulage to the crushing plant.

Ore shipments began in 1922 with 250,000 tons, rose to 1,500,000 tons in 1926, with a maximum output of 1,778,557 tons in 1929. From May, 1932, to May, 1933, production was suspended and operations were confined to stripping. During 1934 and 1935 the annual output was again about 1,000,000 tons and since then has been between 1,500,000 and 1,600,0000 tons. The ore is shipped to the Bethlehem Steel Company's plants at Sparrows Point near Baltimore, Maryland.

In recent years the Chilean Government has taken an interest in the development of an iron and steel industry. A government-subsidized plant near Valdivia has a capacity of 18,000 tons of pig iron a year, 75 per cent being from iron ore from the Tofo mine and 25 per cent from scrap iron. The rolling mills have a capacity of 20,000 tons, and turned out about 10,000 tons in each of the years 1939 and 1940. The operations of this plant have not been

entirely successful, however, and the Government is studying a project for a new plant near Concepción.

MEXICO. In Mexico iron deposits are found in various parts of the country, the principal ones being located in the northern tier of States. The largest single deposit is the Cerro de Mercado in the State of Durango. It is controlled by the Compañía Fundidora de Fierro y Acero de Monterrey, S. A., which also has holdings in the States of Coahuila, Nuevo León, and Oaxaca. This company was, until recently, the only one in Mexico mining iron ore and producing pig iron. Its furnaces and rolling mills are located at Monterrey. Approximately 124,000 metric tons of iron ore were produced in 1938, principally from the Cerro de Mercado. Prior to the outbreak of the Second World War, some shipments of iron ore were made annually to Europe. A second primary iron and steel producer, the Altos Hornos Company, at Monclova, State of Coahuila, began operations at the end of 1944.

There are extensive iron-ore deposits at Las Truchas, State of Michoacán, not far from the Pacific coast. The Bethlehem Steel Company bought this property in 1921 and made extensive explorations, but later discontinued operations.

VENEZUELA. In Venezuela important iron-ore deposits are found in the Sierra de Imataca, lying south of the Orinoco River and not far from its mouth. Some shipments of iron ore were made from this region before the First World War, but the principal development work has taken place since 1926. The principal known deposit is at Pao, 37 miles south of the port of San Felix on the Orinoco River. The Bethlehem Steel Corporation, which controls this deposit, in 1933 formed a subsidiary, The Iron Mines Company of Venezuela, to undertake the development of mining concessions in Venezuela. After further surveys, the company's plans were approved by the Venezuelan Government, late in 1939, and development work was started early in 1940. A loading port is being built at Palua, and from this point a highway and standard-gauge railway are being constructed to the mines. By means of specially constructed shallow-draft boats it will be possible to transport the ore directly to United States ports. It is expected that ore shipments will begin about 1946.

Other high-grade ore deposits are found in mountain ranges south of the Orinoco. The potential iron-ore reserves in this region are believed to be very large. In view of the proximity of these deposits to tidewater, and the fact that the distance by sea to United States ports is considerably less than from the loading point for Brazilian and Chilean ores, it is possible that Venezuela may become the principal supplier of iron-ore imports into the United States.

COLOMBIA AND PERU. Iron ore is also found in Colombia and Peru, and those countries are also interested in developing deposits and establishing iron and steel works.

The most extensive and important deposit in Peru, both with respect to grade of ore and convenience of location, is at Marcona, 250 miles south of Lima and adjacent to the coast. This deposit belongs to the Peruvian Government, which has engaged an American firm to prepare plans for the development of a steel works in the Santa River valley. The Peruvian Government also controls iron-ore deposits at Tambo Grande, located near the sea in the northern province of Piura. Other privately owned deposits are found in the interior of the country.

Colombia is believed to possess substantial resources of iron ore, but explorations of these deposits have not been sufficiently systematic or extensive to permit an accurate evaluation of their extent or quality. They have not been a factor in international trade. Steps have been taken, however, to utilize some of the richest deposits in the establishment of a local iron and steel industry.

Manganese. A number of Latin American countries have deposits of manganese. Since these countries are high-cost producers, exports from Latin America have not been large during peacetime, but they increased materially in volume during the First World War and again during the recent world conflict, in order to supply the needs of the wartime industries of the United States. The principal use of manganese is in the manufacture of steel, but it is also used in the manufacture of dry batteries.

The presence of manganese deposits may be of significance in the future development of steel industries in Latin America. Brazil, which, as has been noted, has vast deposits of iron ore, is also well supplied with manganese. In fact, geologists have reported the deposits in that country to be among the largest in the world.[2] Since 1933 Minas Gerais has been the only producing State. A subsidiary of the United States Steel Corporation, the Companhia Meridional de Mineração, owns the principal deposit. High prices stimulated manganese production during the First World War, and in 1916 it amounted to half a million tons, but it declined after the war, owing to difficulties experienced by Brazilian producers in competing with those of West Africa, Russia, and India. Investment of foreign capital in improvements has been discouraged since 1934 by Brazilian mining legislation, but with the interruption of the usual sources of world supply, Brazilian manganese has again come into demand. The United States normally provides the principal market.

Cuban exports of manganese, most of which is produced in the province of Oriente, have increased materially since 1936. This

2 Benjamin L. Miller and Joseph T. Singewald, *The Mineral Deposits of South America*, (New York: 1919), p. 192.

increase has been due to the development of a new process for concentrating the ore and to the fact that Cuban manganese enters the United States duty free, while imports from other countries are subject to a duty of one-half cent per pound. The Cuban-American Manganese Corporation, a subsidiary of the Freeport Sulphur Company, is the principal producer.

Production of manganese in the United States normally amounts to less than 10 per cent of its requirements. Part of the domestic output is used in the manufacture of dry batteries. Of the imported product the greater portion goes into the manufacture of iron and steel, where it is required for the removal of oxygen and sulphur. Latin America has been supplying about one-fifth of United States requirements, and of this amount increasing quantities have been supplied by Brazil and Cuba.

Vanadium, Molybdenum, and Tungsten. Peru is the leading world producer of vanadium, followed by the United States, southwest Africa, northern Rhodesia, and Mexico. Vanadium is used principally in alloys but also used as a raw material for a number of chemicals. It is believed that the United States requirements of this product could be supplied by increased domestic production and increased imports from Peru and Mexico.

Molybdenum and tungsten, like vanadium, are used principally as ferroalloys, although they are also used in the chemical and other industries. The United States produces about 92 per cent of the world output of molybdenum, the remainder coming from Mexico and Norway. In Mexico molybdenum is derived as a by-product in the treatment of copper ores, principally by the Greene Cananea Copper Company. Small quantities are also produced in Peru and Chile.

Tungsten, used to harden steel and other alloys in the manufacture of high-speed tools and hard-faced machine parts, is a strategic material that has become increasingly important in the United States war production program. It also has important uses in the manufacture of filaments for electric lamps and other vacuum tubes, in refractory electric contact points, and in tungsten chemicals. China has been the leading world producer and the principal source of United States imports of tungsten, but receipts from that country have declined.

The Latin American countries normally supply only about 10 per cent of the world output, but are able to supply larger quantities under the stimulus of higher prices. During the First World War Bolivia became one of the important suppliers. Since 1936 Bolivian production has increased materially. Substantial quantities are now being shipped from Argentina and Peru, and smaller amounts from Mexico and Brazil. If necessary, Latin America probably could supply the United States requirements for imported tungsten. Pro-

duction in the United States in normal times equals that of the combined Latin American countries. The Bureau of Mines has undertaken investigations in the western part of the United States with a view to increasing domestic resources.

Chromite. Chrome ore, or chromite, also is important in the manufacture of alloy steels, particularly stainless steel, and, in addition, has refractory and chemical uses. Its chief refractory use is in the manufacture of bricks and cement for high-temperature furnace linings. Chromite is used also in the tanning of leather, in the manufacture of pigments, and in electroplating. The demand for chromite is particularly heavy in wartime. The Latin American republics accounted for 7.6 per cent of world production in 1937. Most of this amount came from Cuba, where there are large reserves of chromite of refractory grade. There are also low-grade deposits in Brazil.

NONFERROUS METALS

Copper. The most important metal mined in Latin America is copper. Chile ranks second among the producing countries of the world (after the United States), and Mexico, Peru, Cuba, and Bolivia also produce significant amounts. Copper is exported in a variety of forms. Chile produces high-grade electrolytic copper, which normally goes to European markets, and also unrefined bars, concentrates, and precipitates, which go principally to the United States, where they are entered in bond and re-exported after refining. There is no United States import duty on copper, but since 1932 there has been an excise tax of 4 cents a pound on imported copper, which amounts to the same thing.

The United States is the leading producer of copper. It has also predominated in the smelting and refining field, but its lead in both phases of the industry has been reduced during the last decade, owing to the mounting production in Canada and Northern Rhodesia and to the development of refining facilities in other leading producing and consuming countries. The United States normally is a net exporter of copper, but in 1940 and 1941 substantial quantities were imported for consumption in meeting the needs of the war production program.

The four largest copper-producing companies in South America, the principal producer in Cuba, and two out of the three or four large producers in Mexico, are controlled by American capital. The smelters and refineries of affiliated companies, such as the works at Carteret and Perth Amboy, New Jersey, at Baltimore, Maryland, and at Tacoma, Washington, receive the unrefined products of the Latin American mines and give them further treatment. In recent years the Chilean Government has given consideration to the matter

of financing a smelter to treat the copper and gold ores produced by the smaller companies.

Tin. Tin is all-important in the economy of Bolivia, the only country in Latin America that produces an important amount of it. Bolivian production costs are higher than in the other important tin-producing countries of the world, and experts assert that were it not for the International Tin Cartel, which controls the price and production, and in which Bolivia has a favorable quota, the Bolivian producers would not be able to compete in normal times in world markets. Tin mining is carried on by large dredging operations in the Far East, while the Bolivian tin is produced in narrow veins, which have a rapidly declining ore content. Also, labor costs are high in Bolivia.

Although the United States consumes about 40 per cent of the world's tin output, it has never had an important tin-smelting industry and normally obtains its tin in metal bars or blocks, chiefly from British Malaya, where there is an important smelting industry, but to some extent from China, the Netherlands Indies, and the United Kingdom. Exports of tin ore from the British colonies are subject to an export tax unless destined for British territory, in order to discourage the establishment of smelting facilities elsewhere. Bolivia is the United States' nearest alternative source of tin ore, but the Bolivian ores contain so many impurities that they are uneconomical to smelt unless they can be mixed with the richer ores of Malaya or Nigeria. Furthermore, Bolivia can supply only about one-half of the United States' normal peacetime requirements.

Some smelting operations were carried on in the United States during the First World War, when high costs were not an insurmountable obstacle. Under the pressure of the Second World War, steps were taken early in 1941 to establish a tin smelter with Government assistance. The Federal Loan Administrator contracted with the Netherlands firm of N. V. Billiton Maatschappif, owners of tin mines in the Netherlands East Indies, to build and operate a tin smelter at Texas City. The Metals Reserve Company, organized in 1940, had previously made a contract with the smaller tin producers in Bolivia to take sufficient tin concentrates to smelt 18,000 tons of fine tin annually for five years. The output of the chief producing company, controlled by Simon Patiño, was already under contract to British smelters, which normally take most of the Bolivian tin production. Before the war interrupted the operations of the Smelters' Pool, the high-grade concentrates went to England, while those of medium grade went to Arnheim, Netherlands, and those of low grade to Germany and to Bristol, England.

It is conceivable that steps taken during the war emergency to develop processes in the coating of metals or in the use of other

types of containers may affect the consumption of tin in the post-war world.

Although Bolivia is the only important tin producer in Latin America, Argentina and Mexico have a small output. The Argentine ore is derived from a mine high on the Andean plateau in the Province of Jujuy, and the concentrates must be transported thence by truck and rail to the smelter at Buenos Aires. The output is sufficient to supply Argentina's domestic requirements, such as those for the manufacture of solder, which amount to approximately 1,100 tons annually, and to leave a small balance for export.

Lead and Zinc. In world production of lead, Mexico ranks second to the United States. Other Latin American countries producing these metals are Peru, Argentina, and Bolivia, but their output is surpassed by production in Australia, Canada, Germany, and other countries. Important lead-smelting works are operated by the American Smelting and Refining Company and the American Metal Company, Limited, at several points in northern Mexico. In Peru the Cerro de Pasco Company has a lead smelter at Oroya. In Argentina the National Lead Company, S. A., operates a lead smelter at Puerto Vilelas, Chaco Territory.

Latin America is relatively less important as a supplier of zinc. The output of Mexico, the principal Latin American producing country, is exceeded by that of a number of suppliers, notably the United States, Canada, Australia, and Germany. Zinc is mined in Mexico by four companies, two of which are British and two, United States owned. The Mexican Zinc Company, a subsidiary of the American Smelting and Refining Company, operates a zinc smelter at Rosita, State of Coahuila, where it treats ore from its own and other mines.

Small amounts of zinc are produced in Argentina, Peru and Bolivia, but the ore is not smelted in these countries, except for small quantities in Argentina. The zinc ores from these countries and some from Mexico normally go to Germany, Belgium, and France. Because of the large production of the United States, its imports of zinc are usually unimportant, but recently they have increased as a result of war needs and declining United States reserves. These increased imports have come principally from Latin America and, to a small extent, from Canada and Newfoundland. The construction of additional zinc-smelting plants has been undertaken in order that the industry in the United States may be equipped to handle ores such as formerly were smelted on the European continent, and also to supply domestic and British zinc requirements.

Nickel. About 85 per cent of the nickel output of the world is normally produced in Canada. Latin America ordinarily does not

figure as a producer, but there has recently been some development of deposits in Brazil. Deposits at Libramento, State of Minas Gerais, have been controlled since 1931 by the Companhia Nickel do Brasil, which, in 1936, signed a contract with a German firm. New equipment, including electric furnaces for the treatment of the ore, has been installed. There is also a nickel deposit in the Municipality of São José do Tocantins, State of Goiaz, which is owned by a Japanese group. Since the railroad is 210 miles distant, operation of these mines presents some difficulty. Prior to the Second World War, the exports of nickel went to Germany and Japan.

Cuba promises to become an important source of nickel, vitally needed in the production of high-strength steels for the tools of war, as well as of great importance in peacetime industrial uses. There are large deposits of low-grade ores in the eastern part of the country, which when treated by a metallurgical process developed by the Freeport Sulphur Company, yield nickel for armor plate and for other tough steels required for warships, planes, tanks, and guns. The Reconstruction Finance Corporation in 1942 financed construction of a $20,000,000 plant and facilities for the processing of the ore by the Nicaro Nickel Company, a subsidiary of the Freeport Sulphur Company, for the United States Government.

Bauxite. Bauxite is the raw material for the manufacture of aluminum. Surinam (Netherlands Guiana) and British Guiana have bauxite deposits which rank among the largest in the world. These deposits are controlled by the Aluminum Company of America and the Aluminium Company of Canada. Among the American republics, Brazil is the only one known to have important bauxite deposits. These deposits are located in various parts of the country, the principal ones being found in the States of Minas Gerais, Espirito Santo, Bahía, and Rio de Janeiro. In recent years some Brazilian bauxite has been used domestically in the manufacture of aluminum sulphate, and some bauxite has been exported to Argentina. Shipments in 1941 amounted to approximately 14,000 tons. Several companies have become interested in the manufacture of alumina and aluminum. At the end of 1943 a plant designed by a United States engineering firm was under construction near Ouro Preto, with an initial hydroelectric installation of 6,000 h.p. It is to have a capacity of 10,000 tons of pure alumina and electric furnaces to produce 2,000 tons of aluminum metal per year. The excess production of alumina will eventually be available for export.

Minor Metals. BISMUTH. Mexico and Peru are the leading producers of bismuth; most of the remaining output is from the United States and Canada.

BERYLLIUM. Beryllium is very light in weight and is used as an alloying material to strengthen copper, nickel, and iron. Beryl, the mineral from which the metal beryllium is derived, exists in limited quantities in many countries, but the combined production of Brazil and Argentina probably exceeds the output of the rest of the world. The total production is very small.

ARSENIC. Mexico is an important producer of arsenic.

CADMIUM is produced in Mexico.

PLATINUM is classified as a critical material by the Army and Navy Munitions Board. The chemical and electrical uses of platinum have grown rapidly and are important in war production. Colombia is the only important Latin American producer of platinum, supplying about 10 per cent of the world total. Practically all the Colombian production is exported and goes principally to the United States.

NONMETALLIC MINERALS (OTHER THAN FUELS)

Sodium Nitrate. Chile possesses, in the barren pampas of the north, the only large workable deposits of natural inorganic nitrates in the world. The deposits are worked at elevations ranging from 4,000 to 7,500 feet. Although they occur intermittently over an irregular belt some 400 miles long from north to south, and from 5 to 40 miles wide, the principal workings are at five main fields inland from the ports of Iquique, Tocopilla, Antofagasta, and Taltal.

The nitrate deposits were known in colonial times when nitrate was used for making gunpowder. Their value as fertilizer was recognized early in the nineteenth century, and exports, beginning in 1830, slowly increased, but the principal developments came after 1880, when Chile acquired the former Peruvian and Bolivian territory where the main deposits were located. From that time on through 1931, sodium nitrate was the chief export and the main prop of the national economy.

Meanwhile other sources of chemical nitrogen were discovered and expanded to a point where the once dominant position of Chilean nitrate was undermined. The first competitor was the nitrogen derived from by-product coke ovens, which began to be substituted for the earlier types of ovens around 1880. By 1900 the production of by-product nitrogen was about one-third of the world production of chemical nitrogen. Processes for the fixation of nitrogen contained in the air were developed during the decade preceding the First World War, and now provide the chief source of nitrogen. Germany was the first country to perfect these methods of producing synthetic nitrogen, as a part of its program of self-

sufficiency in strategic materials. Other countries followed suit during the 1920's. At the beginning of the century Chile supplied 66.6 per cent of the world output of chemical nitrogen, but this dropped to 55 per cent in 1913, further declined to 23 per cent in 1929, and reached a low of 4 per cent in 1933. The Chilean industry has since made some comeback, and in 1938 Chile produced 8 per cent of the world output of chemical nitrogen.

The recovery of sodium nitrate from the ore (or *caliche*) is a simple process, but it involves a considerable capital investment in order to obtain satisfactory results from a commercial standpoint. The operations must be conducted on a large scale, and large quantities of water and fuel, as well as other supplies, must be brought from considerable distances. From 1884 to about 1929 the Shanks process was used. Prior to the First World War Chilean nitrate occupied such a dominant position that the costs of production were not a serious consideration, and, furthermore, the industry supported a heavy export tax which was the chief source of revenue for the Chilean Government. But with increasing competition from synthetic products, a search for new methods began, and it was carried to a successful conclusion by the Guggenheim brothers. The advantages of the Guggenheim process over the Shanks is that it requires less heat and less manual labor and effects a higher degree of recovery from the ore. The two larger plants, the María Elena and the Pedro de Valdivia, now using the Guggenheim process, have a relatively greater productive capacity than the 12 Shanks plants that are in operation.

An abortive attempt was made in 1931 to reorganize the nitrate industry by forming a great trust known as "Cosach," the abbreviation for Compañía de Salitre de Chile. The Cosach was dissolved in 1933 and a new company, the Chilean Nitrate and Iodine Sales Corporation, was established on January 8, 1934, with control over production quotas, exportation, and trade. The Chilean Government has the dominant voice in this organization, and receives 25 per cent of the profits.

Sodium nitrate is used chiefly as a fertilizer to supply nitrogen to the soil. Industrial requirements, such as the manufacture of munitions, are supplied principally by the synthetic product.

Since the First World War the United States has been the largest market for Chilean nitrate. The United States market is of special importance to Chile, since sodium nitrate enters the United States free of duty and, furthermore, the proceeds of the sales result in free dollar exchange, while the exchange resulting from sales to most other countries is "blocked" and can be used only for special purposes, usually on a "compensation" basis. Since 1940 United States procurement agencies have made large purchases of Chilean nitrate.

Egypt is customarily the second best market for Chilean nitrate, followed by Germany, the United Kingdom, Japan, the Netherlands, and France. European markets normally take about 50 per cent of the Chilean exports of sodium nitrate.

Iodine is an important by-product of the nitrate industry. The major portion of the world consumption for the last 50 years has been supplied by Chile. Since January, 1934, the production and sale of iodine has come under the control of the officially controlled Nitrate and Iodine Sales Corporation.

Some iodine is produced from kelp indigenous to certain regions of the seacoasts of Scotland, Norway, France, and Japan. The commercial production of iodine in the United States from oil-well brines began about 1930, the output averaging about 15 per cent of the Chilean production. As a result of increased supplies from new sources, iodine prices have declined from former levels.

Since 1914 a number of Chilean nitrate plants have also been producing **potassium nitrate.**

Sulphate of Soda is now produced by the Anglo-Chilean Nitrate Company.

Graphite. Of the three commercial types of graphite, a form of carbon, only the most common, or amorphous type, is produced in the Western Hemisphere, where Mexico is the only important producer. Crystalline lump and crystalline flake graphite, the other two types, are produced only in Ceylon and Madagascar. These latter varieties are essential in the iron and steel industry for making foundry facings and crucibles, and are listed as critical materials by the Army and Navy Munitions Board.

Other Nonmetallic Minerals. Under the stimulus of wartime prices, the production of various nonmetallic minerals expanded greatly. Brazil benefited more than any other Latin American country from this boom. Exports of quartz crystals, of which Brazil has a virtual monopoly, exceeded a million dollars in value in 1940, and exports of diamonds were still more important. The diamond-cutting industry has been established in Brazil and Cuba since the outbreak of the war in 1939. In Brazil between 4,000 and 5,000 skilled workers are employed in cutting local stones, and in Cuba about 200 persons are employed in the processing of diamonds imported from the Union of South Africa through the United States. Brazil produces some asbestos. Both Argentina and Brazil have increased their exports of mica, but only part of these shipments have been of the block or sheet type, which is of strategic importance. For some uses splittings of mica less than one-thousandth of an inch in thickness are required. India is the chief source of this grade of mica, followed by Madagascar. Some

Brazilian block mica has gone to India for processing and re-export to the United States.

Building materials comprise an important group in the nonmetallic field. Most of the Latin American countries have deposits of limestone, shale, or other materials that provide raw materials for local cement plants. Granite, marble, rock, and sand are important items of export from Uruguay to Argentina.

Salt is produced on a small scale in a number of countries. While its industrial use has not yet been carried very far, plans have been made in Brazil and Colombia for the utilization of salt deposits in the manufacture of soda products.

Chile is the leading country in Latin America in the production of sulfur and sulfide ores, the raw material for sulfuric acid, which is the most important acid in the chemical industry. Chile ships fairly large quantities of sulfur to neighboring countries. Peru normally supplies its own needs. The Argentine Government has formed a "mixed company" to develop its sulfur deposits.

Brazil produces the kaolin which is used in its porcelain factories.

FUELS

Coal is found in many parts of Latin America, but the known reserves are small in relation to the world total and, furthermore, most of the Latin American deposits are of poor quality. Several of the Latin American governments, and especially those interested in developing iron and steel industries, have given increasing attention to the development of coal resources in recent years. The aggregate Latin American production in 1942 amounted to approximately 5,400,000 metric tons.

Chile has the largest production of any Latin American country. Its output in 1942 reached a record high of 2,420,000 metric tons. All of Chile's production comes from the Province of Arauco. The two principal coal-producing companies, the Lota and the Schwager, have a fleet of six freighters, which transport the coal from the Gulf of Arauco, where the principal mines are located, to Chilean ports near the centers of consumption. Chile also has lignite fields in the Provinces of Valdivia and Concepción. The latter deposits are exploited at a point on the coast 10 miles north of the city of Concepción and the Lirquen and the Cosmito mines.

Since 1925 Chile has imposed an import duty on fuel oil in order to protect the coal industry, but the principal mining companies use fuel oil or hydroelectric power. The principal demand for coal is from the railways and for domestic use, but some is used by gas and electric plants and by cement, ceramic, glass, and sugar factories.

Chilean coal is not suitable for coking, and the iron and steel works at Corral relies on charcoal and hydroelectric power.

Brazil has become the second largest Latin American coal producer, with an output of 1,750,000 metric tons in 1942. It does not, however, produce enough for domestic needs, and considerable quantities are imported. The Brazilian coal fields are in the southern states of Rio Grande do Sul, Santa Catarina, Paraná, and São Paulo. Like Chile, Brazil protects its coal-mining industry by levying a duty on imported coal and by requiring coal-importing firms to buy a quota of domestic coal equal to 20 per cent of their imports. Federally owned railways are also obligated to use native coal.

About 80 per cent of the output normally comes from the State of Rio Grande do Sul and the São Jeronimo and Butia mines. Washing plants have been installed to reduce the ash content.

Plans for the Volta Redonda steel works call for the use of coal from the Santa Catarina fields, and the port of Laguna is being improved to facilitate coal shipments. The new iron and steel plant will require about 400,000 tons of coke annually, and it is anticipated that part of this will be supplied from domestic sources and part from imports.

Mexico produced slightly over 1 million tons of coal in 1938, but annual production since that year has been averaging about 850,000 tons. About 60 per cent of the coal mined in Mexico is converted into coke for use in metallurgical plants and the Monterrey Iron and Steel Works. All except a minor amount of the coal mined in Mexico comes from the eastern part of the State of Coahuila. The coal from this region is bituminous. There are three principal producing companies. The American Smelting and Refining Company controls the principal producing mine, the Nueva Rosita, and also operates the Cloete mine. Workers' co-operatives operate the Palau and La Esperanza mines, which were formerly in the hands of private companies. There are also a number of smaller companies, but their combined output is not very large.

In addition to the Coahuila mines, an anthracite mine at Tonichi, State of Sonora, began operations on July 1, 1942. Most of its output is taken by the copper smelter at Santa Rosalía, Baja California.

Colombia has large coal reserves, but development has been hindered by the inconvenient location of the deposits and the limited domestic demand. Most of the coal produced is taken by the railways. Production during the 1930's averaged about 350,000 tons per year, but subsequently increased somewhat and is now approximately equal to total national consumption.

In Peru production of bituminous coal amounted to 120,000 tons in 1942. Some anthracite coal is mined at the Ancash coal fields. Most of the bituminous coal comes from the Goyllarizquisga mine of the Cerro de Pasco Copper Company. Some anthracite coal is

also mined by the Northern Peru Mining and Smelting Company. There are rich anthracite coal deposits in the Santa River Valley, and plans being developed by the Peruvian Government call for the use of this coal in the development of an industrial area including chemical and steel works, near Chimbote.

It was announced in 1942 that large deposits of medium-grade coal had been discovered in the Province of San Juan, Argentina. The deposits are located about 700 miles from Buenos Aires in the Sierra de Caballo Anca and about 60 miles northeast of Jachal, which is the terminal of a branch of the National Railways.

Several of the Latin American countries are large importers of coal. Prior to 1940 Argentina imported around 3,000,000 tons a year, and Brazil imported, on an average, about a million and a half tons a year. Coal imports and coal consumption in most of the other republics has declined, however, owing to the increasing use of petroleum and hydroelectric power.

Petroleum. While Latin America is relatively deficient in coal resources, it is one of the major oil-producing regions of the world. The aggregate annual production in Latin America during the years 1936-1939 averaged 282,000,000 barrels, or slightly less than 15 per cent of world production. Seven Latin American countries are substantial producers of petroleum (*see* Table 7), and Brazil has developed some slight production in the State of Bahia. Venezuela is the largest producer in Latin America, accounting for over 65 per cent of the Latin American total, and is the third largest producing country in the world, following the United States and the U.S.S.R. Mexico was in first place from the early years of the century, when commercial production began in that country, down through 1927, but has subsequently been in second place in Latin America. Colombia, Argentina, Peru, Ecuador, and Bolivia are the remaining producing countries.

Owing to the low level of domestic oil consumption, about two-thirds of the Latin American output is exported. Local use, both as motor fuel and for industrial purposes, is increasing, however. In Mexico, for example, approximately half of the national production is consumed in the country. Argentina before the war normally produced only about 60 per cent of its requirements of petroleum products, and is normally the largest importer of crude petroleum and fuel oil among the Latin American countries.

All of the producing companies have some refining facilities, and in addition there are refineries in Brazil, Chile, Cuba, and Uruguay. The total refining capacity in Latin America at the end of 1940 was 331,125 barrels daily, of which that in Mexico amounted to 99,800 barrels, in Venezuela, 76,325 barrels, and in Argentina, 94,230 barrels (*see* Table 8).

The development of refining facilities in Venezuela has occurred

only in recent years. The major part of Venezuelan production, as well as a substantial part of the production from Colombia and some other Latin American producing countries, is refined in the Netherlands West Indies on the islands of Aruba and Curaçao. The principal oil companies operating in many parts of the world chose this site for the establishment of a refining industry because of the lack of deep-water harbors adjacent to the Maracaibo oil fields in Venezuela and because of the greater degree of political stability in the Netherlands possessions. Since 1937, however, new concessions granted in Venezuela have required the establishment of refining facilities, and the Standard of New Jersey and the Shell interests have agreed to construct refineries at the end of the war when materials are available.[8]

Most of the Latin American oil exports go out as crude petroleum or fuel oil, but there is some export of refined products. Very little Latin American petroleum refined in the Netherlands West Indies is consumed on these islands, from which the major portion is re-exported to the United States and European markets. Making allowance for the ultimate destination, the prewar export statistics indicate that about 25 per cent of the total Latin American oil exports went to the United States, about 25 per cent to the United Kingdom, and around 30 per cent to the European continent. The remainder went principally to other Latin American countries or was consumed as bunker fuel.

Except in Argentina, where the original discoveries were made by the federal Bureau of Mines, the pioneer work of exploration and development has been carried on by foreign enterprises. In Argentina, a Government-controlled company had a monopoly of oil production and sale until 1915, when private companies were admitted. The private companies, chiefly subsidiaries of foreign enterprises, took the initiative in developing refining facilities, and during the 1920's and early 1930's accounted for the major part of the production in Argentina. After 1937 the Government again restricted the operation of foreign oil companies and took energetic steps to build up the Government oil industry. The foreign oil interests in Bolivia were expropriated in 1936, and in 1938 the Mexican Government expropriated the principal oil-producing companies in that country.

GENERAL REFERENCES

Bain, H. F., and T. T. Read. *Ores and Industry in South America.* New York: 1934.

Clark, J. Reuben, Jr. "The Oil Settlement with Mexico," *Foreign Affairs* (July, 1928).

Coloma Silva, Enrique. "Petroleum Legislation in Ecuador," *World Petroleum,* Vol. XII, No. 9 (September, 1941), pp. 56-63.

3 Ruth Sheldon, "Venezuela's New Petroleum Law," *World Petroleum,* Vol. XIV, No. 6 (June, 1943), p. 29.

Donald R. Richberg's Story: The Mexican Oil Seizure. New York: 1940.

Dunn, Frederick Sherwood. *The Diplomatic Protection of Americans in Mexico.* New York: 1933.

Elliott, W. Y., and others. *International Control in the Non-Ferrous Metals.* New York: 1937.

Emeny, Brooks. *The Strategy of Raw Materials, a Study of America in Peace and War.* New York: 1934.

Haussmann, Frederick. "Latin American Oil in War and Peace," *Foreign Affairs,* Vol. XXI, No. 2 (January, 1943), pp. 354-361.

Leith, C. K., J. W. Furness, and Cleona Lewis. *World Minerals and World Peace.* Washington, D. C.: 1943.

Macmahon, Arthur W., and W. R. Dittmar. "The Mexican Oil Industry," *Political Science Quarterly,* Vol. LVII, Nos. 1 and 2 (March and June, 1942), pp. 28-52 and 161-188.

Mexican Government. *Presidential Messages to Congress.*

Mexican Year Book, The, 1920-1921. Robert Glass Cleland, editor. Los Angeles: 1922. Pp. 290-320.

Mexico and the United States. Proceedings of the Fifth Annual Conference, Institute of Public Affairs. The Arnold Foundation, Southern Methodist University. Dallas, Texas: 1938. Especially—

"The Mexican Oil Problem," by George Ward Stocking.
"Mexico's Case in the Oil Controversy," by J. Silver Herzog.
"Case of the American Oil Companies," by W. E. McMahon.

Miller, B. L., and J. T. Singewald. *The Mineral Deposits of South America.* New York: 1919.

Miller, Eugene Willard. "Petroleum in the Economy of Venezuela," *Economic Geography,* Vol. XVI, No. 2 (April, 1940), pp. 204-210.

Mines Handbook. Published by Mines Information Buerau, Inc., Suffern, N. Y.

Ordoñez, Ezequiel. *El Petróleo en México.* Mexico, D. F.: 1932.

Phelps, D. M. "Petroleum Regulation in South America," *American Economic Review,* Vol. XXIX, No. 1 (March, 1939), pp. 48-59.

Present Status of the Mexican Oil "Expropriations, 1940." Issued by the Standard Oil Company (N. J.), New York.

Roush, G. A. *Strategic Mineral Supplies.* New York: 1939.

Sheldon, Ruth. "Venezuela's New Petroleum Law," *World Petroleum,* Vol. XIV, No. 6 (June, 1943), pp. 27-32.

Singewald, Joseph T., Jr. *Bibliography of Economic Geology of South America.* Baltimore, Md.: Geological Society of America, Special Papers No. 50 (August 30, 1943).

Staley, Eugene. *Raw Materials in Peace and War.* New York 1937.

Stappenbeck, Richard. *Map of the Mineral Deposits of South America.* Berlin: 1926.

Survey of American Foreign Relations, 1931. New Haven: 1931. Pp. 121-164.

Thomson, Charles A. "The Mexican Oil Dispute," *Foreign Policy Reports,* Vol. XIV, No. 11 (August 15, 1938).

Trueblood, Howard J. "Raw Material Resources of Latin America," *Foreign Policy Reports,* Vol. XV, No. 10 (August 1, 1939).

U. S. Bureau of Mines, Department of the Interior. *Minerals Yearbook, Review of 1940.* Washington, D. C.

U. S. Bureau of Mines, Department of the Interior. *Minerals Yearbook, 1941* (in preprint, pamphlet form). Washington, D. C.

U. S. Department of Commerce. *The Coal Industry of the World.* By H. M. Hoar. T.P.S. No. 105, 1930.

U. S. Department of Commerce. *Mineral Raw Materials,* T. P. S. No. 76, 1929.

U. S. Department of Commerce. *The Silver Market,* by Herbert M. Bratter. T. P. S. No. 139, 1932.

U. S. Tariff Commission. *Chemical Nitrogen.* Report No. 114, second series, 1937.

Uprimmy, Leopoldo. "Prospects for Colombian Oil," *Inter-American Quarterly,* Vol. II, No. 1 (January, 1940), pp. 40-47.

La Verdad sobre la Expropiación de los Bienes de las Empresas Petroleras (Also in English, *The True Facts About the Expropriation of the Oil Companies' Properties in Mexico*). Gobierno de México, D. F.: 1940.

Whitaker, A. P. *The Huancavelica Mercury Mine: A Contribution to the History of the Bourbon Renaissance in the Spanish Empire.* Harvard Historical Monographs, No. 16. Cambridge: 1941.

Wilson, Sir Arnold. "Oil Legislation in Latin America," *Foreign Affairs* (October, 1929).

"World Oil Refineries Survey," *The Oil and Gas Journal,* Vol. XXXIX, No. 33 December 26, 1940), pp. 93-103.

Wright, Charles Will. "Mineral Resources, Production, and Trade of Argentina," *Foreign Minerals Quarterly,* Vol. III, No. 3 (July, 1940), pp. 1-52.

——. "Mineral Resources, Production, and Trade of Bolivia," *Foreign Minerals Quarterly,* Vol. II, No. 4 (October, 1939), pp. 1-67.

——. "Mineral Resources, Production, and Trade of Brazil," *Foreign Minerals Quarterly,* Vol. IV, No. 1 (July, 1941), pp. 1-95.

——. "Mineral Resources, Production, and Trade of Chile," *Foreign Minerals Quarterly,* Vol. III, No. 2 (April, 1940), pp. 1-80.

——. Mineral Resources, Production, and Trade of Peru," *Foreign Minerals Quarterly,* Vol. III, No. 1 (January, 1940), pp. 1-63.

——. "Mineral Resources, Production, and Trade of Uruguay and Paraguay," *Foreign Minerals Quarterly,* Vol. III, No. 4 (October, 1940), pp. 1-37.

Periodicals

The Oil and Gas Journal. Tulsa, Oklahoma (weekly)

The Oil Weekly. Houston, Texas.

World Petroleum. New York (monthly)

CHAPTER SEVEN

Agriculture

GENERAL OVERVIEW

Early History of Agriculture. Latin America possesses a great variety of agricultural, pastoral, and forest resources, which have passed through several cycles of development since the first Europeans arrived some four hundred years ago. The settled agricultural populations in the conquered regions, particularly in the territories of the present-day republics of Mexico and Peru, were already cultivating or utilizing in their wild state an extensive variety of plants yielding food, fiber, and medicinal products that have subsequently become staples throughout the world. These products included maize, potatoes, tomatoes, red peppers, beans, peanuts, cacao, vanilla, tobacco, cotton, dyewoods, and various fruits, nuts, waxes, and essences. Some of the food crops listed have continued down to the present day to provide the main articles in the diet of the rural and laboring population throughout most of Latin America and are still among the principal crops raised in Indian communities. Supplementary food products introduced from other parts of the world include wheat, rice, coffee, sugar, and some meat and animal products not previously known in Latin America, such as beef, pork, poultry, milk, and cheese. Commercial agriculture was developed early in the colonial period, both to provide export products and to supply the needs of the new mining centers and of the urban population. By the end of the colonial period the value of agricultural exports exceeded that of exported bullion for all the colonies except New Spain (the present Mexico and Central America).[1]

To a surprising degree the pattern of agricultural production and export evolved before 1800 has persisted down to the present time. The principal changes have been in the volume of production, which has increased as a result of the rapid growth of population and markets in western Europe and the United States, and of the im-

1 Roland Dennis Hussey, "Colonial Economic Life," *Colonial Hispanic America,* edited by A. Curtis Wilgus (Washington, D. C.: 1936), pp. 321, 333, 340.

provements in varieties of crops and methods of cultivation, which have made large-scale production feasible. The more notable of these changes have been the expansion of meat and cereal production in Argentina, the rise of coffee and banana culture in southern Brazil and the Caribbean, and a greatly expanded output of sugar in Cuba.

Proportion of Agricultural Laborers. Agriculture provides a livelihood for a larger number of persons in Latin America than does any other occupation. The proportion of the total population engaged in agriculture in Brazil, where it amounts to 75 per cent, is larger than in any of the other principal countries. The official Mexican statistics show 70 per cent of the economically active population of Mexico to be engaged in agriculture, pastoral activities, and forestry, but there is reason to believe that this overstates the proportion of those whose principal activity is agriculture, and does not make sufficient allowance for the inhabitants of small villages who are engaged in handicraft or in mercantile, professional, clerical, or religious activities. In Cuba approximately 50 per cent of the population is engaged in agriculture (approximately the same ratio as in Italy), and in Chile, 37 per cent of the total population is engaged in agriculture (a slightly larger proportion than in Denmark). In some of the other countries the agricultural population is relatively much smaller than might be expected. In Argentina, for example, less than 17 per cent of the population is engaged in agricultural pursuits, as compared to 22 per cent in the United States. As has been pointed out,[2] a surprisingly large proportion of the Latin American population is urban, and the urban concentration is particularly marked in Argentina and Uruguay.

Exports and Domestic Consumption. In many parts of Latin America there is a fairly sharp distinction between production for export and production for domestic consumption, although the distinction in some instances is becoming less marked with the progress of industrialization and the enlargement of the local markets. A large part of the production for home consumption is carried on by primitive methods, on small tracts with a low yield per acre. Much, although by no means all, of this is strictly subsistence agriculture. For example, the coffee fazendas in Brazil and the large estates in other countries usually set aside plots of ground on which the workers, tenants, or *colonos* may grow part of their food requirements. Likewise, the rural communities that are not engaged in producing for export are usually largely self-sufficient, but even here the business of buying and selling, both as conducted within the community and between different communities, is large, and there is sometimes a considerable degree of dependence upon im-

2 Chapter 3, page 23.

ported food products, such as rice, lard, flour, and codfish. The cities are supplied in part by produce from small truck farms, but much of the rice, wheat, corn, and other staples is grown on large or medium-sized estates.

Production for export is carried on predominantly by the large estates, but many smaller properties, such as the coffee *fincas* in Colombia, cotton farms in Brazil, and vanilla plots in Mexico, also produce export crops.

Limited Mechanization of Agriculture. As a rule, more machinery is found on the large estates than on the smaller farm properties, but the fact that a farm is large does not necessarily mean that improved methods are being followed, or even large-scale production methods. "Hoe agriculture" prevails in many parts of Latin America. Few Indians own or use a plow in their farming operations, and animal or mechanical power is rare in the Indian community. In Brazil, machinery is used principally in the cultivation of sugar, rice, and cotton. Wheat culture is carried on with the grub hoe. The wheat is harvested by scythe or cradle, and threshing is carried out by the traditional methods of flail or treading by animals. Coffee culture is predominantly by hand. The great expanse of fertile, level land in Argentina is particularly well suited to the use of machinery. Argentina's imports of combines rose from 1,112 in 1921 to 7,700 in 1924 and to about 15,000 in 1929.[3] The manufacture of agricultural machinery within the country has attained some importance in Argentina and Brazil. In Cuba, the cultivation of sugar cane is carried on much as in the plantation days, but the harvesting and milling of the cane involves a series of mechanical operations, beginning with the power-driven hoists which lift the cane in cars, and including the private railway systems which transport the cane to the mills, the tractors which supplement the cars, the repair shops and powerhouses, and the great centrals with their towering smokestacks.

Traditional Structure of Latin American Rural Economy. The traditional structure of Latin American rural economy embraces three major elements: (1) The large estate (*hacienda, fazenda, finca, fundo, estancia,* etc.); (2) The small, individually owned property (*rancho, chacra, huerta,* etc.); and (3) the collective holding. In more recent times tenant farming has become an important fourth element.[4]

The conquerors transferred to America the forms prevailing on

3 U. S. Department of Agriculture, *Foreign Agriculture,* Vol. II, No. 7 (July, 1938), p. 323.

4 It is only in recent times that free contract tenants have become an important factor in Latin America. During the colonial era and most of the nineteenth century the so-called tenants (*inquilinos* and *medieros*) were virtually serfs.

the Hispanic peninsula at the time, and after three centuries these became adjusted to the preconquest organization of the Indians.

ARGENTINA. Latifundia still prevail in many parts of Latin America, but they are breaking up under the impact of strong social, political, and economic forces. In Argentina, most of the *estancias* consist of from 6,000 to 12,000 acres, and there are 50 families with holdings in excess of 75,000 acres each in the Province of Buenos Aires.[5]

When large landowners dispose of a tract of land they usually prefer to sell it as one piece, but now more frequently than formerly they subdivide their properties into sufficiently small lots to attract owner-operators. In Argentina, as elsewhere in Latin America, there is a trend toward diversification and more intensive utilization of the land, especially near the centers of population. In recent years opinion has come to favor official action designed to provide financial facilities for the establishment of small and medium-sized farms in the "cereal zone." Likewise, assistance is given to settlers in the Territory of the Chaco, where cotton is grown.

BRAZIL. Small and medium-sized properties are relatively more important in Brazil than in Argentina, but the large estate is the predominant form of agricultural property in most parts of the country. The small holdings are found chiefly in the immediate vicinity of the large cities or in the interior on the fringes of civilization. Fruit, vegetables, cereals, bananas, rice, and mandioca are frequently grown on small tracts, although these crops are also raised on the large estates, either for subsistence or for the market. Most of the coffee is produced by large-scale operators, who employ many newly arrived immigrants as laborers. Small farmers produce the bulk of the cotton crop. There has been a fairly rapid increase in the number of farming properties in the State of São Paulo and in the southern part of Brazil. This trend has been stimulated by higher taxes, the inheritance laws, and official settlement schemes. Many private owners have subdivided their properties and put some of the profits in industry. Increasing industrialization and the growth of cities have given rise to the establishment of truck and dairy farms in surrounding areas. Exhaustion of the soil and the decline in immigration have been other factors tending to bring about the subdivision of the large estates.

CHILE. The concentration of land holdings in central Chile is greater than in any other major Latin American country — approximately 90 per cent of the farm land is in large estates (500 acres and upward). There are a considerable number of small holdings,

5 Paul O. Nyhus, "Argentine Pastures and the Cattle-Grazing Industry," *Foreign Agriculture*, Vol. IV, No. 1 (January, 1940), p. 23.

but most of these average 5 acres or less in size. In southern Chile, where there are many European settlers, and also in the north, where a large part of the produce is grown for the mining centers, the smaller properties are more generally found. The haciendas in central Chile have retained much of the feudal character of colonial society. Most of the laborers, known as *inquilinos,* are born on the estates. Legally, they are free to leave, but they continue on, generation after generation, following the life of their forefathers. The *inquilino* gives about 160 days of labor a year to the hacienda, working from sun to sun. He receives a very small wage payment, but has a small piece of land to work for himself and receives a ration of food and some medical attention. Until recently the *hacendado,* or proprietor, exercised a certain amount of civil jurisdiction. While he no longer has legal jurisdiction, he continues to exercise a patriarchal supervision over all minor matters affecting workers.[6]

PERU. In Peru, large estates in the irrigated valleys of the coastal area account for most of the output of cotton and sugar, which are the two principal export crops, and for part of the rice crop. These estates represent a large capital investment, since they are usually equipped with gins or mills, in addition to modern farming implements, and make use of scientific methods of plant and soil improvement. Alongside the estates are a considerable number of small farms producing cotton, rice, and food crops, principally for the domestic market. While some of the small farmers are expanding their holdings and improving their technique, most of them still use primitive methods and implements. In the sierra, or highland area of Peru, the principal crops are wheat, corn, barley, potatoes, and beans, all of which are grown for domestic consumption, and principally on small plots of land, although there are some large properties, particularly in the lower valleys and in the grazing regions.

CUBA. In Cuba, since the island attained independence, there has been a trend toward concentration of agricultural lands in the hands of the large companies, with the number of farms declining nearly 50 per cent from 1899 to 1933. A major factor in this development has been the rise of the large sugar centrals, which are reported to own, lease, or otherwise control 30 per cent of the area in Cuba.[7] The mills are predominantly foreign-owned. There are some large cattle ranches, which for the most part are owned by Cubans.

MEXICO. The hacienda has played an important role in the eco-

6 George McCutcheon McBride, *Chile: Land and Society* (New York: 1936).

7 Foreign Policy Association, Inc., *Problems of the New Cuba* (New York: 1935), p. 268. In recent years Cubans have acquired control of a number of formerly foreign-owned sugar properties.

nomic and political evolution of Mexico. Even today, after twenty-five years of revolution and drastic land reform, it remains a major factor in the agricultural and pastoral production of the country. The persistence of this form of agricultural organization is the result not only of climatic and topographic factors but also of the social evolution of the country from prehistoric times. A hacienda is officially defined as rural property of 1,000 hectares (2,471 acres) or more. According to the 1930 census, there were still approximately 13,000 haciendas in Mexico, but many of these were located in the semiarid northern states or in other regions where a large part of the acreage consists of mountainous or otherwise non-arable lands. The haciendas have been shorn of much of their political power and also of a large part of their best lands, which have been expropriated or granted to neighboring villages as *ejidos* (community holdings). It is not possible here to enter into a discussion of the complex origins of the agrarian revolution, but it may be pointed out that there existed an accumulation of abuses, including absentee landlordism, encroachment, by ruse or force, on the traditional lands of the villagers, widespread abuses under the survey and colonization laws, whereby a large part of the national domain passed into private ownership of a few, and an excessive infiltration of foreigners, which aroused nationalistic opposition.

The small or medium-sized farm tilled by the owner with the help of his family has never played an important role in Mexico, although the number of such holdings, generally known as *ranchos,* increased greatly during the nineteenth century and by 1910 accounted for a substantial proportion of the agricultural production. The owners of farms in this category received comparatively little attention or sympathy from the revolutionary leaders, who have concentrated their efforts on the "restitution" of the land-owning villages or on the creation of new *ejidos.*

Ejidos. Mexico is the only Latin American country that has seriously undertaken the revival of the *ejido.* During the first quarter-century of the reform, from 1915 to 1939, more than 60 million acres were allotted to peasant villages. During the administration of President Cárdenas (1934-1940), the *ejido* became the cornerstone of the Government's social and economic program. His predecessor, General Calles, wanted to subdivide the *ejidos* into inalienable family tracts, along the lines developed in central and western Europe in the evolution from primitive "collective" communities to individual peasant holdings. But Cárdenas apparently envisaged the *ejidos* as the "cells out of which and around which the whole agricultural life of the country must be organized — economically, politically, and socially."[8]

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8 Eyler N. Simpson, *The Ejido* (Chapel Hill: 1937), p. 450.

The concept of the *ejido* found many supporters among those who visualized it as a citadel of defense for the illiterate Indians against the encroachments of wily and ruthless land speculators, but in practice it has serious defects. It merely provides the basis for a subsistence economy and offers but little hope for enlarged production and a higher standard of living, since the plots are too small to permit large-scale operations or the efficient use of machinery. The effect of the *ejido* policy is thus to freeze the agricultural economy into small, static units. During the latter part of his administration Cárdenas placed more emphasis upon collectively owned but state-managed "agricultural zones," such as the irrigated Laguna basin in the north, where the Government Land Bank not only told the peasants what to plant and how to plant it, but also operated most of the services required by a modern community. The trend of development under Cárdenas' successor, General Avila Camacho, may be characterized as "middle-of-the-road." The new Agrarian Code of December 31, 1942 provides for the subdivision of *ejidos* and the issuance of titles to individual tracts. General administration of the community, however, remains in the hands of the *ejido* committees, subject to federal supervision, and title to lands may be lost under certain circumstances, as in the case of failure to cultivate them for two successive years, for example.

History of Collective Tenure. Elsewhere in Latin America the collective form of tenure has tended to disappear. This form of tenure is believed by the best authorities to have prevailed in most parts of the world at certain stages of social evolution, as an outgrowth of clan or kinship groups, but it has usually tended to disappear under the pressure of population growth and the improvement in the civic and economic status of the individual in modern society. In western and central Europe, beginning with the enclosure movement in England, one country after another took steps to dissolve the corporative and community holdings and to encourage the consolidation of individual properties. During the nineteenth century Mexico and the West Coast countries of South America, where Indian villages are numerous, followed suit. This wave reached Russia in 1906 and 1910, in the reforms of Premier Stolypin. In most of the European countries the change to individual tenure worked out successfully, but the transition proved to be too abrupt in countries like Russia and Mexico, where the masses were not sufficiently developed to grasp the concept of private property or to take advantage of their freedom by improving their individual plots. Such vestiges of the collective system as still exist in Latin America, outside of Mexico, are found chiefly in the mountainous regions and remote corners where there are only small pockets of land suitable for cultivation. In some coun-

tries the native social structure has persisted in spite of the establishment of a new legal superstructure.

TENANT FARMING. Tenancy is common in those areas that have received a large influx of European immigration, notably in Argentina and southern Brazil. A large part of the sugar cane in Cuba is grown by *colonos*. Some of them own their lands, but the majority of them use land leased from the large sugar centrals or from other landowners. The *colono* system arose in the period from 1880 to 1890, which was one of transition from the plantation system of producing sugar to the modern sugar factory. The *colono* undertakes to sell his cane to the mill in return for a stipulated portion of the raw sugar produced from the cane. He is an agricultural enterpriser with responsibility for field operations in the production of cane. The *colono* is not tied to the soil, as the *inquilinos* have been historically in many Latin American countries.[9]

It is estimated that around three-fourths of the land in the cereal zone of Argentina is operated by tenants. A large number of the tenants are immigrants, principally Italian, with a considerable number of Spaniards and Russians. Living conditions of the tenants, even after they have become fairly prosperous, remain primitive, with "isolated one- or two-room abobe houses, frequently whitewashed inside and out, thatched or metal roofs, no floors, the most elementary and plain furnishings of beds, benches, and tables, and much meat in a plain diet. Farms are far apart, racial differences further separate the people, and community and social life is at a minimum."[10] Whatever the defects of this system, it has proven extraordinarily successful in enlarging production, and it also affords opportunities to intelligent and hardworking tenants to rise in the economic scale.

Irrigated Lands. Only a small portion of the total land area in Latin America is cultivated. The proportion of cultivated land in relation to the total area in the various countries ranges from slightly over 1 per cent in Brazil to nearly 10 per cent in Argentina. In the United States over 17 per cent of the total land area is under cultivation.

As has already been indicated, there are vast areas in Latin America that are unsuited to cultivation, owing to such factors as poor soil, lack of moisture, the existence of swamps or jungles, or too rugged or precipitous topography. Most of the great Amazon basin is a tropical rain forest, and while some of the numerous

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9 Foreign Policy Association, Inc., *Problems of the New Cuba* (New York: 1935), chapter 12, pp. 269-280.

10 Paul O. Nyhus, "Dairying in Argentina," *Foreign Crops and Markets*, Vol. XXXI, No. 27 (December 30, 1935), p. 939.

varieties of plants which grow wild in that region are sources of products of commercial value, such as rubber, nuts, insecticides, etc., very little of the area is cultivated. On the other hand, there are extensive areas in Mexico, on the west coast of South America, and in northeast Brazil, where since prehistoric times inadequate rainfall has necessitated the use of irrigation. Of the crop land in Mexico it is estimated that 79 per cent is semiarid, 12 per cent is under irrigation, and 9 per cent is naturally humid. In the six central provinces of Chile, 85 per cent of the cultivated land is irrigated. In Peru, cotton and sugar, the two export crops, are produced on irrigated lands, as are also rice and other domestic crops. In Argentina, the principal irrigated crops are sugar cane and fruit grown in the semiarid belt in the western part of the country. Argentina is the best endowed of the Latin American countries with respect to agricultural land, and has within its borders around 40 per cent of the aggregate Latin American cultivated area. Nearly three-fourths of the crop land of that country is devoted to cereals and linseed, and another 20 per cent to forage crops, principally alfalfa. Argentina is the principal producer in Latin America of all the important cereals.

So-Called "One-Crop Countries." Some of the Latin American countries are frequently referred to as "one-crop countries," because an overwhelming proportion of their exports are derived from a single crop. Cuba was at one time an outstanding example — during the immediate postwar period sugar accounted for 88 per cent of the total value of Cuban exports. The available manpower and resources were concentrated on this one crop to such an extent that it was necessary to import many essential foodstuffs, such as chickens, eggs, milk, meat, corn, coffee, and rice. With the collapse of the sugar market, the country lost its former purchasing power for foreign goods, and local capital and labor were diverted to other fields. The Government gave encouragement to a program of diversification by providing information on agriculture and by enacting, in 1927, a highly protective tariff. Within a decade Cuba not only became self-sufficient in most of the articles mentioned above but achieved a surplus of some for export. The country remains, however, a large net importer of lard, rice, and wheat flour.

Coffee has accounted for all but a small fraction of El Salvador's exports. Prior to the inauguration of the Nazi system of "barter" trading in 1934, a large part of the crop was marketed in Europe. The alternative market provided by the United States has not compensated entirely for the loss of European markets. American coffee drinkers do not buy coffee in the bean and hence are not willing to pay higher prices for fancy beans, as some European

buyers have been. The Government has encouraged the growing of other crops, and the country has become self-sufficient in cotton and sugar, with some export surplus. The cultivation of henequen (sisal) has also been encouraged, and the crop is now sufficient to supply the demand of local bag manufacturers. An agricultural experiment station established in 1940 has imported sires to improve the livestock.

Growth of Diversification. During the 1920's, a time of heavy borrowing in the United States, most of the Latin American countries had many dollars to spend. That period was one of rapidly increasing exports of the one or two export specialities of each Latin American country, such as coffee from Brazil and Colombia, petroleum from Venezuela, and grains from Argentina. Under these conditions, the Latin American countries were importing large quantities of foodstuffs, as well as other goods, from the United States. With the cessation of loans and the decline in their purchasing power, they were forced to grow more of their foodstuffs, and also to push diversification programs designed to broaden the export base. Argentina, for example, became self-sufficient in apples and pears and began to export these fruits to Europe in competition with the United States. Brazil increased its exports of oranges and bananas, as well as of cotton, waxes, and other non-foodstuffs items. Several new items entered the list of exports from Haiti, which had long been dependent on coffee. Colombia took vigorous steps to grow foodstuffs, and imports declined precipitately.

Imports of Foodstuffs. At one time breadstuffs and provisions were among the major items of export from the United States to Latin America, particularly to the Caribbean countries and Brazil. In more recent times United States exports of food products have been far surpassed by those of machinery, motor vehicles, iron and steel manufactures, and other manufactures, but in 1939 United States exports of foodstuffs to Latin America still amounted to $60,000,000 in value. Wheat flour was the largest single item in this trade, followed, in order, by lard, rice, vegetables and vegetable preparations, dairy products, and fruits and fruit preparations. Latin America also normally imports substantial quantities of rice, tea, and spices from the Far East, and various food specialities from Europe, such as wines, sardines, olive oil, and fancy goods. There is also a considerable amount of trade between the various Latin American countries. The principal movements in this trade consists of exports of Argentine wheat and flour to Brazil, of Brazilian pineapples, bananas, coffee, and yerba maté to Argentina, of Peruvian raw sugar to Chile, and of Argentine cattle to Chile.

A discussion of the principal crops of Latin America follows:

CEREALS

Cereals occupy by far the largest portion of the area devoted to crops in Latin America, but since they are grown primarily for domestic consumption in every country except Argentina, the total value of all cereal exports is less than the value of coffee shipments.

Corn. Among the cereals corn is the principal item. It is grown in every country, and in Brazil, Colombia, Peru, Mexico, and Guatemala more acreage is devoted to it than to any other crop. It is the second most widely grown crop in Argentina and Uruguay. On a volume basis, Argentina is the leading producer, and most of the crop is exported. Argentine production increased from an average of 192 million bushels during the period 1909-1913 to 346 million bushels during the period 1933-1937, while its share of world exports rose from 44 per cent to 75 per cent. Brazil is the second largest Latin American producer of corn. In some years its output exceeds that of Argentina, but the entire crop is consumed within the country.

In Mexico corn is of exceptional importance. It occupies over one-half of the crop land and supplies about half the total domestic food requirements. Owing to the very low yield, however, Mexico is a poor third among the Latin American corn-producing countries. Although corn is grown in every section of the country and at every altitude from sea level to 10,000 feet, Mexico is frequently deficient in this important staple, and at times imports substantial quantities. Under exceptional conditions, such as those which prevailed during the drought in the United States in 1934 and 1935, Mexico has been a net exporter to the United States. Although some corn is grown on large estates as a commercial crop, most of the output is from small plots tilled by the Indians. Most of the corn is ground by Indian women in individual households on querns, and the meal, after being soaked with lime in water, is patted in their hands into thin wafers, which are cooked on charcoal braziers. The finished product, the *tortilla,* is the basis of the Mexican diet.

In Guatemala corn occupies around 40 per cent of the cultivated area. As in Mexico, it is grown principally in small fields or garden patches, and is consumed generally in the area in which it is produced.

Wheat. Wheat ranks slightly ahead of corn in the list of Latin American exports, but it is less extensively grown. In only a few countries, principally those in the Temperate Zone at the southern end of the South American continent, is wheat a leading article of diet, but since the consumption of wheat is increasing in

other areas the governments of most of the countries are trying to encourage production.

Latin America produces about 300 million bushels of wheat annually (8 per cent of the world production), of which 85 per cent is produced in Argentina, 7 per cent in Chile, 4 per cent in Uruguay, and 3 per cent in Mexico. Wheat is the principal crop in Argentina, Uruguay, and Chile, is the third crop in Mexico (following corn and frijoles), and is cultivated in Brazil, Peru, Bolivia, Colombia, and Guatemala. Argentina is one of the three or four leading wheat-exporting countries of the world, along with the United States, Canada, and Australia, but its share of the total has declined since 1929. Beginning in the 1920's, the principal European nations set out to make themselves as self-sufficient as possible in breadstuffs, and also adopted policies of preference to colonies and dependencies. As a consequence, the European market for wheat has been restricted, and for several years before the outbreak of World War II, Argentina found its best market for wheat in Brazil.

Wheat and wheat flour bulk large among Brazil's imports. Northern Brazil was long a leading consumer of flour from the United States, but importation of this product has declined sharply since 1934. The Brazilian Government has long attempted to encourage the production of wheat, both by imposing protective duties and by requiring millers to purchase certain quantities of domestic wheat. It has further attempted to reduce wheat imports by providing for the admixture with imported wheat and flour of specified proportions of domestic mandioca flour, corn flour, and rice flour.

Uruguay has some surplus wheat for export. Owing to the poorer quality of its soil, Uruguay has had relatively much less agricultural development than Argentina.

Chile at one time exported wheat to California (in the boom days following the gold rush), but at present it raises barely enough for its own needs. In the other West Coast countries wheat is a minor crop, and is grown in the mountain valleys and highlands, where it is generally sown and harvested by hand.

Rice. Rice is an important article of food in most of the Latin American countries and is a basic item in the diet in Brazil, Cuba, and the Dominican Republic. Brazil was the first Latin American country to take up rice cultivation on an important scale. It is now able to supply domestic requirements, and has a substantial surplus for export to other countries. American Blue Rose rice was introduced into Brazil in 1929, and is now produced in sufficient quantities to take care of the needs of Argentina and Uruguay, which were formerly supplied by the United States. Various other Latin American countries have stepped up rice production since 1931. Their governments have furnished free seed of improved varieties, and have granted tariff and other protection.

Ecuador and the Dominican Republic now have small export surpluses. Cuba and Argentina are the principal importing countries.

Other Cereals. Oats and rye are fairly widely grown as forage crops. The planting of these crops for winter pasture has increased considerably in Argentina in recent years. Both Argentina and Chile export substantial quantities of oats to Europe. These same two countries are also the principal barley-exporting countries of Latin America. Most of the crop is of the forage variety, but some malting barley is grown to supply the local brewing industries. Chile also exports malt.

COFFEE

Importance as Export. Coffee is the principal agricultural export from Latin America. It is grown in all except the three or four southernmost countries and is exported by fourteen of the Latin American republics. It is, furthermore, the most valuable single export from Brazil, Colombia, Haiti, and four of the Central American countries. It is second only to petroleum in Venezuela and is the principal item of agricultural export from Mexico. In a few countries coffee completely dominates the export trade. In 1938, of the total value of exports from El Salvador, coffee accounted for about 90 per cent, from Guatemala, 73 per cent, from Colombia, 58 per cent, from Costa Rica and from Haiti, 50 per cent, and from Nicaragua, 40 per cent. In the case of Brazil, coffee comprised over 72 per cent of the value of all exports in the period 1924-1930, but this proportion had declined to 45 per cent by 1938.

The coffee industry has been the object of special solicitude on the part of the governments of those countries where it is an important crop, as has the grazing industry in Argentina and Uruguay. Most of the coffee production is in the hands of nationals, although there are many foreign-owned properties in Guatemala and southern Mexico and some foreign-controlled properties in Brazil, Venezuela, and elsewhere. Furthermore, a considerable proportion of the crop is grown on small or medium-sized plantations, especially in Colombia.

History of Coffee Industry. It is interesting to note that although Latin America has lost its predominant position in production and trade with respect to various products indigenous to the region, such as cacao, rubber, and cotton, it has gained complete ascendancy in the markets for coffee, a product which is not native to America but was long cultivated in Asia and Africa before its culture spread westward. The first coffee plants to reach the Western Hemisphere were introduced in the Caribbean islands about the close of the first quarter of the eighteenth century, and not

long thereafter, in northern Brazil and on the north coast of South America.[11] Coffee culture did not become important in São Paulo until the first quarter of the nineteenth century.

Brazil became the leading coffee-producing country of the world around 1870. Sugar had previously been Brazil's principal agricultural export, but sugar planting suffered as a result of the cessation of the slave trade and from competition from other sugar-producing areas, such as the subsidized beet-sugar industries in Europe and the more favored regions in the West Indies. The red uplands soils and the climatic conditions in the south central Brazilian states proved to be ideally suited to coffee cultivation. The rising tide of immigration from southern Europe, and the system of tenancy worked out in the southern Brazilian states, also tended to favor coffee production over that of the older crops, such as sugar. During the colonial era northeastern Brazil, with the capital and center of population at Bahía, had been the richest region, and the sugar-cane planters, or *senhores de engenho,* had constituted the aristocracy, with the dominant political influence.[12]

In the southern states the rise of the large coffee plantations provided the basis for a new aristocracy, which assured State policies favorable to the coffee interests. Through State-assisted immigration, ample labor was provided at subsistence wages. There were almost unlimited stretches of suitable lands available for expansion, while the rapidly mounting consumption of coffee in the United States and northwestern Europe provided a market that paid remunerative prices. The method of remuneration of the workers also favored constant extension of new plantings, since the plantation owner had to continue setting out trees in order to retain his laborers. The planters also had the advantage of a depreciating currency, which reduced their local expenses. Until recent times, the planters were practically exempt from land or income taxes. Although the various Brazilian states levied export taxes on coffee, it was possible to pass most of this tax along to the consumer in the importing countries. Beginning in 1906, when a crisis in the coffee market developed, a further stimulus to coffee planting was given by a succession of valorization programs.

Brazil. In Brazil the governmental intervention in the coffee industry is referred to as *defesa* or defense. These operations have generally been referred to as "coffee valorization" in English-speaking countries, but the objectives of the control have been broader than merely to support prices. Coffee is a crop which is subject to

11 William H. Ukers, *All about Coffee* (New York: second edition, 1935), has an interesting chapter on the history of coffee propagation and also contains sections on the cultivation and preparation of coffee in each of the producing countries, with some historical data.

12 Cf. Alan K. Manchester, "The Rise of the Brazilian Aristocracy," *Hispanic American Historical Review,* Vol. XI, No. 2 (May, 1931), pp.145-168.

sharp fluctuations in yield from year to year, depending upon climatic conditions and the extent of the impoverishment of the trees after a heavy crop. Furthermore, since the trees do not come into bearing until six or seven years after planting, and since the plantations represent a large investment, the annual production is not subject to adjustment as in the case of annual crops.[13] Although the coffee defense measures brought a great deal of prosperity to the coffee planters, and over a period of years provided greater stability to the coffee market, they had a grave defect in that the high prices supported by the action of the Brazilian Government stimulated coffee planting in other countries and eventually led to a serious problem of over-production. Brazil's share of world coffee exports declined from 73 per cent in the years 1909-1912 to only 47 per cent in 1937. By 1937 the problem had become so serious in Brazil that in November of that year the defense plan was altered drastically and the previous export tax of 45 milreis per bag was reduced by more than two-thirds. Exports responded to this stimulus, and in 1938 Brazil shipped 56 per cent of world exports. Government control has continued, however, as has also the burning of large stocks of low-grade coffees. The policy of destroying part of the crop was inaugurated in 1931. By the end of the 1938-1939 season the amount destroyed was over 37 per cent of the production.

Colombia. Colombia is the second largest coffee-producing and exporting country. Its production was relatively unimportant until the last quarter of the nineteenth century, and did not surpass that of Venezuela until the time of the First World War, but it increased rapidly during the 1920's, and by 1930 Colombia was shipping about 12 per cent of the coffee entering international trade, as compared to 4.3 per cent of the total exported in the period 1909-1913. Colombia is the leading producer of "mild" coffees, which have usually brought higher prices than most Brazilian coffees.

Other Countries. Prior to the outbreak of war in the Far East, the Netherlands East Indies ranked third among the coffee-producing areas, with El Salvador in fourth position and Guatemala in fifth. Coffee culture was not developed intensively in Central America until the last quarter of the nineteenth century, although coffee had become an important crop in Costa Rica by 1845, and its cultivation had been expanded in the other Central American countries after 1855, when the opening of the Panama

13 See International Institute of Agriculture, *Coffee in 1931 and 1932: Economic and Technical Aspects* (Rome: 1934); J. W. F. Rowe, "Studies in the Artificial Control of Raw Material Suplies, No. 3, Brazilian Coffee," London and Cambridge Economic Service, *Special Memorandum No. 35* (January, 1932); and Erwin P. Keeler, "The Brazilian Coffee-Defense Experiment," *Foreign Agriculture*, Vol. I, No. 12 (December, 1937), pp. 619-626.

Railway brought the West Coast ports into closer touch with European and American markets.

The West Indies long ranked as the leading coffee-producing areas of the New World, but were later surpassed by Brazil, by Venezuela, by Colombia, and by some of the Central American countries. Coffee culture was introduced into Haiti from Martinique by the Jesuits early in the eighteenth century, and soon spread to all the mountainous parts of the country. During the period 1926-1931, coffee accounted for over 76 per cent of the total value of Haitian exports, but as the result of the diversification program begun during the 1920's, coffee now represents only about 50 per cent of the total value of Haitian exports. At the other end of the island, in the Dominican Republic, coffee constitutes around 10 per cent of the exports. During the period of violence and upheaval which ended with the proclamation of the independence of Haiti, in 1804, many coffee growers fled the country. Some of these growers settled in Cuba, and as a result, Cuba became an important coffee-exporting country by the middle of the nineteenth century. A decline in this trade set in during the period of the Ten Years' War (1868 to 1878), and thereafter, the obsession for cultivating sugar, together with a period of low prices for coffee, led to the abandonment of the coffee plantations. An effort to revive coffee culture was begun in 1927, as a part of the general program of diversification, and by 1932 Cuba had again become a coffee-exporting nation.

Venezuela still holds high rank among the coffee-producing countries, but production has increased less rapidly there than in various other countries. Before the Second World War, the United States took from one-third to one-fourth of the Venezuela coffee exports, the balance being distributed among various European countries, going principally to Germany and France.

Mexico is an important coffee-producing country, but as a large part of the crop is consumed in the country, it ranks only sixth among the coffee-exporting countries of Latin America. The United States normally takes half or more of the Mexican coffee exports, with Germany in second place as a market.

United States Market. Prior to the outbreak of the Second World War, Latin America supplied about 85 per cent of the total of about 4 billion pounds of coffee annually entering international trade.

The United States is by far the largest market for coffee, taking 57 per cent of total coffee exports from Latin America, and nearly half of the total exports from all countries. The United States annual coffee imports before the war ranged from about $125,000,000 to $150,000,000 in value, and all but about 2 per cent of these imports were supplied by Latin American countries. The United States is not only the world's largest market, but it is the only im-

portant market that permits coffee to enter free of duty, a fact of great importance, since it permits the grower to obtain a larger profit than when exporting to countries that impose import duties. Furthermore, the exchange derived from coffee sales to the United States is not normally subject to restrictions of any kind,[14] while most of the European countries have been willing to take coffee only on a "barter" basis and have blocked the funds from coffee sales.

The fact that the United States market remained free and open became increasingly important during the period from 1919 to 1939, as one European country after another restricted imports of Latin American coffees, while granting preferential arrangements for coffees entering from colonies or dependencies. Great Britain, France, Belgium, the Netherlands, Italy, and Portugal all took steps to favor colonial coffees in the home market.

Coffee ranks as one of the three largest imports, by value, into the United States. It accounts for around 30 per cent of the total value of United States imports from Latin America. Annual United States imports and consumption of coffee doubled during the quarter-century from 1914 to 1939. Imports held up well during the depression years, and rose from 1,481 million pounds in 1929 to 2,055 million pounds in 1940.

The United States obtains about 98 per cent of its coffee from Latin America, chiefly from Brazil and Colombia. Prior to the First World War, Brazil alone supplied 75 per cent of United States coffee imports, Colombia supplied 7 per cent, and Venezuela supplied 5 per cent. Since World War I Brazil's share has declined in just about the same proportion as that of Colombia has increased. In 1938, for example, Brazil furnished 60 per cent (by value) of United States coffee imports, and Colombia, 22.7 per cent while Venezuela's share declined to 1.2 per cent.

European Markets. Between the First World War and 1939 slightly over half of Brazil's coffee exports went to the United States. Before the First World War, Germany was the leading European market for Brazilian coffee and second only to the United States among all countries as a market, but after the war Germany became relatively less important as a transshipment point and also shifted in making its purchases, obtaining them to a greater extent from Central America, Mexico, Colombia, and Venezuela. Germany obtained 77 per cent of its coffee imports from Brazil in 1911, but by 1935 this had declined to only 46 per cent. Following World War I, France was Brazil's best market in most years, although Germany was in first position as a purchaser in some years. Although France continued to buy about half of its coffee imports

14 Since the middle of 1941 the funds of certain nationals on the Proclaimed List have been blocked in connection with the Economic Warfare Program of the United States.

from Brazil during the 1930's, the proportion of the total arriving from Guadaloupe, Madagascar, Nova Caledonia, and other French colonies was increasing rapidly. The Netherlands, Italy, Scandinavia, Belgium, and Argentina have been among the principal minor markets for Brazilian coffee.

The United States is even more important in the Colombian coffee trade, taking about three-fourths of Colombia's total coffee exports. During the three years preceding the outbreak of the Second World War, Germany took about 15 per cent of the total.

The bulk of the Central American coffees has traditionally gone to Europe, particularly the fancy varieties, which brought high prices from a clientele that prized the beans for their color and size, as well as for their aroma or cup qualities. Some Central American coffees are also highly valued in the United States for their blending qualities, but American coffee roasters are not willing to pay a premium for the beans merely because of their attractive appearance, since few American coffee drinkers buy and grind their own beans. Germany was the leading market for coffee from Guatemala and El Salvador, and was an important outlet for coffee from Honduras, Nicaragua, and Costa Rica. There are a large number of German coffee planters in Central America, particularly Guatemala, where 50 per cent or more of the crop is grown on German-owned plantations. Germany has also maintained excellent shipping connections with the Pacific coast of Central America, except during wartime.

Costa Rica sends most of its coffee to the London market, where it has a high reputation for quality. London coffee firms have had close relations with Costa Rican planters for approximately a century. Since 1933 a larger proportion of Central American coffee has been going to the United States, particularly from those countries which previously had exported to Germany. In 1933, for example, Guatemala sent 51 per cent of its crop to Germany and 21 per cent to the United States, but by the 1937-1938 crop season this relationship had been reversed, and the United States was taking over half. Meanwhile, several of the Central American countries, and particularly El Salvador, were increasing their output, so that by 1938 the United States was obtaining 8 per cent of its coffee imports from Central America, as against 3 per cent in 1929.

France is normally the best market for the coffees of Haiti, the Dominican Republic, and Ecuador. For many years prior to 1936, France was the principal market for Haitian coffee and also a leading outlet for other Haitian exports. But there was an abrupt change after April, 1936, when France denounced its commercial convention with Haiti. In that year the President of the New York Coffee Exchange visited Haiti, at the invitation of the Government,

and in conferences with members of the local coffee trade made known the requirements of the New York coffee market. Following this visit, the Haitian Government employed American experts to assist in the production and preparation of coffee. Improved methods of drying and curing the coffee were introduced.

Price Differential for Types of Coffee. There are two general classes of coffee, "Brazils" and "milds," but there are many types and grades within these classes. The "milds" normally command a somewhat higher price than the "Brazils." This price differential helped to stimulate the production in various countries producing mild coffees, particularly during the years when Brazil was supporting the price through valorization. This increase was notable in Colombia, the leading producer of mild coffees. Prior to 1936 Colombia was able to step up its production without suffering from a quantity or surplus problem, but in the fall of that year accumulating stocks led the authorities to inaugurate a system of coffee defense. The semiofficial Federation of Coffee Growers made purchases of coffee in various centers in order to support the price. In May, 1937, the export tax on coffee was raised from 10 centavos per bag to 25 centavos to provide funds for coffee defense, and in May, 1940 a temporary export bounty of 2 pesos per bag was inaugurated.

Price Trends. Unusually high coffee prices prevailed during the latter 1920's, induced in part by the Brazilian defense measures. World consumption was increasing during these years, but less rapidly than production. There was a sharp break in the market late in 1929. There was some slight recovery in subsequent years, but after 1937 prices trended downward. The unit price of coffee imports into the United States was 6.2 cents in 1940 as against 20.4 cents in 1929. While the volume of United States coffee imports increased, the value of coffee imports from all countries declined from $302,000,000 in 1929 to $127,000,000 in 1940.

Inter-American Coffee Agreements. The adverse coffee situation was aggravated by the outbreak of war, which eventually shut off the larger part of the European market. For several years previous, at three Pan American coffee congresses, efforts had been made to agree upon common measures to alleviate the coffee situation. A Pan American Coffee Bureau was established, with offices in New York, early in 1937, to promote coffee consumption in the United States and to improve marketing procedures. But no agreement regarding restrictive measures could be reached until, under the pressure of the war emergency, and with the encouragement and assistance of representatives of the United States Government, an Inter-American Coffee Agreement was signed on November 28, 1940, and put into effect on April 16, 1941, providing for export

quotas to control shipments from the Latin American countries to the United States and to all other countries, and for import quotas by the United States to control receipts of coffee from Latin American republics and from other countries. The agreement is administered by an Inter-American Coffee Board, which has authority to increase or decrease quotas under certain restrictions. By September, 1941 the prices of the leading Brazilian and Colombian grades had practically doubled as compared with the quotations of the previous year. At this advanced level of prices, the Latin American coffee-producing countries receive larger returns on their exports to the United States than they obtained from exports to all countries prior to the conclusion of the agreement. Since the success of the agreement is contingent upon the maintenance of a high level of consumption in the United States, the Inter-American Coffee Board has been careful not to force the price too high. The consumption is not much affected by minor changes in the retail price, but substantial increases might result in lower consumption.

Two quota increases were made in the first quota year, one of 5 per cent in June, 1941, and another of 20 per cent in August of the same year. Serious shipping shortages necessitated further increases in the second and third quota years, in order to make available coffee that was geographically close to United States ports. In general, the quotas of the Inter-American Coffee Agreement have been administered in such a way as to assure the maximum utilization of available shipping for the transport of coffee to the United States. Originally it was provided that the agreement should be in force for three years, but the time was subsequently extended to October 1, 1946.

Coffee prices were frozen in the United States by the Office of Price Administration at the end of 1941. Imports in general apparently have not been seriously interfered with as a result of price ceilings. At times the shortage of shipping has been a limiting factor.

On the whole, the war does not appear to have caused much change in the production of coffee. Such variations in production as have occurred have been due principally to weather conditions. In Venezuela, for example, adverse weather conditions considerably reduced one crop, and in Brazil were responsible for several short crops following each other in succession. The ill effects resulting from these short crops have been offset to some extent by the increased prices that have prevailed since the signing of the Inter-American Coffee Agreement.

SUGAR

History of Sugar Industry. Sugar cane is grown in all the Latin American countries except Chile. Although not indigenous

to the New World, the plant was introduced in the early days of the Conquest, and it soon became the leading item of agricultural export from the colonies. During the latter part of the sixteenth century Brazil occupied the leading position among the sugar-producing countries of the world. In the seventeenth century and the early part of the eighteenth century the leadership passed to the British West Indies, and in the second half of the eighteenth century, to Haiti, which was then a French colony known as Saint Domingue.

Sugar cane was planted early in the Spanish-controlled islands, Cuba and Santo Domingo (that is, in the eastern half of the island of Hispaniola), but development lagged until the last quarter of the eighteenth century, when the liberalization of trade regulations stimulated economic activities. The big advance in Cuba came at the end of that century, when the Haitian sugar industry was almost destroyed in the course of the violent upheavals which ended with Haiti's attainment of independence and which resulted in the emigration of most of the sugar planters to Cuba and other Caribbean areas. Cuba became the leading sugar-producing country of the world, and despite setbacks caused by civil war and competition from the subsidized sugar-beet industry in Europe, production reached 1 million tons in 1894, on the eve of the war of independence. The establishment of large sugar centrals, using improved methods of extraction, enabled the Cuban industry to compete in leading markets, and also marked the beginnings of the modern sugar industry in the Dominican Republic. The modern sugar industries in Peru and Mexico also date from the last two decades of the nineteenth century.

Importance as Export. Latin American sugar production now represents about 18 per cent of the world output. Excepting Chile, Bolivia, and Uruguay, the Latin American countries are severally self-sufficient in sugar, and five or six of them ship substantial quantities to foreign markets. Latin America provides 30 per cent of the aggregate world exports of sugar. Cuba is the leading sugar-exporting country of the world, and accounts for 75 per cent of the total Latin American sugar exports. Two-thirds of Cuba's output normally goes to the United States, the remainder being shipped to the so-called "world market," principally to Great Britain. Brazil is the second largest Latin American producer of sugar, but its exports are small. The Dominican Republic ranks second as an exporter. Sixty per cent of its exports go to the United Kingdom. About one-half of the Peruvian sugar exports go to neighboring Latin American countries and most of the remainder to Great Britain and the United States. Most of the exports from Haiti and Brazil go to Great Britain. Argentina ships some sugar to Bolivia.

Cuba. A somewhat detailed discussion of Cuba's sugar industry appears warranted here, in view of the country's outstanding position as an exporter of sugar.

EXPANSION OF INDUSTRY SINCE 1903. There was a large increase in Cuban sugar production following the ratification of the Cuban-American reciprocity treaty at the end of 1903, which granted Cuba a 20 per cent duty preferential in the American market. A number of strong American companies entered the production field, and the annual output started an upward climb, which continued through the war period and the early postwar years, reaching a peak of over 5 million tons in 1925. The wartime disruption of the European sugar-beet industry, which enabled Cuba to make important sales in the European market, was an important factor in the expansion. The recovery of the European producers and the expanding production of sugar in other areas produced a crisis by the middle of the 1920's. Beginning in 1926, a series of measures were enacted by the Cuban Government restricting production and providing for orderly marketing. From 1931 through 1935 exports were limited in accordance with the Brussels International Agreement. In 1934 the United States Government took steps to assure Cuba a substantial share of the American market, under a system of quotas; and by the London Sugar Agreement of 1937, Cuba received a basic quota of 940,000 tons in the "free" market.

DEPENDENCE UPON UNITED STATES MARKET. Cuba's economic dependence upon the continental mainland goes back to colonial times. At the beginning of the twentieth century Cuba was shipping practically all of its surplus sugar to the United States, and it has continued to depend primarily upon the American market. During the First World War about one-fourth of Cuba's sugar exports went to other markets, but following the war, the "world" market became very narrow, with most of the principal consuming countries either supplying their own needs or reserving their markets for sugar-producing dependencies.

Cuba has long supplied a large proportion of the total sugar consumption in the United States. This was true even before Cuba was given preferential tariff treatment. From 1906 through 1926 (with the exception of two years) Cuban sugar comprised more than one-half of the shipments of sugar to the continental United States. The volume of Cuban shipments also increased phenomenally during this period under the stimulus of rising United States consumption. During this period domestic production of beet sugar and production of cane sugar by noncontiguous territories of the United States also increased greatly. On the other hand, United States imports of full-duty sugar declined sharply

after 1903. In the three years preceding reciprocity, full-duty imports averaged 48 per cent of the total receipts; in the three years following reciprocity they averaged only 24 per cent. The proportion of full-duty sugar continued to decline, and by 1914 had practically disappeared.[15] Since 1914 the imports of full-duty sugar into the United States have been important only under exceptional circumstances.

Since 1926 the Cuban share of the United States market has declined and the proportion supplied by continental producers and by insular areas has increased.

GOVERNMENT CONTROL. Since 1934 the marketing of sugar in the continental United States has been restricted by law.[16] Under this authority the Secretary of Agriculture designates, at the beginning of the year, the maximum quantity to be marketed, subject to revision during the year. The estimated consumption is apportioned to the supplying areas in accordance with a formula set forth in the statute. Under this program, Cuba was supplying, prior to 1941, about 29 per cent of the total United States consumption of sugar. Sugar from other Latin American republics, which must pay full duty rates, amounted to less than 2 per cent of United States consumption.

International Sugar Agreement. In addition to Cuba, three other Latin American countries (Peru, the Dominican Republic, and Haiti) were parties to the International Sugar Agreement signed in London in 1937, and received fixed quotas which might be exported to the "free" market. This agreement remained nominally in effect during the first two years of World War II.

Refining Facilities. Most of the sugar-producing countries of Latin America have some refining facilities, although a large part of the crop is normally consumed locally in the form of brown sugar or as plantation white. Most of the sugar exports from Latin America go out as raw sugar, but there are some exports of refined sugar. Several Cuban mills carry the process of manufacture through from the cane to 100-degree refined sugar. This development on a commercial scale dates from about 1926. The sugar-adjustment legislation enacted in the United States in 1934 restricted the imports of "direct consumption" sugars from Cuba to 22 per cent of that country's quota, but not all of this type is fully refined. Cuba exports some refined sugar to other markets. One sugar mill in the Dominican Republic produces refined sugar.

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15 U. S. Tariff Commission, *The Cuban Reciprocity Treaty*, p. 66.

16 Except for the period September 12 to December 31, 1939, when the quotas were suspended by Presidential proclamation because of the excessive prices arising out of speculation stimulated by the outbreak of war in Europe.

By-Products of Sugar. The by-products of the sugar industry are also important. The bagasse is consumed as fuel by the sugar mills. In Peru some bagasse is used in the manufacture of paper. Molasses is also an important item. In some countries the molasses is used locally to produce alcohol, but most of the output of Cuba and the Dominican Republic is exported. Rum is also a by-product of considerable value.

Historical Role of Sugar. Sugar has played a spectacular role in the history of several Latin American countries, particularly Brazil and the West Indies. The need for labor for the sugar plantations was the principal reason for the large importation of slaves from Africa. Control of the sources of supply of sugar also was an important factor in the international rivalries in the Caribbean area. In modern times sugar has brought great wealth to several of the republics, but the industry has also given rise to perplexing social and political problems. One writer has gone so far as to declare that "cane sugar, as cultivated at present, is the curse of the West Indies."[17] The experience of Cuba affords a case study for some of the problems which the unrestricted expansion of sugar cultivation presents,[18] and demonstrates how too great dependence upon a single crop tends to create an unstable economic and social system. A surprisingly small proportion of the riches that poured into Cuba during the "dance of the millions" resulting from the sugar trade was spent on permanent improvements or on capital investments that would have created new sources of wealth. Work in the sugar industry is highly seasonal, a situation which gives rise to unemployment problems. Furthermore, the technological development of the industry has led to large foreign investments in the industry. It is estimated that two-thirds of the Cuban sugar was produced in mills controlled by American capital, and a substantial part of the remainder in those controlled by European capital.[19] Such extensive foreign economic influence almost invariably produces nationalistic reaction. The history of the sugar industry in the mainland countries, as well as in the West Indies, has borne out the fact that a balanced economy with stable farming, commercial, and industrial elements cannot be built upon the unsound basis of a single overdeveloped industry.

BANANAS

History of Banana Industry. Bananas are grown extensively in Latin America from southern Mexico to southern Brazil. The fruit (including the closely related plantain) is an important item

17 Melvin M. Knight, *The Americans in Santo Domingo* (New York: 1928).
18 Foreign Policy Association, *Problems of the New Cuba* (New York: 1935).
19 *Ibid.*, p. 227

of diet in tropical and sub-tropical regions where the rainfall is sufficient for this plant. Because of the large market for bananas in the United States, the principal commercial development has been in the Caribbean area.

Shipments of bananas to the United States on a regular basis started in 1885 with the formation of the Boston Fruit Company. Irregular shipments had been made over a period of several decades prior to that time, principally from Cuba, Honduras, Panama, Jamaica, and Costa Rica. Banana plantations had been started in Costa Rica in the 1870's by Minor C. Keith and associates to provide freight traffic for the railway being constructed from Puerto Limón to the capital, San José. The Keith and Baker (Boston Fruit Company) interests were merged in 1899 with the formation of the United Fruit Company, which thus became and has since remained the principal banana-trading company.

By 1898 the United States was importing 12 million bunches of bananas. Its imports increased to 65 million bunches in 1929, and to an all-time high of 67 million bunches in 1937.

The trade in bananas with Europe developed more slowly than that with the United States. Shipments of the small Cavendish variety from the Canary Islands and from Madeira began fairly early, but the trade never attained large proportions. Shipments from the Caribbean area to the British market began during the last years of the nineteenth century. The improvement of refrigeration facilities, which reduced the percentage of waste, stimulated trade with Europe. By 1929 Europe was importing 31 million bunches from all sources, and by 1938 its imports had increased to 44 million bunches.

The Latin American republics supplied about 60 per cent of the bananas entering international trade in 1938. Of the total shipments from Latin America in that year, 79 per cent went to the United States, 7 per cent to Germany, 2 per cent to the United Kingdom, 4 per cent to Argentina, 4 per cent to the Netherlands, and 4 per cent to other countries.

Jamaica and Honduras. In the early period of the banana trade Jamaica took the lead as a producing area, and has continued to hold it, except during the years 1928 to 1934, when Honduras was in first position. At one time the banana exports from Jamaica went principally to the United States, but by 1938 these shipments were going mainly to the United Kingdom, Canada, and Germany.

Costa Rica. Costa Rica has long been an important source of supply, but there has been a considerable decline in its exports since the peak year of 1913. The principal factor in this decline has been the damage caused by the sigatoka disease to the plantations on the Atlantic coast. All the other Central American coun-

tries except El Salvador have become more or less important in the banana trade.

Colombia and Brazil. Of the South American countries, Colombia and Brazil are the principal producers. Colombia's banana exportation developed between 1900 and the First World War. Brazil has long had important commercial plantings supplying the domestic market, with some export to the Río de la Plata cities. Its exports have increased substantially since the 1920's and steps have been taken to improve the quality of the fruit. Ecuador has become a factor in the international banana trade since about 1931.

Mexico. Regular exportation of bananas from Mexico was developed during the period 1906-1910. In 1912 the shipments exceeded for the first time 1 million bunches, and by 1914 more than 2 million bunches were being exported. Practically all these were shipped from the State of Tabasco from plantations along the Grijalva River, and went to southern United States ports. The scarcity of ships during the First World War brought about a decline, and banana exports did not again total 1 million bunches until 1921. In the early days of the industry ocean-going steamers were forced to lie off the port of Alvaro Obregon (formerly Frontera) because of a bar blocking the entrance to the river. Work was begun in 1910 to open a deep-water channel, but this project was not completed until 1928. The decade following 1930, especially the years 1934-1940, was the period of heaviest shipments of bananas from Tabasco and from Mexico as a whole. During most of these years Mexico was the leading exporter of bananas among the American republics and second only to Jamaica among all countries. About 1916, exportation of bananas was begun from a region in the southern part of the State of Veracruz. The banana plantations in the State of Chiapas near the Guatemalan border were started about 1922. A few years later the banana regions on the Nautla and Tecolutla Rivers in the northern part of the State of Veracruz were developed. Part of the bananas exported from the State of Veracruz have been moved down the coastal rivers by barge and then shipped by steamer from gulf ports, and part of the exports from this region, as well as all banana exports from the State of Chiapas, have moved overland by rail to the United States.

The sigatoka disease made its appearance in Mexico in 1937, and the State of Tabasco was particularly hard hit.

Recent Developments. The most important recent developments in the banana trade, other than the great expansion in production in Mexico and Brazil and the beginning of shipments from Ecuador, already mentioned, have been: (1) The revival of banana exports from Haiti and the Dominican Republic; (2) the shifting of production in the Central American republics from the Atlantic

to the Pacific coast; and (3) the increase, before the outbreak of the Second World War, in shipments to Europe from the Cameroons and French West Africa. In Haiti commercial production on a large scale was begun about 1935, when the Haitian Government signed a contract with a United States fruit company looking toward extensive development. After a period of neglect and decline, banana cultivation and shipping are again receiving considerable attention in the Dominican Republic. The last decade has witnessed a substantial shift in the centers of production in Panama, Costa Rica, and Guatemala from the Atlantic to the Pacific side. This shift has involved considerable investment, not only in new plantations but also in port and railway construction. The plantations on the Atlantic side have not been entirely abandoned, but considerable areas there that were formerly devoted to banana production have been abandoned or put into other crops, such as cacao and coconuts.

The principal banana-exporting areas outside Latin America and the European possessions in the West Indies are Taiwan, the Canary Islands, French West Africa, and the Cameroons. Shipments from the Canaries declined after 1929, but exports from the other areas were tending upward prior to the outbreak of war.

Although the United States at one time took substantial quantities of bananas from Jamaica, in recent years the Latin American republics have supplied all United States imports except for small quantities from British Honduras.

Foreign Markets. The European market is important to several Latin American republics, but none of the leading European importing countries depends primarily upon Latin America for its supplies. Colombia has been more dependent upon the European market than any other Latin American republic. Normally only about half of Colombia's banana exports go to the United States. In 1938, shipments to Germany constituted about 25 per cent of Colombia's total banana exports, those to the Netherlands, 10 per cent, and to the United Kingdom, 5 per cent. Argentina and Uruguay take most of Brazil's banana exports, but Great Britain has been buying from 15 to 20 per cent. The European markets are normally of some importance to Costa Rica and Honduras. Ecuador ships some bananas to Peru and Chile, but the bulk goes to the United States.

Advantages and Disadvantages of Present Organization. In recent years the relative advantages and disadvantages of the banana trade as now organized have come in for considerable discussion. It is recognized that the development of a market for bananas has brought a new source of wealth to twelve of the Latin American republics, and has broadened the economic base in regions

that had previously depended almost exclusively upon a single crop, coffee.[20] The development of the fruit trade has been closely related to the construction of ports and railways, the establishment of regular shipping and of radiotelegraphic services, and the provision of hospital facilities and public utilities. The fruit companies also have invested substantial sums in agricultural research and in experiments with new crops and plants. Without the added incentive which banana shipments gave to the improvement of transportation facilities, it is doubtful that coffee exports would have attained their present proportions.[21]

On the other hand, the dominant position of the great fruit companies and the tactics they have used in dealing with laborers, with small producers, and with Latin American governments, have been severely criticized. The United Fruit Company, which controls about two-thirds of the world banana trade and employs around 65,000 persons, has been called "virtually a state within many states."[22]

Doubtless there is some truth in the arguments on both sides. Bananas are fairly easy to grow, and despite losses from drought, floods, "blow-downs," and disease, the production problem is relatively much simpler and the expense less than in the production of coffee and various other important export crops of Latin America. Furthermore, no processing is required in order to prepare bananas for the market, as in the case of sugar and coffee. The emphasis has been on the organization of the market, and the provision of railways or roads to the plantations, of suitable port facilities, and of suitable shipping with refrigeration and ventilation. The United Fruit Company purchases about half its bananas from private planters and grows the remainder on its own estates.[23] The cost per item at the point where it is grown and cut is apt to appear very small in relation to the retail price of the fruit and the large profits of the company. On the other hand, the critics often fail to take into consideration the expenses involved in the marketing organization, the necessity of planning production and shipping so as to ensure a constant supply, the losses through acts of nature and political disturbances, and the contributions made by the company to public health and medical services, as well as those made through its merchandising and other departments. While it is natural that the governments of the producing countries should be concerned

20 Cf. Chester Lloyd Jones, *Caribbean Backgrounds and Prospects* (New York: 1931), chapter vii.

21 A very favorable view of the contributions of the fruit companies is taken by Samuel Crowther in *The Romance and Rise of the American Tropics* (New York: 1929).

22 Charles D. Kepner, Jr., "The Banana Industry in the Caribbean," *Modern Hispanic America*, edited by A. Curtis Wilgus (1933), chapter viii, p. 178. Also see Charles D. Kepner, *Social Aspects of the Banana Industry* (New York: 1936).

23 Charles D. Kepner, Jr., "The Banana Industry in the Caribbean," *Modern Hispanic America*, p. 172.

with obtaining the maximum benefits for their nationals, the number of new contracts which have been made in recent years would appear to indicate that it is possible to effect reasonable compromises to the profit of all parties concerned.

OTHER AGRICULTURAL PRODUCTS

Fresh Fruits Other than Bananas. Pineapples, avocados, and guavas are the principal fruits native to the New World which enter into international trade. Cuba and Mexico export pineapples to the United States, and Brazil ships pineapples to Argentina, Uruguay, and Great Britain. The United States imports avocados from Cuba, the quantities being limited by agreement so as not to interfere with the marketing of the domestic crop in the United States.

Citrus and deciduous fruits were introduced into various parts of Central and South America at an early period, but no trade developed outside the areas in which the fruit was grown. Fruit exports from Latin America on a significant scale have been developed only recently, with the assistance of experts from the United States.

As a result of the high prices for fresh fruits following the First World War, a number of countries in the Southern Hemisphere began to develop "off-season" production for sale in Northern Hemisphere markets. The first countries to become important in this trade were South Africa, Australia, and New Zealand.

BRAZIL. Brazil is second only to the United States as a producer of oranges, and is one of the two or three leading exporting nations. Oranges are grown throughout the country, but the chief commercial production is in the States of Rio de Janeiro and São Paulo and in the southern States. The first orange trees planted in California are said to have been taken there from the State of Bahía by a returning American missionary. Brazil began to export oranges to Argentina early in the twentieth century, and to Europe in 1926. Its exports of oranges in 1938 were valued at 8½ million dollars. Great Britain took about half the total, Argentina was in second place as a purchaser, and smaller quantities went to various continental countries and to Canada. Brazil also exports some lemons and grapefruit.

MEXICO. Mexico, the only other outstanding producer of citrus fruit in Latin America, does not export any of it. Citrus fruits, with the exception of sour limes, are not permitted to enter the United States from Mexico because of the prevalence of the fruit fly in the latter country.

ARGENTINA. Argentina produces some oranges but not enough for its own needs. The principal producing region is the Paraná

Delta, a group of islands formed by the Paraná and Uruguay Rivers where they join the Río de la Plata.

With the exception of the long-established grape and wine industry in the dry western provinces of Mendoza and San Juan, Argentina's production of fruit for export has been developed since the First World War. Apples and pears have been planted in the Mendoza region, and two other important fruit-producing areas have been developed — one in the Río Negro Valley, in south-central Argentina, and the other on the Paraná River, about 30 miles from Buenos Aires in what is known as the Delta District. Production in the Delta District is primarily for the Buenos Aires market, while most of the production in the Río Negro Valley is exported.

Argentine table grapes, which are similar to the varieties grown in the United States, have found a regular market in New York and New Orleans. The United States usually takes over half of Argentine grape exports. Smaller quantities go to Brazil.

The profitable exportation of grapes, which began in 1921, indicated the possibilities for the exportation of Argentine fruits to foreign markets, particularly to the United States and other Northern Hemisphere countries, where the fruit seasons are the reverse of those in Argentina. The development of the Río Negro region was made possible by the completion, in 1921, of a government-operated irrigation system. Apples and pears from this region gained a reputation for their superior qualities as early as 1928 on the Buenos Aires market, but owing to poor grading and packing, they could not fully compete with fruit imported from the United States and New Zealand. The railway company serving the Río Negro Valley took the initiative in organizing a fruit-marketing subsidiary, which engaged experienced fruit packers from California, built packing houses, and erected box factories equipped with automatic machinery. Although the United States shipped considerable quantities of apples and pears to Argentina in the 1920's the volume of this trade declined after 1930, owing to restrictions and to the increasing competition from locally grown fruit. On the other hand, Argentine exports of pears to the United States have become important since 1935. In the trade agreement between Argentina and the United States concluded in October, 1941, Argentina granted the United States substantial duty reductions on fresh apples (from October 1 to January 31), fresh pears (from October 1 to December 31), and fresh grapes (from September 1 to November 30), while the United States made equivalent concessions on grapes (from February 15 to June 30) and on plums (from February 1 to May 31) and agreed not to raise the duty on pears.

Brazil ranks second to the United States as an outlet for Argen-

ine fruit, being the leading market for apples and melons, and running slightly behind the United States in its purchases of pears, plums, and grapes exported from Argentina. While Argentina ships deciduous fruits to Brazil, it buys oranges, bananas, and pineapples from that country.

The dried-fruit industry in Argentina has been expanded greatly, but there is still considerable importation of dried prunes, raisins, peaches, figs, and dates.

CHILE. Chile also has been expanding its orchards. Apples, peaches, and melons are the principal fruits exported, but some grapes, pears, and plums are also shipped. In 1921 the Chilean Government sent two representatives to the United States to study the fruit industry. An American canning expert was engaged, and under his direction, the Government installed a canning plant in Santiago. It also erected at Angol, in south-central Chile, a fruit-storage plant equipped with modern conveyors and sizing and washing machines. In 1934 the Government invested in a cold-storage plant at Valparaiso to aid in the export of high-grade fruit. Chile supplies over 70 per cent of the melons imported into the United States. Their movement is regulated by the Chilean Government to meet the demands of the New York market.

Vegetables. In 1938 the United States imported fresh and dried vegetables from Latin America valued at over 3 million dollars. Cuba and Mexico are the principal suppliers of fresh vegetables in this trade — tomatoes, green peas, asparagus, etc. — which are imported by the United States from November through March or April, when domestic production of vegetables is low. This trade has been affected in recent years by earlier and heavier shipments of the domestic products from the southern States. From Mexico the United States also buys dried vegetables, such as onions, garlic, and garbanzos. Chile over a period of years has been increasing its production and exports of lentils and beans, the bulk of which normally goes to Europe, principally to Germany. The United States takes some of Chile's exports of lentils, dried beans, and garbanzos. In some years Mexico exports considerable quantities of garbanzos to Spain and the Antilles, but there are great fluctuations in this trade.

The United States exports seed potatoes to various Latin American countries, principally Cuba.

Latin America grows a wide variety of vegetables for local consumption. In areas near the large cities the commercial production of vegetables has attained considerable importance. Several kinds of vegetables that are raised primarily as subsistence crops are very extensively grown. In Mexico, for example, beans (frijoles), a staple article of the diet, are the second crop after corn, and the two

crops are frequently grown together. Beans are also a staple in various other Latin American countries, particularly in the Caribbean area. Both sweet and white potatoes are indigenous to South America, and were found by the Spanish conquistadores in the area now occupied by Peru and Bolivia. White potatoes are extensively grown in the Andean regions, and in Argentina, Brazil, Mexico, Cuba, and other countries. Brazil is the second largest producer of manioc. It is generally used in that country by all classes of the population, principally in the form of flour mixed with other food. Brazilian laws require a certain percentage of manioc flour to be mixed with imported wheat flour in the baking of bread. Recently considerable interest has been shown in the industrialization of manioc in the manufacture of starch, dextrines, alcohol, and tapioca.

Tobacco. Tobacco is grown and manufactured in virtually all the Latin American countries. Most of the production is used in local manufacturing establishments, but Brazil, Cuba, the Dominican Republic, and Paraguay are important exporters. Latin America produces from 6 to 8 per cent of the world total, and exports from 9 to 12 per cent of the tobacco entering international trade. The Latin American countries also import different types from the locally grown varieties of tobacco, but this trade has declined since the First World War, as one country after another has taken up the production of some of the varieties formerly obtained abroad, such as the bright flue-cured tobaccos used in the manufacture of American-type cigarettes. The United States is the largest tobacco-exporting country in the world, but in recent times only from 1 to 2 per cent of these exports have gone to Latin America. The peak year of United States exports to Latin America was 1917, when 11 million pounds of tobacco were shipped, but exports had declined to 4½ million pounds by 1938.

BRAZIL. Brazil is the leading tobacco-producing country in Latin America, and is also the largest exporter on a volume basis, but on a value basis, Cuba ranks first as an exporter. In both countries the value of exports in 1938 was much lower than in 1929. Tobacco is cultivated in all the States of Brazil. Bahía is normally the most important, supplying large quantities of tobacco for use in the manufacture of cigars, for which there is both a large domestic market and a substantial export demand.

The southern State of Rio Grande do Sul and Santa Catarina also have a large production. Germany and the Netherlands are normally the two leading foreign markets for Brazilian leaf tobacco, and Brazil has felt the loss of these markets since 1939.

CUBA. Cuba has been hard hit by developments that have restricted the market for Cuban tobacco and cigars. The most important of these developments have been the decline of the United

States demand for high-priced cigars and the migration of a part of the Cuban cigar industry to the United States. The United States is still by far the best market for Cuban leaf, but Great Britain provides the principal market for cigars. The United States imports practically no raw or manufactured tobacco from any Latin American country except Cuba, which enjoys a substantial preference below the tariff rates applicable to imports from other countries.

OTHER COUNTRIES. Argentina is the third largest tobacco producer of the Latin American countries, but domestic consumption is so great that Argentina imports considerable quantities from Brazil, Paraguay, the United States, and the Near East. There has been a steady increase in the Chilean tobacco crop since about 1934, to meet an equally steady rise in domestic consumption. Mexico and the Dominican Republic have long been important tobacco-producing countries, but the industry has become relatively less important than formerly in both countries.

Cacao. Cacao is the name commonly used in referring to the beans from which chocolate, cocoa, and cocoa butter are made. The cacao beans of commerce are prepared by the curing process of fermentation and drying. Very few of the beans are further processed in the country in which they are grown.

Cacao, like rubber, is a commodity in which Latin America long enjoyed a virtual monopoly but lost its dominant position during the present century. In 1900 the Latin American republics, together with the West Indies, produced 81 per cent of the world output of cacao, but by 1937 this had declined to 31 per cent. The volume of production in Latin America increased three-fold during this period, but meanwhile world production increased seven-fold, the principal increase taking place in the British and French territories on the west coast of Africa.

The numerous varieties of cacao may be grouped into two major classes, the "fine" and the "ordinary" grades. The "fine" grades command a higher price because of their excellent flavoring qualities. The "ordinary" grades make up about 90 per cent of the total output, and it is in these grades that most of the increase in production has developed.

HISTORY OF CACAO INDUSTRY. Of the world's three great non-alcoholic beverages, tea, coffee, and cocoa, the last-mentioned was the first to be introduced into Europe, having been brought in by the Spanish in 1528.[24] During the colonial era cacao was an export of some importance from Guayaquil (Ecuador), Guatemala, La Guaira (Venezuela), and Brazil. Ecuador and Venezuela are still the principal sources of fine cacao, with smaller quantities being

24 William H. Ukers, *All about Coffee* (New York: 1935), p. 21.

produced by Costa Rica, Surinam, and the British West Indies. Ecuador was long the principal cacao-producing country of the world. It retained the lead until about 1911, when it was surpassed by Brazil. Ecuador dropped to third place in 1915, when the Gold Coast was in first position. Ecuadoran production reached a peak in 1916, and thereafter started to decline as a result of the ravages of the witch-broom and Monilla diseases.[25]

IMPORTANCE AS EXPORT. Five countries — the United States, Great Britain, Germany, the Netherlands, and France — normally absorb 81 per cent of the cacao entering international trade. All of these countries have developed large chocolate- and cocoa-manufacturing industries, which have been built up primarily on the processing of the common, or basic, cacao beans. The United States alone imports nearly 40 per cent of the total.

Before the outbreak of World War II, Latin America was producing about one-fourth of the world production of cacao beans. The United States was taking around 67 per cent of Latin American cacao exports, Germany, 20 per cent, and the Netherlands, 4 per cent. The United States consumption normally exceeds the entire Latin American output (on a quantity basis without reference to grades), and it has been obtaining more than half of its imports from Africa. Under wartime conditions, the Latin American producers have been forced to market a larger proportion of their crops in the United States. In the case of countries like Brazil and the Dominican Republic, where production is largely confined to the common grades, this shift in the direction of trade offers no inconvenience. It is of some consequence, however, to Ecuador and Venezuela, whose flavor grades normally command a premium in world markets. The American chocolate industry does not require all of Latin America's output of the higher-priced grades.

BRAZIL. Brazil is by far the largest producer and exporter of cacao in Latin America, and is second only to the Gold Coast among the various producing areas of the world. The volume has been increasing fairly steadily over a long period, but not so rapidly as it has increased in Africa since the beginning of the twentieth century. Cacao ranks third among Brazil's export crops. About 90 per cent of the exports are from the State of Bahía. The semiofficial Cacao Institute of Brazil was organized in 1931. It gives financial assistance to the planters, has built improved storage facilities, is supervising the cultivation and grading, and is undertaking a program of highway construction and general social welfare. The United States normally takes 60 per cent or more of Brazil's cacao exports, with Germany in second place as a market and Argentina in third position.

25 República del Ecuador, *Informe a la Nación* (1934) *anexos*.

DOMINICAN REPUBLIC. The export of cacao from the Dominican Republic began in 1888. Gradually replacing tobacco and coffee in popularity, cacao became for a time the country's chief export crop, but in 1914 it yielded first place to sugar.[26]

During the five-year period 1933-1937, cacao comprised nearly 13 per cent of the total exports of the Dominican Republic. There have been no great increases in Dominican production since the First World War, but the country has risen to second place among Latin American producers as a result of the decline in Ecuador's production. Normally the United States takes about 96 per cent of cacao exports from the Dominican Republic, the balance going to Germany and other European countries.

OTHER COUNTRIES. Production in both Ecuador and Venezuela has trended downward. Producing grades in widespread demand for flavoring purposes, these countries normally ship to a large number of markets. Prior to the middle 1930's the United States provided the best market for cacao from both countries, but for several years subsequently Germany was the principal sales outlet. The Netherlands, Belgium, Denmark, Great Britain, France, and Italy normally purchase smaller quantities of the fine cacaos from Ecuador and Venezuela. Colombia has doubled its production since 1930, but domestic consumption tends to exceed production.

Costa Rica and Panama are the only Central American countries exporting cacao in significant amounts. Their production is from trees planted by the United Fruit Company on abandoned banana plantations. Nicaragua and Guatemala each produce about 1 million pounds annually, and there is a small industry in Honduras and El Salvador. Mexico was at one time an important source of cacao, but must now supplement domestic production with imports.

There are small but expanding manufacturing industries in most of the Latin American countries using cacao as raw material.

Maté. Maté is a popular beverage in the southern part of South America. It is prepared from the leaves of the tree *Ilex paraguarensis,* which belongs to the holly family. It contains the same alkaloids as tea and coffee, and is an active stimulant, but owing to its smaller content of tannic substances, it is said to be less trying to the digestion and the nervous system than some other beverages. The principal articles in the diet of the cattle hands of Argentina and southern Brazil are meat and maté.

The main habitat of the *Ilex paraguarensis* is the basin of the Río de la Plata, particularly the middle reaches of the Paraná. There is considerable international trade in maté (both crude and cleaned) among the countries of southern South America. Brazil is the lead-

26 Otto Schoenrich, *Santo Domingo: A Country with a Future* (New York: 1918), pp. 155-156.

ing producer, and exports substantial quantities to Argentina, Uruguay, and Chile. At one time maté ranked among the three principal exports from Brazil, but this trade has declined drastically, as a result of the development of maté plantations in the territory of Misiones in Argentina. Argentina is now approaching a point where it will have an export surplus, and steps have been taken to open markets for the refined product in Europe and the United States. Paraguay is also an important producer and exporter.

Most of the production in Brazil comes from the forests, but some of it comes from semi-cultivated trees or from plantations. Most of the production in Argentina is from plantations, whose output first became important around 1925.

Tea. Small beginnings in the production of tea introduced from the Orient have been made in several Latin American countries, principally Peru and Brazil. In Peru experiments in tea growing began in the late 1920's with seed brought from Java. By 1943 some 1200 acres had been established and planting was proceeding at the rate of about 500 acres a year. The Government maintains a seedling nursery and sells the planting stock to large farmers. A factory for drying and processing the tea is to be built at Tingo María in eastern Peru to serve the tea plantations being established in that region. The Peruvian Government has engaged the services of an English tea expert to assist in this development.

Wines and Brandies. Argentina is the largest grape-producing country in Latin America. While a large part of the grapes produced are of the table varieties, sufficient quantities are made into wine to make Argentina one of the large wine-producing countries of the world. Until recently very little was done to standardize production, which formerly had been almost exclusively for domestic consumption. Attempts to market wines in the United States following repeal of prohibition proved unsuccessful. By the 1933-1934 season the grape producers of Mendoza and San Juan were faced with a serious problem of overproduction, and some growers turned to the raising of other fruits. Meanwhile, Argentine wines came to supply an increasing proportion of the domestic demand, and imports declined. Following the shutting off of French and Italian products in 1939 and 1940, a market for Argentine vermouth and champagne opened up in the United States.

Brazil is the second largest Latin American producer of grapes and wine. Most of the production is in the State of Rio Grande do Sul, where the industry was introduced by Italian colonists in the 1890's but did not become important until the early 1900's when the State government brought an expert into the country from Italy to introduce European methods of grape cultivation and wine production. The wine industry is in the hands of many small farmers, mostly of Italian origin.

Chile and Peru have old, well-established wine industries and produce some excellent wines. Chile has developed a small export trade.

Mexico produces some wine in Coahuila and Lower California.

Rum or *aguardiente* is an important by-product of sugar-cane production in most of the Latin American countries. Rum is an important item of export from Cuba. Several fermented beverages, such as *pulque* in Mexico and *chicha* in Ecuador and Peru, are of considerable local importance. Beer is manufactured in most Latin American countries, usually with imported hops and malt. Several countries are now producing the malt barley for domestic needs, and Chile has become an exporter of this product.

Spices and Flavorings. Vanilla, an orchid which originally grew wild in various districts of Mexico, was used by the Aztecs to perfume their chocolate. Up to 1850 the State of Veracruz, in Mexico, had been practically the sole source of supply, but in recent times Madagascar has produced approximately two-thirds of the world output. The United States takes practically all of the Mexican production of vanilla beans.

Coumarin extract from the tonka bean has an aroma similar to that of vanilla, and is sometimes used as a substitute. One of its most important uses is in the manufacture of tobacco. It is also used for its aroma and flavor in the soap, perfume, liquor, and bakery industries. The tonka bean (known locally as *sarrapia*) is the seed of a fruit produced by a tree that grows wild in the northern part of South America. Some cultivation of the trees has been undertaken in Trinidad. The larger part of United States imports of tonka beans has originated in Venezuela, but the beans have been processed in Trinidad before reaching the United States market. The processing, which is known as crystallization, consists principally of soaking in rum. Within recent years the Government of Venezuela has passed regulations requiring that the crystallization process be performed in Venezuela. Brazil and Colombia also produce tonka beans.

Mexico produces some anise and cummin seeds, and also cayenne and pimento. The British West Indies are major sources of various spices, particularly nutmegs, mace, ginger, and pimento (allspice).

Edible Nuts. Coconuts are grown extensively throughout tropical America. The meat is utilized in a small way in the various Latin American countries, and the United States imports some coconuts from Honduras, Panama, Cuba, and the Dominican Republic, in addition to the larger quantities imported from Jamaica and other British West Indies.

In addition to coconuts, the United States imports babassu and cohune nuts from Latin America for the oils they contain.

Brazil nuts, which are collected from wild trees in the Amazon Valley, are an important export from Brazil. The United States is the principal market, but normally smaller quantities go to Great Britain, Germany, Canada, and other countries. Bolivia also exports small quantities of the nuts.

The cashew tree, a native of the West Indies, was transplanted in the Far East, and today India supplies most of the world exports. There are plentiful supplies in Brazil, and small quantities are exported, but the industry has not been developed, owing to the lack of an ample supply of hand labor.

Walnut exports from Chile reach fairly important proportions.

Vegetable Fibers.

COTTON is indigenous to Latin America and is fairly extensively grown today, although most of the output is confined to a few countries. Latin American production has more than doubled since 1929, and the greater part of the increase has been in the output of Brazil, which amounts to more than 2 million bales of Latin America's total annual output of approximately 3 million bales (10 per cent of world production).

Over half of the Latin American production normally is exported. There are substantial cotton-textile industries in Brazil and Mexico, and some cotton spindles in most of the other countries. With the exception of small purchases of fibers of special lengths, most of the countries grow enough cotton to supply the needs of the local textile industries. Chile and Cuba are wholly dependent on cotton imports, and Colombia, Venezuela, and Ecuador import some cotton to supplement the local production.

Brazil, Argentina, and Mexico, among the larger producers, grow cotton of varieties similar to those in the United States. American cotton experts have done much to improve local varieties in each of these countries and have played an important role in the ginning, grading, and marketing of their products. Peruvian cotton averages 1-3/16 inches in length of staple, and commands a premium on world markets. Haiti produces a small amount of the Sea Island variety, but boll weevil infestations have greatly restricted the output.

Brazil. The situation in Brazil with respect to cotton is of special interest. The importance of the crop in the national economy has varied considerably from time to time. At two periods — early in the nineteenth century and again during the period of the Civil War in the United States — Brazil was the leading cotton-exporting country. But until recent times other crops such as sugar, rubber, and coffee have normally been more profitable and have attracted the available supplies of labor and capital. Furthermore, the Brazilian staple was irregular and was poorly prepared for the market,

with the result that the principal consuming countries purchased American cotton whenever it could be obtained in suitable quantities and at normal prices. Prior to 1933, most of the cotton grown in Brazil was raised in the northeast, where most of the crop is of the tree or perennial type, although it has become considerably mixed with annual varieties. Since about 1930 Brazilian production has quadrupled, the larger part of the expansion having occurred in the southern States, particularly in São Paulo. The crop-restriction program in the United States gave the Brazilian planters their opportunity. They were able to take advantage of it as a result of the successful efforts of the State authorities to develop adequate supplies of seed which was suited to local conditions and which would produce cotton with the characteristics of the American Upland product. The Brazilian Government also gave financial assistance to the cotton planters and took steps to improve planting and ginning methods.[27] The planting of cotton was also stimulated as a result of the low range of coffee prices which prevailed during these years.

Brazil's exports of the 1940-1941 crop exceeded those of the United States for that season, and Brazil was second only to India among cotton-exporting nations. It appears likely that Brazil's production will continue to expand, but there are a number of contingencies which might restrict the output, such as: (1) The renewal of serious United States competition, either through export subsidies or through a change in policy which would permit American cotton farmers to compete on a cost-of-production basis; (2) insects or plant pests; or (3) a change in the relationship between cotton and coffee prices which would make coffee growing more attractive and cause a part of the labor that is now employed in the cotton fields to be diverted to coffee production.[28]

The United Kingdom has normally been Brazil's leading market for cotton, but in 1937 and in 1938 Germany was in first place. Japan became an increasingly important purchaser after 1934, and was the second largest market in most years from 1936 through 1941. During the 1940-1941 season Canada was the leading market, with Japan in second position.

Peru. Peru is normally the second largest cotton-producing country in Latin America. About 85 per cent of the crop is exported, as the cotton-textile industry in Peru is small. Cotton growing is entirely dependent upon irrigation. Further expansion is limited by the fact that considerable cost would be involved in bringing additional land under irrigation. There might be some shift

27 Benjamin H. Hunnicutt, *Cultivo e Comercio* (São Paulo: 1936).

28 In September, 1941 the United States Department of Agriculture inaugurated a new export subsidy on cotton to enable American growths to compete with Brazilian cotton in the Canadian market.

from the production of other crops, such as sugar, to cotton cultivation, but owing to the investment that has been made in sugar mills and equipment, there has to date been no shift of this sort on an appreciable scale. Great Britain normally takes more than half of the Peruvian crop, with Germany the next greatest purchaser, and smaller quantities go to other European countries and Japan. Prior to 1930 the United States also provided a market for Peruvian cotton, but the enactment in that year of an import tax of 7 cents per pound on long-staple cotton made peacetime imports virtually impossible.

Argentina. After neglecting cotton cultivation for a long period, Argentina has risen, since the First World War, to an important position among the cotton-producing countries of South America. From an average annual output of around 2,000 bales before 1914, production increased to about 300,000 bales in 1939. The cotton-textile industry in Argentina is a much more recent development, and has attained importance only since the 1930's. Exports of raw cotton reached a peak in 1936, and thereafter declined, owing to the fact that domestic consumption was increasing more rapidly than production. Most of Argentina's cotton is grown in the Chaco territory, where a plentiful supply of public lands has been made available to settlers. In 1935 the governor of the Chaco territory visited the United States to study American farming and marketing methods and to recruit cotton farmers for settlement in the Chaco. A rapid increase in cotton production in Argentina was expected, but developments have proceeded slowly. Poor roads and an insufficient labor supply have been deterrents. Estimates vary widely as to the amount of available land in Argentina that is suitable for cotton cultivation. It is claimed by some authorities that the best lands in the Chaco have already been taken up. An improvement in cotton prices in relation to those of other crops might stimulate cotton planting considerably, but the fact that settlement in the cotton regions is taking place very slowly remains a serious obstacle.

Mexico. Cotton production in Mexico has shown a slow but fairly steady increase during the present century. The average annual production of 187,000 bales in the years 1910-1914 rose to 205,000 bales in the period 1922-1926, and a further increase to 313,000 bales occurred in 1936-1940. Since 1940 there has been further expansion and in 1943 a record crop of around 500,000 bales was harvested.

The larger part of the crop is used by the local textile industry in Mexico. Practically all the cotton is grown under irrigation in the northern States. The most important district is that known as the Laguna District, which borders on the States of Coahuila and Durango. The Mexican Government has pushed an ambitious pro-

gram of public irrigation work since 1926, but only part of the newly irrigated areas is normally planted to cotton. The extent of the area planted to cotton varies considerably, being dependent upon such factors as (1) the relative prices for cotton and other irrigated crops, particularly wheat, and (2) climatic conditions, which affect the amount of water available for irrigation. The need for food crops in Mexico would appear to preclude the possibility of any great expansion of cotton cultivation in the near future.

Other Countries. Several other Latin American countries — Colombia, Ecuador, Guatemala, Nicaragua, and El Salvador—have been encouraging cotton cultivation as part of a program of agricultural diversification, and in order to supply the needs of local spinning plants.

HARD FIBERS. Latin America produces a large variety of hard fibers which find wide use locally and also are exported in large quantities. The most important of these are *henequen* and *sisal,* closely related varieties of the agave plant. Both species originated in Yucatan, Mexico, which region had a practical monopoly of the supply until about 1910. The high prices which obtained during the First World War caused plantations to be started in various parts of the world, including Cuba. More recently the cultivation of sisal in Haiti and of henequen in El Salvador has been gotten under way. In 1938 Latin American exports of henequen and sisal comprised 34 per cent of the world total, with Mexico's exports accounting for 28 per cent.

True sisal is produced chiefly in British East Africa and in the Netherlands East Indies, while Mexico remains the principal source of henequen. The principal use for henequen is in the manufacture of binder twine. The United States is the leading market for henequen from Mexico and Cuba, as well as for exports of true sisal from Java, Tanganyika, Kenya, and Haiti. The heavy decline in exports of henequen from Mexico has been accompanied by an increase in exports from that country and Cuba of manufactured binder twine to the United States, which has also been importing increased amounts of sisal from Africa and the East. The henequen market has also been affected by the increased use of the harvester combine in the United States.

Experimental plantings of sisal have been made in the State of São Paulo, Brazil. It was reported early in 1941 that 380,000 plants had reached the production stage, and that private interests, in co-operation with the State Ministry of Agriculture, were planning to plant 500,000 seedlings near Araraquara.

Mexico's exports of henequen, in good years, are valued at around 10 million dollars, and binder twine exports, at half a million dollars. Another hard fiber of significance in the export trade is

istle, annual exports of which from Mexico have value of approximately 1 million dollars. Istle is produced from the leaves of wild plants found principally in northern Mexico. The fiber of commerce finds its chief use in the manufacture of scrubbing brushes and nail brushes, but it is also used for basketwork, twine, and baling rope. The United States takes most of Mexico's exports of istle, but in normal years about 25 per cent goes to Europe, principally to Germany and Great Britain. Another fibrous product exported from Mexico is broom root, or *raíz de zacatón,* which is exported principally to Europe.

Abacá, the principal hard fiber used for marine cordage, has only recently been produced commercially in Latin America. Before November, 1941 more than 95 per cent of the world's supply of abacá was produced in the Philippines, but small quantities were also produced in the Netherlands Indies and British North Borneo. Abacá, or Manila hemp, is listed as a strategic material by the United States Army and Navy Munitions Board because of its use in the manufacture of ship's ropes and ship's cables. It is also used to make hoisting ropes and other kinds of rope that are required to have great tensile strength and lightness.

Before the Second World War private United States companies were experimenting with the cultivation of abacá on abandoned banana lands in Central America, principally in Panama, Costa Rica, Guatemala, and Honduras.

A Brazilian hard fiber called *piassava* is obtained from a palm growing on the coast of the State of Bahía. It is used locally in the manufacture of brooms, mats, and brushes, and is also exported to some extent. Experiments have been carried on with numerous other Brazilian fiber plants, including caroa, which is derived from a thorny bush found in the arid northeastern States.

In Colombia, the use of the native *fique* plant, which is similar to sisal, has recently been extensively developed. Practically all the sacks used in shipping Colombia's coffee exports are made from this fiber. Pita is another Colombian plant that produces a useful fiber, but its cultivation has not been developed as yet.

In Ecuador, *cabuya* fiber is used domestically for making bags, ropes, belts, and the soles for rope sandals.

The United States procurement agencies, in 1942, contracted with a large fruit company for the planting of 40,000 acres of abacá in Central America. Up to the middle of 1943 a total of approximately 23,000 acres had been planted, about half of these plantings being in Costa Rica and the remainder in Panama, Guatemala, and Honduras. The chief limitation on the continuance of the abacá industry in Latin America is the fact that considerable hand labor is required in cleaning and preparing the fiber, and there is uncertainty as to whether the Americas will be able to compete with the

Philippine Islands and other areas in the Far East with low labor costs.

SOFT FIBERS. Hemp. Chile, Argentina, and Brazil produce small amounts of hemp. Exports of hemp from Chile increased from 484 long tons in 1932 to 5,100 long tons in 1938.

Flax Fiber. Small quantities of flax fiber are produced in Chile, Peru, Argentina, and Brazil. The Peruvian Government has shown an interest in pushing the cultivation of fiber flax and has engaged the services of a Belgian expert. The first large-scale experiments were begun in 1933. In 1941 about 15,000 hectares were planted, which gave a yield of 2,700 tons of fiber. There was some decline in production subsequently, owing to insect pests and rust. Scutching mills have been erected in the principal producing centers.

In Chile fiber flax is grown principally in the Provinces of Valdivia and Llanquihue. During the 1940-1941 season some 1500 hectares were cultivated. The first flax mill was erected in 1943 at La Unión, financed by private and governmental interests. It was reported that linen yarn suitable for weaving fine-textured fabrics was produced by this mill.

Jute. Several of the Latin American countries are large consumers of jute, which is imported from British India. Brazil's annual imports of jute for the manufacture of bags for the coffee, cereals, and cotton trades amount in value to around $3,500,000. Several attempts have been made to grow jute in Brazil and also to utilize substitute fibers. The Japanese colony in the State of Amazonas made plantings from seeds introduced from India. The yield from these plantings of 40 tons of fiber in 1937 rose to 1,200 tons in 1941.

Kapok. The ceiba tree, which produces tree cotton, or kapok, is indigenous to tropical America, but the Netherlands Indies is normally the principal source of supply. Kapok is used to stuff pillows, mattresses, and chairs, and is also utilized in the manufacture of life preservers and insulation material. The United States imports some kapok from Ecuador, Cuba, and Brazil.

Silk. During the colonial period Mexico developed a small silk industry, and there were small exports of silk cloth to Peru, but this trade subsequently disappeared.

Brazil is today the only Latin American country with commercial production of cocoons. In 1923 the Government inaugurated a policy of active assistance to the industry, granting a subsidy to a company which furnished silkworm larvae and mulberry-tree cuttings to cultivators without charge. Most of the silk culture is carried on by Italian immigrants who have had previous experience in

their native land. There are silk-spinning and silk-throwing mills at Campinas, State of São Paulo, and also silk-weaving mills. Production of cocoons reached a peak of 600 metric tons in 1936, but has since declined as a result of the decline in prices and the withdrawal of important interests.

GENERAL REFERENCES

Land Tenure

Dunn, Frederick Sherwood. *The Diplomatic Protection of Americans in Mexico.* New York: 1933.

Encyclopedia of the Social Sciences, Article on "Land Tenure," section on Latin America, by George McCutcheon McBride.

Encyclopedia of the Social Sciences, Article on "Village Community," by Harold E. J. Peake.

Gonzalez Roa, Fernando. *El Aspecto Agrario de la Revolución Méxicana.* Mexico: 1919.

McBride, George McCutcheon. *Chile: Land and Society.* New York: 1936.

——. *The Land Systems of Mexico.* New York: 1923.

Mendieta y Nunez, Lic. Lucio. *El Problema Agrario de México desde Su Origin hasta la Epoca Actual.* Mexico: 1923.

Munguia, Enrique. "The Agrarian Problem in Mexico," *International Labour Review,* Vol. XXVI, Nos. 1 and 2 (July and August, 1937), pp. 49-85 and 200-238.

Phipps, Helen. *Some Aspects of the Agrarian Question in Mexico.* University of Texas Bulletin No. 2515. Austin, Texas: 1925.

Simpson, Eyler N. *The Ejido: Mexico's Way Out.* Chapel Hill: 1937.

Tannenbaum, Frank. *The Mexican Agrarian Revolution.* New York: 1929.

Thomson, Charles A. "Mexico's Social Revolution," *Foreign Policy Reports* (August 1, 1937); also "Mexico's Challenge to Foreign Capital," *Ibid.* (August 15, 1937).

Cacao

Arcoleo, F. "International Organization of the Cacao Market," *International Review of Agriculture* (February, 1939).

Keitham, Elizabeth. "Cacao Industry of Brazil," *Economic Geography* (April, 1939).

——. "Cacao in Costa Rica," *Economic Geography* (January, 1940).

Merdian, B. C. "World Cacao Production and Trade," *Foreign Agriculture* (February, 1941), pp. 33-60.

Coffee

Hearst, L. "Coffee Industry of Central America," *Economic Geography,* Vol. VIII, No. 1, pp. 53-66.

Rowe, J. W. F. "Studies in the Artificial Control of Raw Material Supplies: No. 3—Brazilian Coffee," *Memorandum No.* 34. London. Royal Economic Society, 9 Adelphi Terrace, Strand, W. C. 2 (February, 1932).

Ukers, William H. *All about Coffee.* New York: 1939.

Nickizer, V. D. *The World Coffee Economy, with Special Reference to Control Schemes.* Standford University, California: 1943.

Cotton

Barber, Charles H. "Production of Cotton in Latin America," *Foreign Agriculture,* Vol. III, No. 9 (September, 1939), pp. 375-392.

Keeler, E. P. "Cotton Versus Coffee in Brazil," *Foreign Crops and Markets* (December 9, 1935), pp. 815-831.

Norris, P. K. Reprints of U. S. Department of Agriculture — *Cotton Production in Northeastern Brazil.* (Revised December, 1939). *Cotton Production in Southern Brazil.* (Revised September, 1939). *Argentina, Mexico, and Peru—Minor Cotton-Producing Regions of Latin America* (February 17, 1930).

Fruit

Jones, Chester Lloyd. *Caribbean Backgrounds and Prospects* (Banana industry). New York: 1931.

Kepner, Charles D. *Social Aspects of the Banana Industry.* New York: 1936.

Motz, Fred A. *The Fruit Industry of Argentina,* Foreign Agriculture Report No. 1 (January, 1942).

——. *The Fruit Industry of Brazil,* Foreign Agriculture Report No. 2 (January, 1942).

——. *The Fruit Industry of Chile,* Foreign Agriculture Report No. 3 (January, 1942).

Nolan, Louis C. "Argentine Grape and Wine Control Program," *Foreign Agriculture* (December, 1942).

Cereals

Conrad, Hally H. *World Corn Production and Trade.* Foreign Agriculture Report No. 5 (May, 1942).

Dicken, Samuel N. "Corn and Wheat in Mexico's Changing Economy," *Journal of Geography,* Vol. XXXVIII, No. 3 (March, 1939), pp.99-109.

Nolan, Louis C. "The Evolution of the Argentine Grain Price-Guaranteeing Policy," *Foreign Agriculture* (May, 1942).

Nyhus, Paul O. "Argentine Corn," *Foreign Agriculture,* Vol. I, No. 8 (August, 1937), pp. 393-418.

——. "Argentine Wheat," *Foreign Agriculture,* Vol. II, No. 7 (July, 1938), pp. 323-348.

Other Crops

Mallory, L. D., and William P. Cochran, Jr. "Mexican Vanilla Production and Trade," *Foreign Agriculture* (November, 1941), pp. 469-488.

Nolan, Louis C., and Julia L. Wooster. "Yerba Maté," *Foreign Agriculture* (August, 1942), pp. 313-319.

Report of United States Vegetable Oil Mission to Brazil, March 9 to April 28, 1942. Mimeographed, 117 pp. with maps. Washington, D. C.: June, 1942. (Available in Fats and Oils Unit, U. S. Department of Commerce.)

Rossiter, Fred J. "World Rice Production and Trade," *Foreign Agriculture* (October, 1938), pp. 445-482.

Schreiber, Walter R. *The Amazon Basin Brazil Nut Industry,* Foreign Agriculture Report No. 4 (January, 1942).

Sievers, A. F., and E. C. Higbee. *Medicinal Plants of Tropical and Subtropical Regions,* Foreign Agricultural Report No. 6 (July, 1942).

General

Bacon, L. B., and F. C. Schloemer. *World Trade in Agricultural Products, Its Growth; Its Crisis; and the New Trade Policies.* Rome: 1940.

Dicken, Samuel N. "Monterrey and Northeastern Mexico," *Annals of the Association of American Geographers,* Vol. XXIX, No. 2, pp. 129-158.

International Institute of Agriculture. *International Yearbook of Agricultural Statistics.* Rome: 1939-1940.

McClintock, John C. "Food for the Americas," *Foreign Commerce Weekly* (February 20, 1943), pp. 3, 5, 11.

Minneman, P. G. *The Agriculture of Cuba.* Washington, D. C.: 1942.

Nolan, Louis C. "Bolivian Progress toward Expanded Agricultural Production," *Foreign Agriculture* (December, 1942).

Pan American Union. *Commodities of Commerce Series.* Washington, D. C.

U. S. Department of Commerce. "Foodstuffs Trade with Latin America," *Trade Promotion Series,* No. 214, 1941.

U. S. Tariff Commission. *Latin America as a Source of Strategic and Other Essential Materials.* Report No. 144, second series, 1941.

Wylie, Kathryn. "Agricultural Relations with Mexico," *Foreign Agriculture* (November, 1942).

——. *The Agriculture of Colombia.* Washington, D. C.

CHAPTER EIGHT

Forest Industries

LUMBER

Latin America is estimated to have 30 per cent of the world's forest land, yet its annual production of sawn timber amounts to but 5 per cent of the world output. The relatively minor development of Latin American timber resources is due to two things — the comparatively limited consumption of woods in Latin America and the nature of the woods produced there. Most of the Latin American forest lands produce tropical hardwoods, whereas the principal demand is for softwoods for construction and industrial purposes. It is estimated that of the productive forest lands in Latin America only 6 per cent grow softwoods, that 8 per cent is in temperate hardwoods and mixed growths, and that 86 per cent is under tropical growths.[1]

Softwoods. Brazil has about three-fifths of the softwood resources of Latin America, the remainder being located in smaller areas in Argentina, Chile, Mexico, Cuba, the Dominican Republic, and on the coasts of Central America. Most of the softwoods are found at high altitudes, where the elevation partly offsets the effect of the tropical latitudes. The useful tropical timbers are of three general types: (1) Precious woods, (2) special-purpose woods, and (3) general utility woods. Those in the last-mentioned category may be found useful to supplement the diminishing supplies of temperate hardwoods in the Northern Hemisphere.

Hardwoods. Latin America has been exporting hardwoods since about 1500. The Republic of Brazil took its name from the pau-brazil, or dyewood, found in that country. Dyewoods and cabinet woods were also exported from the Spanish colonial domains. But for several hundred years Latin America has depended largely upon North American conifer forests for its construction timbers. In the early period, these exports consisted

1 Ivan M. Elchibegoff, "The Forest Resources and Timber Trade of Latin America," *Inter-American Quarterly*, Vol. III, No. 2 (April, 1941), pp. 75-82.

principally of shipments of New England white pine to the West Indies. At a later period the yellow pine of the southern states was shipped, and toward the end of the nineteenth century Douglas fir and other West Coast timbers entered the trade, which was carried on with the leading South American countries, as well as with those in the Caribbean area. As a result of the gradual development during the present century of domestic lumber industries, particularly in Mexico, Brazil, Chile, and Argentina, the market for United States timber has declined, while a considerable amount of trade in Latin American lumber has developed between the various republics.

History of Lumber Industry. The exploitation of Latin American timber has, for the most part, been carried on in a primitive fashion. The beginnings of commercial development date from the era of railway construction in the 1880's and 1890's. American lumber men, using American machinery and methods, started developments in Chihuahua, Mexico, around 1904, and in Paraná, Brazil, in 1912. The Revolution put an end to the promising operations in Mexico, which were not renewed on an important scale until the 1920's. Both in Mexico and in Brazil the local industry has been granted substantial tariff protection. Prior to the First World War Brazil imported about 80 million board feet of timber a year, principally softwoods from the United States and Canada, but after the war the average imports amounted to less than a quarter of that quantity. Meanwhile, Brazil has become an important supplier to the adjoining countries of Argentina and Uruguay, where Brazilian lumber has been accorded preferential tariff and exchange treatment.

Brazil. The value of Brazilian timber exports probably exceeds the combined value of exports of this commodity from other Latin American countries. About three-fourths of the total exports consist of pine, which is used principally as box material. Since 1939 shipments of Paraná pine have been made to South Africa, where it is used for orange cases, butter boxes, and similar articles. The United States is the principal market for Brazilian cabinet woods, but shipments are also made to Europe.

Chile. Exports from Chile are principally of rauli and laurel (temperate hardwoods). For several years before the outbreak of war in 1939 Germany had been taking increasing quantities of South American woods. Nearly half of Chile's exports of woods went to Germany, the balance finding markets in Argentina, Bolivia, and Peru. During those years Germany also placed trial orders for Brazilian paumarfin (said to be a substitute for American hickory) and Brazilian guimbua (a substitute for South African boxwood).[2]

2 U. S. Department of Commerce, *Commerce Reports* (December 25, 1937).

Other Countries. Mexico, Nicaragua, Honduras, Guatemala, and Cuba are substantial producers of mahogany and Spanish cedar. Ecuador has important reserves of softwoods and hardwoods, but its chief export from the forests is balsa wood, which goes principally to the United States. Venezuela and Colombia export small quantities of cabinet woods.

Peru's timber areas are next in importance to those of Brazil among the forested lands of South America, but they are almost entirely located east of the Andean range, in the Amazon drainage basin. Although this region is now connected by highway with the Peruvian coastal regions, it is more economical to import softwoods than to bring native lumber over the mountains. Peru exports some hardwoods from Iquitos, via the Amazon.

Argentina is the principal lumber-importing country of Latin America. It is still an important market for southern pine and Douglas fir from the United States, but since about 1930 local needs have been supplied to an increasing extent either through greater utilization of native resources or through imports from Brazil, Paraguay, and Chile. In 1935 other South American countries supplied 44 per cent of Argentine softwood imports as against 23 per cent in 1929.

Cuba is another important market for southern pine. Cuba also normally imports European spruce, sap gum, tupelo, and treated lumber.

Since the First World War balsa wood has become an important item of export from Ecuador. Balsa is especially suitable for aircraft construction and for making rafts, life preservers, and buoys, because of its combined qualities of lightness and strength. In peacetime it is also used extensively in the manufacture of airplane models, toys, puzzles, and surgical splints, but during wartime the entire supply is reserved for military needs.

The balsa tree is widely distributed throughout tropical America, but Ecuador is the major source of supply. By 1943 its exports had increased to several times the normal prewar total. Substantial production has also been developed in several Central American countries, particularly Costa Rica.

FOREST PRODUCTS OTHER THAN LUMBER

In addition to the various kinds of woods they yield, the forests of Latin America produce an extensive variety of valuable articles of commerce, such as rubber, balata, chicle, and other gums; medicinal essences; flavoring materials; vegetable ivory (tagua); and *ilex paraguarensis,* from which maté is prepared. Some of these products originally obtained from the wilds of jungle or forest are now being cultivated, and hence have become agricultural products.

Several of them are sufficiently important in foreign trade to warrant special mention.

Tanning Materials. The United States has become increasingly dependent upon foreign sources of tanning materials as its supplies of hemlock, oak, and chestnut have diminished. The most important tanning material imported is quebracho, which enters primarily in the form of extract but also to a limited extent as logs. Quebracho trees are native to northern Argentina and Paraguay, which together produce practically the entire world output. Most of the Paraguayan extract is shipped through Argentina.

Quebracho is considered essential to the United States tanning industry. Chestnut extract is the most important vegetable tanning material produced in the United States, but owing to the ravages of the chestnut blight, it is doubtful whether the domestic product will be available for longer than fifteen or twenty years. Quebracho and chestnut extracts are complementary rather than competitive, since they are normally mixed in varying proportions.

Argentine exports of quebracho extract and logs in 1938 were valued at about $11,500,000. The United States normally purchases between 16 and 20 per cent of the total exports, the balance going to various European countries.

Regulations of the Argentine Government have tended to favor exports of the extract as against logs. The Argentine Government has also permitted agreements between producers in Argentina and Paraguay to limit output and fix prices.

The principal tanning materials imported by the United States other than quebracho are mangrove and wattle bark and extract, which come from Africa and Asia. But there is also some importation of other Latin American materials, such as divi-divi and algarobilla from Venezuela. These tanning agents are obtained from the pods of different varieties of the Caesalpinia tree. Another variety of the Caesalpinia, known locally as *Cascalote,* is used extensively in Mexico.

Chicle is the principal constituent used in the manufacture of chewing-gum base. It is derived from the latex of trees of the *Achras Zapota* variety, which grow wild in the American tropics. Most of the chicle of commerce is obtained from Mexico, Guatemala, and British Honduras. The United States normally takes 90 per cent of Latin America's chicle exports, most of the remainder going to Canada and the United Kingdom.

Mexico supplies about three-fourths of the total supply of chicle. Its production comes from the Yucatan peninsula. Part of the Mexican and Guatemalan production goes out through British Honduras, which also produces some chicle. The proportion furnished by Guatemala has increased considerably in recent years as

the result of improved transportation facilities and Government assistance. Airplanes are used exclusively in transporting chicle from the producing areas in Guatemala to Puerto Barrios.

Waxes. The most valuable of the Latin American waxes entering international commerce is carnauba wax, which is produced from a palm which grows extensively in northeastern Brazil. The wax has long been used in Brazil for making candles. Exports have increased rapidly in recent years. The United States is the principal market, and in 1939 its imports of this wax were valued at approximately 5 million dollars. Smaller quantities go to Great Britain and to the European continent. In 1938 an American company established a plant at Fortaleza, State of Ceará, to prepare the wax, inaugurating for the first time in the history of the industry the use of improved mechanical processes.

Mexico produces a valuable wax called candelilla, which has numerous industrial uses and for some purposes is interchangeable with carnauba wax. It is produced from a plant that grows wild in the arid and semiarid regions of northern Mexico, the principal producing State being Coahuila. The United States takes around 70 per cent of the exports, while normally Germany takes about 15 per cent and France, 8 per cent, with smaller quantities going to Great Britain and the Low Countries.

Rotenone. Since 1929 there has developed in the United States an important import trade in the roots of plants containing rotenone, a valuable insecticide. In 1940 about half of the United States imports originated in the Amazon Valley, in territory of Brazil, Peru, and Venezuela, the product being known locally under such names as *cubé, timbó, and barbasco.* Derris root from the Far East was also an important source of rotenone before the outbreak of the present war. The properties of rotenone make it particularly valuable as an insecticide, since it is highly toxic to most cold-blooded animals while practically harmless to warm-blooded animals. Since the entry of the United States into the war, plantings of rotenone-yielding plants have been made in the Amazon Valley, in Central America, and in the West Indies.

Cinchona. Cinchona bark, which is obtained from various species of the cinchona tree, is the raw material for medicinal quinine and its related alkaloids. The cinchona tree is native to South America, its chief habitat being the eastern slopes of the Andes from Colombia to Bolivia. South America was the sole source of cinchona bark from the early seventeenth century (when the medicinal qualities of cinchona were discovered) until the first part of the nineteenth century. Expeditions were sent to South America in the 1850's by both the Netherlands and the British Governments to obtain seedlings for the establishment of plantations in their Asiatic colonies.

Colombia was the leading supplier of cinchona bark as late as 1880, its exports in that year amounting to 6 million pounds. By 1885 Ceylon was in the lead, with an output of more than 15 million pounds. The rapid development of high-yielding trees in the Netherlands Indies plantation, however, led to the abandonment of many plantations in Ceylon, as well as to a decline in the harvesting of wild trees in South America. About 90 per cent of the world's output has been supplied during the last fifty years by the Netherlands Indies, principally Java.

In the years 1936-1939 average production of cinchona bark in the principal producing countries was about 29 million pounds. The Netherlands Indies supplied an average of around 24 million pounds, or nearly 85 per cent of the total. South America as a whole supplied about 8 per cent, British India 7 per cent, and the remainder was supplied by Ceylon and French Indo-China. Bolivia was the principal South American producer, with Peru, Ecuador, and Colombia ranking next.

The Java cinchona plantations have been developed to a point where the average quinine content of the bark is 7 or 8 per cent, as compared to a content ranging from less than 1 per cent to 5 per cent in the case of the Latin American product. Recent investigations, however, indicate that the other alkaloids derived from cinchona bark are present to a higher degree in South American bark than in that from Java, and that these alkaloids may also be utilized in antimalarial preparations, a discovery that may affect the future competitive position of Latin American cinchona.

World trade in cinchona bark and quinine has been controlled in the past by a cartel known as the Kina Bureau, composed of planters of cinchona and quinine manufacturers in the Netherlands and in Java. The postwar possibilities for cinchona bark production in Latin America will depend upon a number of factors, one of the most important being the extent to which synthetic antimalarials prove satisfactory.

During the war atabrine has been used extensively as a substitute, and there are in the experimental stage other synthetics which appear to have greater possibilities. On the other hand, the demand for antimalarials may be increased greatly as a result of international efforts to reduce the prevalence of malaria in large infested areas throughout the world. Such campaigns cannot be carried out successfully unless there is a reduction in the cost of antimalarials. Since a way has been found to utilize the cinchona alkaloids other than quinine, the possibilities for Latin American cinchona may be materially increased. During the recent war, steps have been taken to develop cinchona bark production in Latin America, not only from wild trees but also by improving existing plantations and establishing new ones.

After the United States entered the war, it undertook an active procurement program in the Latin American countries, and late in 1942 sent missions to Colombia, Bolivia, Peru, Ecuador, and Guatemala. By the end of 1943 agreements had been concluded with a number of countries providing for the exclusive export to the United States of all antimalarial products except such amounts as might be needed for domestic purposes. Under these contracts the United States gave financial assistance in development work, and also furnished technical assistance and high-grade seed brought from the Philippine Islands. Seed produced from old plantations in Guatemala has also been distributed to other areas.

Early experiments with the cultivation of cinchona in various Latin American countries were not successful. In the 1930's, however, private American interests revived activities in this field.

Factories have been established in Bolivia, Peru, Ecuador, and Colombia for processing cinchona bark, and it is estimated that these local plants provide a market for 500,000 to 1,000,000 pounds of bark per year. Prior to the war the amount of bark processed in Latin America was insignificant, but since about 1940 both the number and the capacity of factories in Latin America have been considerably increased. Larger quantities than at any time in the past are being processed locally into quinine sulphate, totaquine, and other quinine alkaloids.

OIL SEEDS AND NUTS

Flaxseed. Latin America is an important source of oil-bearing seeds and nuts. From the standpoint of international trade, the most important of these products has been flaxseed, of which almost the entire output is used in the production of linseed oil. The chief use of flaxseed or linseed oil is in the preparation of paints and varnishes, but it is also used as an ingredient in manufacturing linoleum and printers' ink. It is consumed as food in Russia. Since 1943 Argentina has been using a large part of its output for fuel.

Argentina is the principal flaxseed-producing and exporting country of the world. In the period 1909-1913 it produced 20 per cent of the world output. After 1918 production expanded rapidly, and between 1920 and 1940 Argentina's production averaged about one-half of the world total. In 1929 Argentine exports of flaxseed were valued at more than 100 million dollars, and 35 per cent of these shipments went to the United States. In recent years the foreign market for flaxseed has been somewhat restricted by import duties and quotas levied by the principal consuming countries to protect national or colonial producers.

In 1930 the United States raised the import duty on flaxseed. In 1932 the United Kingdom imposed a 10 per cent duty on non-

Empire flaxseed, which caused a sharp decline in imports of Argentine flaxseed, and in 1934 France imposed a duty on flaxseed from sources other than French colonial possessions. United States imports in 1939-1940 were the largest in a decade, owing to needs in connection with the war production program and new construction, but thereafter domestic planting increased sufficiently to supply all national needs. Flaxseed is normally the largest single item exported to the United States by Argentina, and the Argentine authorities have been much concerned about keeping open and enlarging the United States market. In the Argentine-United States trade agreement of October 14, 1941, the United States duty on flaxseed was reduced from 65 cents per bushel to 32½ cents per bushel "for the duration of the existing abnormal situation," but owing to shortage of shipping space and the expanded domestic production in the United States, Argentina was not able to benefit by the reduction. Whether or not the United States continues after the war to supply its own needs will depend upon how flaxseed prices compare with those for alternative crops.

Flaxseed is an important crop in Uruguay, and is the principal agricultural export from that country, but shipments are much smaller than those from Argentina. In the Uruguay-United States trade agreement of July 21, 1942, Uruguay received the same duty concession from the United States as that previously granted to Argentina.

Castor Oil. The oil from castor beans is used as a drying oil and for other purposes. Brazil produces about 40 per cent of the world output of castor beans and is a leading factor in this trade. In 1935 Brazil superseded India as the leading exporter of castor beans.

Oiticica Oil. Brazil is the sole supplier of another drying oil, oiticica, derived from the nut of the oiticica tree, which grows wild in the northeastern states. As a result of research by the United States paint and varnish industry, scientific extraction and commercial exports of oiticica oil began around 1935, and production has subsequently shown an upward trend. Oiticica oil has special qualities which make it useful in the manufacture of pressed fiberboard, moisture-resisting fiber bags, linoleum, and brake bands, as well as in the paint and varnish industry.

Tung Oil. Tung oil has increased greatly in commercial importance in recent years. Its great drying speed and the high degree of water resistance possessed by its films make it the most important of the so-called drying oils. It finds extensive use at present in the manufacture of many products indispensable to war production. In 1940, 90 to 95 per cent of United States factory consumption of tung oil was used in the paint and varnish

industry, especially in the manufacture of high-grade varnishes. Other strategic uses are in the making of certain insulating compounds for electric generators, cables, and wire. It is also used in the production of many types of brake linings and of gaskets for steam pipes, pumps, and engines. In addition, tung oil is used in the manufacture of linoleum and oilcloth, and for waterproofing fabrics.

China, the sole large producing and exporting country, has supplied in the past almost the entire world output of tung oil. Shipments from that source were almost completely cut off as a result of the war.

Many parts of the world with suitable climatic conditions have been interested in creating domestic sources of supply. In the southern part of the United States attempts to grow tung experimentally were begun in 1905. In 1940 it was roughly estimated that the scattered producing areas, comprising about 200,000 acres, had approximately 13 million trees. Of the total number of trees, about one-third reached bearing age in that year.

Experimentation with tung was undertaken in certain areas in Latin America as early as 1928. The only Latin American countries whose output is sufficient to be of commercial importance are Paraguay, Argentina, and Brazil.

PARAGUAY. In Paraguay, the Government has taken steps to further tung production. It announced, on June 25, 1940, that upon completion of the National School of Agriculture in San Lorenzo del Campo Grande, a tung experiment station was to be created and annexed to the school. Best results from tung growing in Paraguay are expected in the central and eastern regions, including Villa Rica, Caazapá, Yuty, Encarnación, and the zone of the Upper Paraná. It was reported in 1942 that the only area where tung was being produced to any significant extent was in the Hohenau Colony, about 50 miles northeast of Encarnación. It was roughly estimated that from 1,200 to 1,500 acres in this area were under cultivation.

ARGENTINA. In Argentina tung growing is confined to the northeastern part of the country, the plantings being concentrated mainly in the Territory of Misiones and adjoining sections of the province of Corrientes. Interest in tung production became widespread in 1933, and a considerable number of plantings were undertaken throughout the Territory. In 1940 the Argentine Government announced a plan to set out 100,000 trees annually over a period of several years at the Experiment Station at Loreto, the Forestry Station at Posadas (both in Misiones), and the National Nursery in Bella Vista (Corrientes), and planting stock was distributed among these institutions. Around 38,000 tung

trees were harvested in 1936-1937, 58 per cent of which were in Misiones, 39 per cent in Corrientes, and the remaining 3 per cent in Entre Rios. Many new plantings have been made and are expected to effect a sharp increase in tung fruit and oil production when the trees reach bearing age. There are three Argentine mills expressing tung oil — two in the tung-producing area and the third at the port of Corrientes.

BRAZIL. In Brazil, commercial plantings of tung are confined almost exclusively to the State of São Paulo. A private firm made the first planting there in 1930 from seed nuts obtained in the United States. The following year additional seed from the United States and from China was brought in by a large seed and nursery company and by the State Department of Agriculture. The industry in the State of São Paulo has developed within the past decade. Production of tung nuts in that State in 1940 was estimated at approximately 772,000 pounds.

Although the State of São Paulo is the chief commercial producer of tung in Brazil at present, there are a few sizable plantings in the neighboring State of Paraná, and in late years there has been some cultivation in the State of Rio Grande do Sul.

A Brazilian Tung Oil Society was formed to encourage the production of tung oil and assist in the development of the industry. The Society's stated objectives include assistance to planters through distribution of information; the furnishing of selected seeds and plants; the guarantee of good market prices to members through purchasing harvests and arranging for oil extraction in adequate industrial plants; and facilitation of sale to world markets.

Cottonseed Oil. Cottonseed is perhaps the most important, in both volume and value, of the oil-bearing seeds produced in Latin America, but most of the output is consumed in the countries of origin. Mexico, Brazil, Peru, and Argentina, the principal cotton-growing countries of Latin America, have developed substantial industries for crushing the seed and utilizing the oil in the manufacture of soap and vegetable shortening. Cottonseed cake and meal are exported.

Palm Oil. Several commercially important varieties of oil palms grow wild in Latin America, but exploitation has been retarded by lack of transportation and the shortage of labor required to gather and crack the nuts. Brazil has very large resources in oil nut palms, such as babassu, tucum, ouricury, muru-muru, and coconut.

Babassu Oil. Exports of babassu kernels from Brazil have taken on importance since 1934, when the United States in its trade agreement with Brazil bound the duty rate against increase. Babassu

came into a competitive position as a result of the subsequent levy of excise taxes on vegetable oils from other countries entering the United States. Total United States imports of babassu, nevertheless, remained small in comparison with the imports of coconut and palm oil from the Far East and West Africa until the outbreak of war shut off part of the supplies from these sources.

Babassu oil is similar in its properties and uses to coconut oil. Before their occupation by the Japanese, the Philippine Islands were the chief suppliers of coconut oil and copra to the United States. Normally, copra and coconut oil are able to compete with babassu kernels, despite the favorable United States tariff treatment accorded the latter, for the following reasons: (1) Coconuts grow along the coasts and are easy to gather and to ship, whereas the babassu palms are located in the interior of Brazil, which is without adequate roads or railways; (2) babassu nuts are more difficult to crack; and (3) labor in the Philippines is most plentiful and efficient.

Other Oils. Several of the Latin American countries normally import fairly important quantities of vegetable oils or kernels. Domestic production, principally from oil-bearing seeds, has been greatly stimulated in recent years. Developments in Argentina have been notable since the end of the 1920's, when the country still imported large quantities of edible oils, particularly olive oil. By 1940 Argentina had a small export surplus, and in 1942 over 100,000 tons of vegetable oils were exported. The principal expansion has been in the production of sunflower seed, and the next most marked increases have been in the production of cottonseed, peanuts, and rapeseed. Several countries have expanded sesame cultivation.

Several Latin American countries have long been important producers of essential oils, such as Paraguayan oil of petitgrain, which is distilled from the leaves and twigs of the bitter orange (220,000 pounds were exported in 1938); Brazilian oil of rosewood (yearly production ranges between 200,000 and 450,000 pounds); the balsam of Peru, which, despite its name, comes from El Salvador; and linaloe oil from Mexico (from 2,000 to 12,000 pounds distilled annually).

Mexico also produces from 25,000 to 40,000 pounds of lime oil annually, and in addition, about 100,000 pounds of lime oil are exported annually from the British West Indies.

The war has stimulated experiments with various types of essential oils not previously produced in the Western Hemisphere in commercial quantities. For example, extensive plantings of aromatic plants, especially lemongrass, have been made by the Jewish refugee colony at Sosua, Dominican Republic, and lemongrass oil and citronella oil are being produced by a large operator in Guate-

mala. Experiments with aromatic plants and their distillation are being conducted by the experiment station of the United States Department of Agriculture at Mayaguez, Puerto Rico.

RUBBER

Rubber, which once figured prominently in the trade of several countries, is of minor importance in the export trade of Latin America today.

Most of the world's rubber is derived from the latex of trees found in the Tropics in the Americas, in Asia, and in Africa. Except for small quantities of guayule, which is derived from the bark of a shrub which grows wild in northern Mexico, most of the rubber of commerce is the product of a tree known as *Hevea brasiliensis,* which grows wild in the Amazon Valley and has been transplanted and cultivated in the Far East and, to a lesser extent, elsewhere.

History of Rubber Industry. World consumption of rubber did not become important until the second half of the nineteenth century, following the discovery of vulcanization by Charles Goodyear in 1839. As the demand increased, efforts were made to cultivate rubber trees. Extensive plantings of the Castilla variety, which is indigenous to that region, were made in southern Mexico and in Central America, and the *Hevea brasiliensis* was planted in Trinidad, British and Dutch Guiana, Mexico, and Brazil. But plantation rubber was a success only in the East, the best results being obtained in Malaya and the Netherlands East Indies. Plantings were started there from seed gathered by an Englishman in Brazil in 1876, germinated in London, and sent out via the botanical gardens in Ceylon.

The development of the industry was slow, and it was not until 1894 that the first plantation rubber was exported from the East.[3] Shipments from the eastern plantations did not exceed 1,000 tons until 1904.[4] By 1914, however, exports from these plantations amounted to over half of world shipments, and thereafter plantation rubber supplies increased rapidly, while exports of wild rubber declined.

For about a century prior to 1914 Brazil was the chief source of crude rubber. Exports from that country reached a peak of 42,286 tons in 1912. Exports of rubber from other parts of Latin America reached a peak in 1910 with the shipment of about 25,000 tons, including about 10,000 tons of guayule from Mexico. By

3 Howard and Ralph Wolf, *Rubber, A Story of Glory and Greed* (New York: 1936), p. 168.

4 U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, Trade Promotion Series No. 181, *Rubber Statistics,* 1900-1937 (Washington, D. C.: 1938), p. 5.

1938 production in Latin America had declined to the point where it amounted to only about 2 per cent of the world output. In that year about 15,000 long tons were exported from South America, principally from Brazil, and about 3,000 long tons from Mexico.

Extreme Price Fluctuations. The history of rubber has been characterized by extreme price fluctuations. During the boom years from 1908 to 1910 rubber sold in New York for more than $3 per pound. This was before plantation production had hit its stride. Demand was rising rapidly owing to the growing automobile industry. By 1932 the New York price of rubber was averaging only 3½ cents per pound. During the period of Brazilian predominance in rubber production, various syndicate operations had supported the price. Following the break in prices in 1920, various attempts were made by planters in Malaya to bring about voluntary restriction of output and to stimulate consumption, but they met with indifferent success. From 1922 to 1928 the Stevenson restriction scheme was in effect in British Malaya and Ceylon. As a result, prices were driven to more than $1 per pound in 1925, but these high prices stimulated extensive plantings throughout the East, particularly in the Netherlands East Indies, and as these new supplies came on the market, the Stevenson plan broke down. The low prices of the depression years brought about new attempts at valorization, which eventuated in the International Rubber Regulation Agreement of 1934, affecting all the large rubber-plantation areas. This agreement has since been extended.

New Plantations. As a result of the high prices of the restriction period, large American consumers of rubber became interested in creating independent sources of rubber in areas under United States control or in lands closer to American consuming centers. As a part of a survey of essential raw materials authorized by Congress, the Departments of Commerce and Agriculture, between 1923 and 1927, investigated the possibilities of developing the plantation-rubber industry in the Philippines and in Latin America. Independent surveys were made by some of the large United States rubber companies, and new plantations on a limited scale were launched in Liberia by Firestone (1927) and in the Philippines by Goodyear (1928). In 1927, Henry Ford negotiated a 2,500,000 acre concession on the Tapajos River, in the State of Pará, Brazil, part of which was exchanged in 1933 for another concession of 700,000 acres not far distant, where conditions were deemed more favorable. In 1935 the Goodyear Company acquired a 2,500 acre concession near Gatun, Panama, and in the following year 1,000 acres in Costa Rica. In both countries the Goodyear Company established experimental plantations, using high-yielding stock obtained from the company holdings in the Philippines, in an effort to develop a productive and disease-resisting tree.

These experiments have advanced far enough to give considerable hope that the difficulties which have previously impeded the establishment of a rubber-plantation industry in the Western Hemisphere can be overcome. The outbreak of war in 1939 gave an added impetus to plans to develop supplies of this strategic material nearer home. The United States normally consumes over half of the world production of rubber, and the material is of vital importance in war industries. Crude rubber was for some years before the war the most valuable single import into the United States. During the years 1935-1939, imports of crude rubber had an average annual value of $166,997,000, and in 1940 the value amounted to $318,000,000.

Nurseries. The United States Congress, in June, 1940, appropriated a half-million dollars to enable the United States Department of Agriculture to conduct a new investigation of rubber production in the Western Hemisphere and to take steps towards the establishment of the industry. The plan of action formulated by the Department called for the delivery of high-yielding clones of *Hevea* obtained from the Goodyear Company to central propagating stations in Central America and the West Indies, and the establishment of seedling nurseries in all co-operating countries for the reception of the budwood. The first shipment of budded stumps arrived in Honduras in November, 1940. The ultimate distribution points, from which the commercial plantations are to radiate, are the local nurseries and demonstration stations situated in the co-operating countries. Since seedlings a year old must be available for bud-grafting from superior clones, arrangements were made to expedite the shipment of seeds and the preparation of the soil. United States Army bombers were used to deliver 1½ tons of Philippine rubber seeds from Panama to Belem, Brazil, since the use of slower shipping facilities might have resulted in the germination of the seeds before they reached their destination.

Major Obstacles. It is recognized that this is a long-range program, and that it may require ten or twelve years before the new production will become available. It takes two years to plant seeds, grow nursery seedlings, bud, and transplant; it requires another year or two to start plantations; and five years more must elapse before tapping can commence. Also it remains to be seen whether a rubber-plantation industry can succeed in tropical America. The three major obstacles in the past have been: (1) The South American leaf-spot disease, which is peculiar to and coextensive with native *Hevea* in the Western World; (2) the shortage of suitable labor and the high cost of labor as compared with the costs in the East; and (3) the socio-political conditions under which the producing companies have had to work.

LEAF-SPOT DISEASE. In their native environment, in mixed stands in the forest, where there may be only two or three *Hevea* trees to the acre, these trees are only lightly attacked by the leaf-spot disease, but when planted close together they are decimated by it. Early *Hevea* plantings in Trinidad and the Guianas failed on account of this blight. Specialists engaged in carrying out this program are working to overcome the disease through the development of resistant strains, through the selection of areas where natural conditions are unfavorable to epidemics, and through direct control measures, such as dusts and sprays.

LABOR SHORTAGE. A shortage of labor has been one of the serious handicaps encountered by the Ford plantation in Brazil, despite the co-operation of the Brazilian Government in relaxing immigration restrictions. Representatives of the Goodyear Rubber Company apparently place their main hopes for solving this problem on the possibility that, once the experimental plantations supported by the large companies have shown the way, thousands of small farmers will take up rubber cultivation on small tracts.[5] It is pointed out that 50 per cent of the rubber grown in the Middle East is on the numerous family tracts of the natives, consisting of only a few acres each. It is also recognized that under peacetime conditions, methods of operation efficient enough to withstand the competition from the East, with its low wage and subsistence level, must be evolved if the industry is to succeed in the Western Hemisphere.

SOCIO-POLITICAL CONDITIONS. The third major source of trouble experienced in Latin America in efforts to establish the industry, the socio-political conditions under which the producing companies have had to work, has been largely responsible for the failures that have occurred in Brazil and Mexico. High export taxes, as well as other tax levies, uncertain land tenure, and unstable political conditions have made it impossible for them to compete with other producing areas.

The difficulties involved in effecting any large-scale increase in rubber production in the Americas have been clearly brought out during the course of the efforts made since Pearl Harbor to increase the supply of natural rubber in the Western Hemisphere.

PURCHASE AGREEMENTS Even before the entry of the United States into the war, agencies of the United States Government concluded a general purchase agreement with the Brazilian Government, whereby Brazil agreed to sell to the Reconstruction Finance Corporation of the United States the exportable surplus of a number of strategic materials, including rubber. Following

5 J. J. Blandin (Vice-President, Goodyear Rubber Plantations Company), "Why Rubber Is Going Home," *Agriculture in the Americas* (May, 1941), p. 7.

the Inter-American Conference at Rio de Janeiro, in January, 1942, a comprehensive rubber agreement was negotiated with Brazil. This was signed on March 3, 1942, and later in the year similar agreements were concluded with all the other American republics having suitable conditions for the production of rubber. These agreements, which in most cases run to the end of 1946, provide for the purchase of all available rubber in excess of domestic consumption, at prices varying according to types and qualities but substantially above the previously prevailing market prices. In addition, the agreements provide for a large measure of financial and technical assistance, including financial aid to enable collectors to extend existing areas of exploitation and to tap entirely new areas; assistance in methods of tapping and preparation of rubber; aid in obtaining labor; provision of supplies, equipment, and food on liberal terms; and provision of means of transport into and from areas hitherto inaccessible.

As a result of these agreements, collections and shipments of rubber increased substantially in 1943. United States imports of crude rubber from all Western Hemisphere sources from April, 1942, to December 31, 1943, amounted to approximately 45,000 long tons, of which 23,700 tons came from the Amazon Valley.[6] These United States imports may be taken as roughly equivalent to total exports of rubber from Latin America during that period, since shipments to other countries were small.

Guayule. Since rubber trees do not begin to yield until six or eight years old, all this rubber was obtained from wild trees or from a few old plantations that had been previously abandoned. A quicker-growing source of natural rubber which was yielding some supplies of this strategic material during the war emergency is guayule. Under cultivation, this desert shrub is usually ready for harvesting at the end of four years from the time of planting, and in an emergency, harvesting may take place even earlier, although the yield of latex is not so great. Most of the world supply of guayule comes from shrubs growing wild in northern Mexico. Extensive experiments with guayule planting in the United States have been carried out by the Intercontinental Rubber Company, which has long operated in northern Mexico, and a factory has been built at Salinas, California. About 10,000 acres of guayule were planted in that vicinity. These experiments indicated that guayule could be raised commercially in the United States at a cost of from 25 to 30 cents a pound. The high resin content of guayule has

6 According to information furnished the United States Senate Agricultural Sub-committee by Douglas H. Allen, President of the Rubber Development Corporation. Mr. Allen stated that the total cost of the wild rubber program, excluding a project in Haiti, approximated $83,162,823, or represented a cost of 82 cents a pound for all the wild rubber obtained. Dispatch of the Associated Press, published in the *Washington Star*, December 9, 1943.

limited its use principally to the manufacture of rubberized fabrics and to blending with crude rubber from other sources. Tests have indicated that when the resins are removed by simple treatment with a solvent, guayule rubber is equal in quality to high-grade plantation rubber. The yield from guayule is low, however, in comparison with that from the *Hevea* tree, and production costs are high. No major production of rubber is expected from this source during the war, and it appears unlikely that cultivation of guayule on a large scale will be pushed.

Future Possibilities. As regards the future possibilities for plantation tree rubber, there is difference of opinion among the experts. There appears to be general agreement that there are extensive areas in tropical America with favorable conditions of soil and climate for rubber production, and that considerable headway has been made towards overcoming some of the technical difficulties confronting the industry. As previously mentioned, however, serious problems remain to be solved. Not only must Latin American rubber compete with that from Far Eastern areas in some respects better favored, but furthermore, allowance must be made for serious competition from synthetic rubber, production of which has greatly expanded during the war. Some high authorities in the United States claim that synthetic rubber will be able to hold its own in the postwar era without benefit of tariff protection or subsidies,[7] and that, in any event, the capacity to produce a substantial proportion of United States consumption should be retained as a measure of national defense.

On the other hand, for most uses synthetic rubber needs to be mixed with the natural product. Furthermore, it appears likely that the total world consumption of rubber will increase substantially, so that the world market may be expected to absorb at least the normal prewar production of natural rubber as well as such amounts of synthetic rubber as may be required for special purposes, or to maintain standby plants.

GENERAL REFERENCES

(*Note: See also* section, "Other Crops," in General References for Chapter 7.)

Russell, Joseph A., "Fordlandia and Belterra, Rubber Plantations on the Tapajos River, Brazil," *Economic Geography* (April, 1942), pp. 125-145.

Whittlesey, Charles R. *Governmental Control of Crude Rubber: The Stevenson Plan.* Publications of the International Finance Section of the Department of Economics and Social Institutions, Princeton University, Vol. II, pp. xiv, 235. Princeton: 1931.

7 William M. Jeffers, Rubber Director, in an interview published in the New York *Times*, July 14, 1943.

CHAPTER NINE

Pastoral Industries

Early History of Livestock Industry. The llamas and the alpacas of Peru were the only important domestic animals in the Americas before the Conquest, but cattle, sheep, and horses were brought in the first ships to arrive from Europe. The new livestock flourished, particularly the cattle, and within a short time the plains of southern South America and northern Mexico were covered with herds of the longhorn breed then prevalent in Spain. Their milking qualities were not highly developed, but the animals were prized for meat, hides, and tallow, and also served for traction. In the absence of refrigerating facilities, meat was preserved by salting or sun-drying. Wool, hides, and salted meats were items of export throughout the colonial era.

Livestock ranches were established to raise oxen for use in the sugar mills, or to breed animals for other special purposes, but much of the meat, hides, and tallow was derived from the wild herds which roamed the plains. The *gauchos* of Spanish South America, the *vaqueiros* of Brazil, and the *vaqueros* of Mexico became an important element of the population and had considerable influence on the political and social evolution of Latin America.

Importance in Various Countries. The livestock industry has had its principal development in the region drained by the Río de la Plata and its tributaries. This region has never produced any large quantities of minerals, and commercial agriculture on a large scale is a comparatively recent development there. In Argentina pastoral products regularly comprised the larger part of the exports up until 1904, and have done so intermittently since that time; meats, wool, hides and skins, and packing house by-products in 1938 accounted for around 45 per cent of the total value of exports. In Uruguay, exports are still predominantly pastoral (84 per cent of the total), with wool as the major item and fresh and canned meats, hides and skins, and tallow ranking next in importance. Over a third of Paraguay's exports are of animal origin. Brazil has more cattle and hogs than any other Latin American country, but most of the stock is low-grade; exports of

the pastoral industry normally make up less than 10 per cent of the total value of shipments abroad.

Except for those in the temperate southern portions of South America, the existing breeds of cattle have not been highly improved for either beef or milk production. In the tropical and subtropical regions of Latin America the highly specialized European breeds of cattle do not thrive. In some regions local varieties of native or *criollo* cattle have been developed. In Brazil and northern South America the Braman (Zebu) stock has been introduced. This type is well adapted to the climate and is immune to certain diseases that affect European breeds. Much remains to be done, however, in the way of improving the breeds so as to increase productivity, and experiments with various kinds of cattle are being carried on in Latin America and in the southern part of the United States.

Development in Argentina. It is in Argentina that the animal industries have reached their maximum development. Cattle and horse hides were the leading articles of export at the close of the colonial era, and the industry was still being conducted in a frontier fashion, although changes in methods were beginning to be introduced. The spectacular growth of the Argentine meat trade since 1900 has caused some observers to lose sight of the fact that there was a slower but significant evolution in this trade in the preceding century. Salting and rendering plants were constructed before 1800. Improved methods of salting meat and utilizing the by-products were introduced during the Rosas regime. The Liebig system of preparing meat extract was introduced in 1863, and in 1868 the Argentine Government offered a prize for the best process of conserving meat in its fresh state. The *saladeros,* or salting plants, increased in importance; exports of salted meat reached their peak in 1895 and these continued to be the main type of beef exports until 1900.

Sheep. The first importation of merino sheep is believed to have been made in 1794, but the establishment of this breed in South America really began with the receipt of a shipment in 1813. Scotch and Irish immigrants had an important part in the improvement and expansion of the livestock industries. Scotch settlers developed *estancias* with improved breeds of sheep, especially in the south. Numerous Irish immigrants were brought in to work in the *saladeros* and on the sheep and cattle ranches.[1] By the middle of the nineteenth century sheep raising was the leading

1 Michael G. Mulhall, *The English in South America* (Buenos Aires: 1878), chapters xli and xlii. Mulhall estimated that there were 25,000 Irish in the Province of Buenos Aires at the time of writing. Working under the share system, some of the Irish succeeded in acquiring large estates, and their descendants are among the leading landed proprietors in Argentina.

industry in Argentina; wool exports became the leading item of export from the country and remained so until the end of the century. The peak in numbers of sheep was reached around 1895. The flocks have subsequently declined, until today they number only about half what they did at that time. This decline was due to the appropriation of the sheep ranches on the pampa for cultivation, and the shift in livestock preference from sheep to cattle as the European market for refrigerated beef expanded.

Improved Methods. The cattle industry has shown slow but steady improvement since 1840, when the first purebred shorthorn bull was introduced. The introduction of wire fencing a few years later was another important step in the direction of using more modern methods. The technique of shipping frozen meat was developed during the last quarter of the century. Substantial shipments of frozen mutton and lamb were made, but exports of refrigerated beef did not attain important proportions until 1900, when the British Government closed its ports to live Argentine cattle. The large *frigoríficos,* or meat refrigerating establishments, had a rapid development during the opening decade of the century, principally with British and American capital; the breeding of high-grade fat stock received a strong impetus, and Argentina quickly replaced the United States as a supplier of fresh meat to the European market. Shipment of chilled beef expanded rapidly after the First World War and this product soon became the major item in the Argentine meat trade.

The cattle and sheep industries in South America are almost exclusively grazing industries, very little money, time, and effort being devoted to feeding. The high quality of the pastures in Argentina, which are largely planted to alfalfa; the mild climate, which permits grazing throughout the year; and the proximity of the pastures to tidewater have been major factors in enabling Argentina to capture the meat markets of the world.

MEATS

Beef. Latin America occupies an important position in the international meat trade, particularly the beef trade. Latin America has less than one-fifth of the total number of cattle in the world, but ships three-fourths of the fresh beef and veal and practically all the canned beef entering international trade. Argentina has been of outstanding importance in this trade. Uruguay and Brazil have also featured prominently in it, but not so importantly as Argentina. The relative position of Latin America in world markets decreased in importance and that of Australasia increased following inauguration by the British Government, in 1932, of Empire preferences. But total Latin American shipments con-

tinued to hold up well, owing to increased exports of frozen beef to the Continental European countries and larger purchases of canned meat by the United States. Since 1941, as the result of wartime demands, there has been no marketing problem, since all the meat that can be produced is readily sold at high prices. In view of the excessive slaughter and exports, several countries in 1942 restricted exports in order to protect domestic consumers. In order to save shipping space, shipments of boneless meat were instituted at the beginning of 1941, an innovation that may influence postwar practices.

Mutton and Lamb. Latin America occupies a much less important position in the world trade in mutton and lamb. In this trade Australia and New Zealand are in the predominant position. Of the Latin American countries, Argentina is by far the most important. Uruguay is also fairly important, while Brazil and Chile make small shipments.

Pork and Lard. Latin America is not an important factor in the pork and lard trade, although sizable shipments of frozen pork are made by Argentina, and Brazil exports small quantities. The Latin American countries have about one-seventh of the hog population of the world, but most of the countries consume more pork products than they produce. Over half of the hogs in Latin America are in Brazil. The hog industry in Argentina is growing, but difficulty has been experienced in the past in fitting hog production into the organization of livestock production in that country. The impetus which the war has given the hog industry in Argentina may have a lasting effect. Over 2,000,000 head of hogs were marketed in 1942, a number far in excess of any previous record. Exports of frozen pork in that year amounted to over 53,000 metric tons, and exports of lard exceeded 20,000 tons.

The per capita consumption of meat in Argentina is unusually high. In recent years about 75 per cent of the beef production, 65 per cent of the mutton and lamb, and 80 per cent of the pork have been consumed in the country.

OTHER PASTORAL PRODUCTS

Dairy Products. The dairy industry has never been of outstanding importance in Latin America, but it is expanding. Local varieties of cheese are produced throughout Latin America, but milk and butter have never been prominent in the diet. Argentina is the only one of the Latin-American countries that has developed an important export trade in dairy products. Exports of butter and cheese first became important during World War I. They subsequently declined, but have regained their importance during

the Second World War. Domestic consumption of these products has increased. Casein is exported in fairly important quantities. During the last decade or so, up-to-date pasteurizing plants have been installed in many leading cities, and the manufacture of preserved milk products has been inaugurated in a number of countries.

Hides and Skins. The Latin American countries occupy an equally important position in the exportation of cattle hides as in that of beef. Argentina is the world's largest exporter of cattle hides, and Brazil and Uruguay are also of significance in this trade. Germany is normally the largest market for these hides, with the United States ranking next. The United States is the world's largest producer of cattle hides, but it has a deficit in heavy hides, and normally obtains about 50 per cent of its imports of cattle hides from Latin America. Since the outbreak of World War II, both British and American purchases of Latin American hides have increased, thus offsetting in part the loss of the Continental market.

Latin America is relatively much less important as a producer and exporter of sheep and lamb skins. Europe normally purchases about 25 per cent of its requirements from Latin America, while the United States, before the war, took around 40 per cent of its imports of sheep and lamb skins from that source. Although American tanners prefer skins from New Zealand and Australia, in most instances those from Latin America can be used as substitutes. Three-fifths of Latin American exports of this item come from Argentina, and the balance from Uruguay, Chile, Brazil, and Peru.

The United States normally takes about 80 per cent of Latin American exports of goat and kid skins, but its purchases in the Far East are usually several times larger than in Latin America. Neither in goat and kid skins nor in calf and kip skins would Latin America be able to satisfy the normal United States demand should other sources of supply be cut off.

Wool. The principal sheep-growing regions in Latin America are found on the east coast of South America, in southern Argentina, Uruguay, and Brazil. Second in importance are the West Coast countries of Peru and Chile. Mexico and Bolivia also have a considerable number of sheep, but these countries are not important in the international trade in fleece. Latin America supplies about one-fifth of the world exports of wool, the major portion originating in Argentina and Uruguay. Uruguay produces mainly medium and fine wool from crossbred sheep. Before the recent war, its principal market was in Europe, but since 1939 a large part of this wool has gone to the United States. Normally, Argen-

tina's exports of the finer wools go principally to Europe, but Argentina is also a large exporter to the United States of wools not finer than 40's, including carpet and other types. At times Argentina is also the principal supplier to the United States of 40's/44's wools.

GENERAL REFERENCES

Hanson, Simon G. *Argentine Meat and the British Market.* Palo Alto: 1938.

National Foreign Trade Council, Inc. *Argentine-American Trade Relations.* New York: February 1, 1937.

Nyhus, Paul O. "Dairying in Argentina," *Foreign Crops and Markets,* Vol. XXXI, No. 27 (December 30, 1935), pp. 935-944.

——. "The Hog Industry in Argentina," *Foreign Agriculture,* Vol. IV, No. 8 (August, 1940), pp. 490-507.

Putnam, George E. *Supplying Britain's Meat.* London: 1923.

Richelet, Juan E. *La Ganaderia Argentina y Su Comercio de Carnes.* Buenos Aires: 1928.

Sycks, Dana C. *Cattle Raising in Argentina.* U. S. Department of Commerce, Trade Information Bulletin No. 647. Washington, D. C.: 1929.

CHAPTER TEN

Manufacturing Industries[1]

The outstanding position of the Latin American countries as producers of foodstuffs, fibers, and minerals has tended to obscure the growing importance of the manufacturing industries in their economies. Not that smokestacks and dynamos are entirely new sights in Latin America. Some of the leading manufacturing enterprises active in Latin America today were founded during the last decade of the nineteenth century or during the prosperous years 1902-1912. Many new industries were launched during the First World War period; and with the 1920's came an influx of branch plants of American manufacturers. But it is only since the 1930's that factory production has come to represent a significant proportion of the total national output in several of the larger countries, and that there has been recognized the importance of manufacturing activity in a general program of diversification designed to adjust Latin American economics to the changed world conditions.

Standing of Countries. ARGENTINA AND BRAZIL. Argentina and Brazil are far in the lead as regards the value of industrial production and the number of persons engaged in manufacturing activities. The gross value of manufactured products in Argentina in 1941 was 6,337 million pesos (approximately 1,700 million dollars) and the value added by manufacturing was 2,200 million pesos (approximately 600 million dollars). The gross value of manufactures in Brazil in 1940 was 25,154 million cruzeiros (about 1,500 million dollars). There is no official estimate of the value added by manufacturing. The number of industrial workers was considerably higher in Brazil (1,412,000) than in Argentina (632,000) owing to the smaller per-man efficiency in Brazil and the smaller capitalization per unit of production.

MEXICO. Mexico is in third place among the American republics from the standpoint of manufacturing activity. In 1940 there

1 Chapter 10 is a summary of *Industry in Latin America*, by George Wythe (New York: 1945). Used by permission of the Columbia University Press.

were 332,000 wage earners engaged and the gross value in production that year was 1,811 million pesos (approximately 330 million dollars), and the net value added by industry was 905 million pesos (approximately 115 million dollars). Mexico has a widely diversified industrial structure but no one of its industries has had as large a development as, for example, the textile industry in Brazil or the meat-packing industry in Argentina.

CUBA. While manufacturing activities in general have had only a slight development in Cuba, there are nearly 60,000 persons engaged in the mechanical operations of the sugar mills and an additional 20,000 or so in other factory operations.

OTHER COUNTRIES. Uruguay and Chile show a surprising degree of industrialization in proportion to the population, although the number of persons engaged and the value of output fall considerably below that in the larger countries. Manufacturing industries in Colombia, too, have made great advancement during the last decade or so, particularly in textiles, cement, shoes and clothing, pharmaceutical and toilet goods, and various food-processing establishments. Steps have also been taken to establish basic chemical industries and primary iron and steel production. There has been considerably less development in Venezuela, but there are a number of up-to-date factories in addition to the petroleum refineries. In Peru the metallurgical and hydroelectric plants are the chief industrial establishments, followed by sugar and cottonseed-oil mills, textile factories, a tire factory, a cement plant, and miscellaneous industrial enterprises.

In the smaller countries the reduced size of the domestic market imposes limitations on any industrial development, except in a few industries producing goods of wide popular consumption, such as cotton textiles, flour, beer, cigarettes, shoes, clothing, and soap. In a few cases, however, there has been some industrialization of local raw materials, such as the manufacture of bags from henequen fiber in El Salvador.

Stage of Industrial Development. Most of the Latin American countries are still in the early stages of manufacturing development and produce only the simpler types of consumer goods, but several of the larger countries have advanced to what may be called an intermediate stage involving some development of the iron and steel industries and the production of capital goods. Brazil, for example, is manufacturing various types of industrial and agricultural machines, and is also producing the larger part of the metals and raw materials that enter into their production. In Brazil, as well as in Argentina and Mexico, the assembly of locomotives, rolling stock, automobiles, and trucks is carried on, and there is considerable manufacture of the parts entering into the

finished product. The motors and more involved parts are still imported, but Brazil has begun the manufacture of airplane engines under the technical direction of a United States firm.

With minor exceptions, principally in Brazil, practically all of the machinery used in manufacturing operations is imported, although local foundries and machine shops may build installations to special order and manufacture parts for mining and manufacturing machinery. Industrial research has had its beginnings only during the recent war. All of the countries are still dependent upon foreign research, technique, and special skills.

While the bulk of the output of the manufacturing establishments consists of articles of common consumption, the industrial structure in larger countries is rapidly showing more complexity and there is an increased tendency to carry the manufacturing operations through all stages. There is also an increased production of quality goods. Most of the Latin American factories work for the domestic market and are protected by import duties, exchange control measures, and other restrictions. Furthermore, most of the industries have received direct Government assistance in the form of subsidies, loans from the Government or from Government-owned banks or industrial financing institutions, and other official measures. A large part of the industries have also had the benefit of certain tax exemptions in their earlier years.

Types of Manufacturing Industries. There are three principal types of industrial activities in Latin America: (1) The processing of local raw materials, primarily for export; (2) local service industries, such as utilities; and (3) protected industries working primarily for domestic consumption.

PROCESSING. The products of the first group consist principally of manufactured foodstuffs (refrigerated and canned meats, sugar, dairy products, malt, vegetable oils, wine, and rum), and semi-manufactures (metals and refined petroleum products, quebracho extract, waxes, essential oils, industrial alcohol, etc.). Exports of finished manufactures are limited and in the past have consisted principally of handicraft articles, such as harvest hats, Panama hats, huaraches (sandals), silverware, leather goods, and hand-made glass, but there is some export regularly of machine-made products, such as binder twine and cordage from Mexico and Cuba and henequen bags from El Salvador. During the war exports of some other manufactured goods, principally cotton textiles from Brazil and Mexico, and woolen yarns and blankets from Uruguay, have obtained substantial proportions. In 1942 Brazil's exports of textiles, valued at approximately 45 million dollars, were second only to coffee in the list of exports from that country.

SERVICE INDUSTRIES. The second group of industries includes gas and electric utilities, repair shops and foundries, construction enterprises, and other local service industries that do not require tariff protection. In addition to these service industries there are certain other local industries that cater to local needs and that do not need tariff or other protection, such as the manufacture of bricks. Most of the American republics also manufacture cement from local materials, but owing to the high cost of fuel in Latin America, this industry, at least in the port towns, requires protection in order to compete with imported cement.

PROTECTED INDUSTRIES. While the plants falling in these two groups comprise some of the outstanding industrial establishments in Latin America, the largest proportion of the industrial workers are employed in protected industries manufacturing goods for home consumption. The older industries, such as the manufacture of shoes and cotton textiles in the larger countries, are now sufficiently well established to produce articles of good quality at reasonable prices and to compete to a limited extent abroad. But most of the industries are still relatively high-cost producers and would have difficulty in surviving competition from the older industrial countries. Furthermore, special protective measures had to be taken during the years preceding the outbreak of the Second World War against the competition of Japanese cotton and rayon textiles.

Principal Industrial Groups. The foodstuffs and textile groups are by far the principal groups in all of the Latin American countries. As a rule these two groups account for about one-half of the total number of workers and of the aggregate value of production. The metal-working group is of considerable importance in a number of countries, since it includes metallurgical plants, foundries and machine shops, and miscellaneous establishments, fashioning a variety of metal wares. The chemical group, including industrial chemicals, pharmaceutical and toilet goods, and such things as matches, paints, and insecticides, has reached relative importance during the last two decades. Other types of industries, such as those working in wood, leather, rubber, and ceramics, fall considerably behind the larger groups previously mentioned, although they include a considerable number of large and efficient individual factories.

FOODSTUFFS AND BEVERAGES. This classification includes many different types of processes, such as the great meat-packing establishments in the Río de la Plata countries, sugar and flour mills, fish packing, vegetable and fruit canning, and the manufacture of condensed milk, vegetable shortening and cooking oils, macaroni, crackers and biscuits, yeast, confectioneries, breakfast foods, and specialities. For the most part the foodstuffs industries use local

raw materials but there are some imports of chocolate, vegetable and animal fats, and coloring materials. Some of the leading flour mills, such as those of Rio de Janeiro, grind only imported wheat. Most of the processing machinery is imported, as is also the tinplate for canning and the paper used in preparing labels. The present war has greatly stimulated the local production of vegetable oils to replace previously large imports of copra, olive oil, and other vegetable oils. The brewing industries have long been among the most prosperous establishments in many of the Latin American countries. For the most part, malt and hops are imported, but several countries are now producing part of their requirements. The distilling industries, wineries, and bottling works have also expanded considerably in recent years.

TEXTILES. Cotton spinning and weaving has long been one of the leading industrial activities in Latin America. There are approximately 4½ million spindles in Latin America, of which about 60 per cent are in Brazil and 20 per cent in Mexico. The development of the cotton textile industry has come much more slowly in Argentina, but it has expanded rapidly since about 1930. The manufacture of cotton textiles has also been growing steadily in Colombia during the last decade or two. Cotton is widely grown in Latin America, and most of the countries produce sufficient to supply the needs of their spinning industries. The principal exceptions are Chile, Uruguay, Colombia, Venezuela, and Cuba.

The woolen industries are considerably less important than the cotton branch, but they have had considerable development in Argentina, Chile, and southern Brazil, where the climate requires woolen clothing. There is also some manufacture of blankets, floor coverings, coarse suiting materials, and native types of shawls and coverings in various countries. Many of the woolen articles are made by handicraft methods.

There is a small industry in several countries in spinning and knitting silk goods using imported yarns. Brazil has made some effort to develop the production of animal silk, but the output covers only a part of the normal requirements. Both Argentina and Brazil have large plants manufacturing rayon yarn, and there is some production of yarn in Chile, Colombia, and Mexico. Most of the raw materials in all of these countries is imported, although several of the countries have made a start during the war to develop local supplies of linters, pulp, and industrial chemicals.

Since several of the principal Latin American crops, such as grains from Argentina and coffee from Brazil, Central America, and the Caribbean, are shipped in bags, the manufacture of bags is an important branch of the textile industry in a number of countries. Jute is imported from India and is spun, woven, and made up into bags in a number of countries. There is increasing tend-

ency to substitute local fibers. In Chile jute is mixed with locally grown hemp. In Brazil some jute is grown locally and experiments are being conducted with a number of local fibers. In Mexico, Cuba, Colombia, and El Salvador locally grown hard fibers are extensively used in the manufacture of bags as well as of cordage, brushes, and other articles.

The manufacture of knit goods and clothing is carried on to some extent in large factories, but much of the production is accounted for by household industry.

IRON AND STEEL. Mexico was the first Latin American country to establish a primary iron and steel industry, beginning in 1903. A modern steel industry in Brazil is more recent, but by the late 1930's Brazil was crowding Mexico for first place in volume of production. These two countries are still the only ones having any substantial production of pig iron, but in several other countries there are electric furnaces and rolling mills which utilize scrap and imported pig iron to produce reinforcing bars, wire, castings, and miscellaneous products. At the beginning of 1944 Brazilian production of iron and steel was about 200,000 tons annually, produced principally in the State of Minas Gerais where the principal iron deposits are located. Charcoal has been used for fuel. The new iron and steel works at Volta Redonda, erected by the Brazilian Government with the financial assistance of the Export-Import Bank of Washington and the technical collaboration of a United States company, was entering into production of some items at the beginning of 1945. When it is fully in operation, Volta Redonda will have a capacity of about 350,000 tons annually and will produce sheets, plates, structural steel, and heavy rails. A coking plant is being built near Volta Redonda to utilize coal from the State of Santa Catarina, but owing to the difficulties of transportation and the relatively poor quality of the coal, it is considered likely that a considerable part of the coal requirements will have to be imported. Towards the end of 1943 the Belgo-Mineira works in Minas Gerais began the production of light rails for the first time in Brazil or South America.

In Mexico, the Compañía Fundidora de Fierro y Acero de Monterrey is the only producer of pig iron and is the principal producer of iron and steel products, although there are several smaller plants using electric furnaces. Production includes bars and rods, structural shapes, rail and track material, wire, car wheels and axles, and miscellaneous castings and forgings. A second blast furnace was put into operation in July, 1943 which was expected to increase the capacity by 700 tons a day. A new Mexican iron and steel plant, Altos Hornos, S.A., at Monclova, State of Coahuila, began preliminary operations at the end of 1944 with an anticipated annual production at full capacity of 100,000 tons. The final

products will consist chiefly of black and galvanized sheets, plates, and tinplate.

The Argentine industry produces something over 100,000 tons annually, using local scrap or imported ingots. There are several rolling mills producing bar iron principally, but also some sheets and wire. The manufacture of steel pipe was begun in 1943. Argentina produces sufficient enamelware and sanitary fixtures for its own needs and exports some to other South American countries. In Chile, furnaces at Valdivia have been producing about 15,000 tons of pig iron annually, but these operations have not been successful and American technicians were engaged in 1943 to draw up plans for a new plant with a capacity of 50,000 tons annually to be located near Talcahuano. There are several small rolling mills in Chile. In Colombia, there is a small plant producing pig iron from scrap and local ore at Medellín, and plans have been drawn up by the Colombia Institute of Industrial Development for a plant in the city of Paz del Río, State of Boyacá, to have an initial capacity of 25,000 to 35,000 tons. In Uruguay, wartime prices and shortages have resulted in the establishment of a small open-hearth furnace and rolling mill to produce reinforcing bars principally.

CHEMICALS. Chemical products may be divided into two principal types: (1) Basic chemicals which are required not only in the manufacture of secondary chemical products but also in nearly all types of manufacturing operations, and (2) secondary industries producing such articles as pharmaceutical and toilet preparations, paints and lacquers, insecticides and disinfectants, explosives, and plastics. In practice, the secondary industries have usually developed first, using largely imported materials, but the basic chemical industries have also made considerable progress in recent years.

The Latin American countries are deficient in coal and sulphur, two of the most important raw materials in the chemical field, but a number of the Latin American countries produce petroleum, which is both the fuel and the industrial raw material, and a wide variety of other materials are produced locally. There is now considerable manufacture of some of the basic acids, solvents, and other reagents used in the chemical field. Several of the countries are now manufacturing alkali products, although the output is small and alkalies are still one of the principal chemical items imported into Latin America. Several Argentine companies now produce 12,000 tons of caustic soda a year. In Brazil, a company has been formed with Government backing to erect a Solvay processing plant at Cabo Frio, State of Rio de Janeiro. In Colombia, a plant is now under construction at Bogotá with financial backing by the official Institute of Industrial Development, to produce chlorine and caustic soda using salt from rock mines at Zipaquirá. Plans have also been drawn up for another Colombian plant to produce

soda ash by the Solvay process. There is also increasing utilization of local raw materials in the chemical field, such as alcohol, metals and metalloids, essences, waxes, essential oils, etc.

PAPER. The Latin American countries are deficient in softwoods suitable for making wood pulp, and only a start has been made in the production of soda ash and other chemicals required in large quantities in making pulp and paper. Mexico, Brazil, and Chile have the principal stands of softwoods. Mexico and Chile are the chief producers of wood pulp, and also produce some newsprint. Several other countries also have produced wood pulp intermittently, and also make a poor grade of pulp from straw, waste paper, and other local materials. In Peru, a sugar-refining company is producing pulp from sugar-cane bagasse, and is also manufacturing paper. In Brazil, a large chemical pulp and newsprint factory was near completion at the beginning of 1945, but some essential equipment remained to be installed. The plant is located in the State of Paraná, in the midst of the forests of that State, and electric power will be derived from a near-by waterfall. When completed, this establishment is expected to supply about half of Brazil's pulp requirements and 80 per cent of its newsprint consumption.

In the larger countries local factories supply most of the local requirements for cartons, wrapping paper, writing papers, paper bags, and envelopes.

OTHER INDUSTRIES. Other products manufactured in Latin America include furniture, lumber-mill products, leather, shoes, glass tableware and containers, window glass, cigarettes, cement, tires and tubes, rubber-soled shoes, and miscellaneous articles of wood, leather, rubber, and metal.

Protection to Industry. LESS DEPENDENCE UPON IMPORT DUTIES FOR REVENUE. The Latin American republics have throughout their history relied upon import duties for the major portion of their revenues. Traditionally, the only other important sources have been export duties (as on nitrates from Chile and petroleum from Mexico), production taxes on natural resources that are in effect equivalent to export duties (as on mining in various countries), and excise or consumption taxes (for example, in Brazil). In a few countries, principally in Central America and on the west coast of South America, fiscal monopolies of such articles as tobacco, alcohol, and salt, have provided a substantial part of the revenues. License or business taxes are a secondary source of revenue in most of the countries.

Since the First World War income taxes have been inaugurated in most of the Latin American countries. Revenues from this source are still of minor importance, on the whole, but collections

from income taxes have become second only to import duties in several of the larger countries.[2]

Increased Protection — New Devices. In most of the Latin American countries the import tariffs are voluminous documents, since most articles of commerce are subject to duty. Although most of the rates have traditionally had primarily a revenue character, the majority of countries have enacted some protective rates from the time of their emergence as independent nations. Protective tariff policies have taken on a more systematic and consecutive character in the larger countries since the 1880's, when the modern phase of industrial development began. During the last two decades protection has been further broadened and adjusted to new developments. As the federal governments have become less dependent on customs collection for revenue, they have had a freer hand in applying nonrevenue criteria to the import tariffs.

The height of the tariff walls varies considerably in the different countries. The tariffs in Chile and Venezuela are among the highest in Latin America and perhaps in the world. It is difficult, however, to find a satisfactory yardstick to measure the height of tariffs, and, in fact, nearly all of the countries apply some rates that are prohibitively high. Furthermore, import duties are only one of the measures used to protect local industry. Absolute prohibitions on imports, tariff quotas, import quotas, production or import monopolies, sanitary measures, licensing fees, and exchange restrictions, are among the services employed to control the inflow of foreign merchandise.

Export Duties and Exchange Controls. Export duties are also used for protective purposes in two ways: (1) By restricting the exportation of raw materials needed by local manufacturers, and (2) by making it unprofitable to export certain materials in other than a processed form (examples: quebracho extract and crystalized tonka beans).

Most of the exchange-control systems now in force are the outgrowth of the financial crisis beginning in 1931. The original purpose of the controls was to protect the currencies, but the most important effect was to reduce the amount of exchange available to pay for imports. The usefulness of this method of control, as a powerful instrument for fashioning national economic policy, was soon recognized, and a number of governments proceeded to elaborate systems of exchange rationing, involving discrimination as between types of imports and also at times as between different

2 *See* Table 11 for the percentage of total national revenues obtained from the chief categories of taxes in the twenty Latin American republics, the United States, and Canada.

supplying countries. Several countries adopted, and still maintained, a hierarchy of exchange rates — "official," "free market," etc. — applicable to different types of exports and imports. In these countries, since the mid-1930's, the exchange-control mechanisms have perhaps had a more important influence upon the volume and character of imports than have the import tariffs.

The Future of Latin American Industry. What is the outlook for the further expansion of industry in Latin America? There is little doubt that majority opinion in Latin America tends to favor industrialization, not only as a means of diversifying and strengthening the economy, but also as a matter of national prestige and as a means of satisfying the growing interest in subjects commercial and technical on the part of the rising generations. Certain types of light industry have become well established, and the opportunity afforded by the Second World War has enabled the larger countries to break new ground and to look forward with more confidence to the development of the heavy industries. Most of the countries are taking stock of their resources to appraise the possibilities — and limitations — of further development.

Factors Conditioning Industrial Development. The chief factors conditioning industrial development are geographic features (climate, location, topography, rivers, etc.), natural resources (raw materials, fuel, and water power), the qualities of the population (skilled and unskilled labor, initiative, managerial ability), the availability of capital, and the size of the market.

Most of the Latin American industrial development has occurred in the zones having a temperate climate, but there are some large establishments in tropical regions (sugar mills, petroleum refineries). Some of the countries are handicapped by the nature of their terrain which adds to the cost and difficulty of transportation. The situation varies greatly as regards raw materials resources, but several of the larger countries can draw on diversified resources, some of which are the basis for export industries (such as meat packing) and others provide materials for factories working for domestic markets. The fuel problem is more serious, particularly the shortage of good-quality coal.[3] This has been, and is likely to continue to be, a serious drawback, but other sources of power are being utilized, chiefly hydroelectric power. Latin America is also deficient in the special skills and techniques required in most of the advanced stages of industrialization, but it seems unlikely that this factor will prove a seriously limiting factor, since the countries can obtain such services elsewhere on reasonable terms, during the period of industrial apprenticeship. An increasing number of Latin Americans are looking toward industrial careers, and are

3 *See* chapter 6.

receiving training at home and abroad. Local private capital is deficient for some of the larger undertakings, such as hydroelectric developments and integrated iron and steel enterprises, but the outstanding current developments of this character are now being undertaken as quasi-public enterprises. Furthermore, the financial and technical co-operation of United States agencies has been available in a number of important instances. There has been a substantial growth of local capital resources in several of the larger countries. Furthermore, several countries have organized Government-supported industrial financing institutions.

LIMITED MARKET. While one or more of the factors mentioned may be decisive in this or that specific industry, perhaps the chief limitation on further industrialization as a whole is to be found in the small size of the market available to most Latin American manufacturers. Most of the countries have small populations, and even in the larger countries the per capita income and the structure of wealth distribution are not such as to afford important outlets to any except articles of low cost and general necessity. Nevertheless, the situation is not a static one, and the local market is expanding, and may be expected to continue to expand with the growth of population and wealth. The chief danger would appear to be in attempts to force industrialization at too rapid a pace, and thus create uneconomic industries that will require continuous subsidies, while withdrawing resources, capital, and manpower from agriculture, mining, forestry, and other fields. In the long run, the prosperity of the manufacturing industries will depend upon the well-balanced development of the country's human and material resources.

GENERAL REFERENCES

Bulletin of the Pan American Union. "Mexican Industrial Census of 1940." Vol. LXXVI, No. 3 (March, 1942), pp. 173-175.

Ellsworth, P. T. *Chile, An Economy in Transition.* New York: 1945.

Inter-American Affairs 1942. New York: 1943. Table 9, "Manufacturing Industries in Certain American Countries," p. 198.

Jobin, José. *Brazil in the Making.* New York: 1943.

Phelps, Dudley Maynard. *Migration of Industry to South America.* New York: 1936.

Rippy, J. F. *Latin America and the Industrial Age.* New York: 1944.

Wythe, George. *Industry in Latin America.* New York: 1945.

——. "The New Industrialism in Latin America," *Journal of Political Economy,* Vol. XLV, No. 2 (April, 1937), pp. 207-228.

——. "Outlook for Latin American Industry," *Inter-American Quarterly,* Vol. II, No. 2 (April, 1940), pp. 36-52.

Zalamea, Jorge. *Progress and Problems of Colombian Industry. Bulletin* of the Pan American Union (August, 1941), pp. 451-461.

CHAPTER ELEVEN

Transportation and Communications

Obstacles to Transportation. Nature has not been kind to Latin America as regards facility of developing means of transport. It has been said that there are "more formidable obstacles to transportation in South America than in any other continent,"[1] and the observation applies with almost equal force to Middle America. These obstacles have conditioned the nature of economic and political developments in Latin America, and have added a considerable toll to the cost of moving persons and goods. These handicaps are more severe in some areas than others, and to some extent they are being overcome through the progress of aviation and radio. As population and wealth increase, the expense of constructing ports and docks, of building and maintaining highways and railways, of dredging and regularizing rivers and waterways will become less burdensome, if the projects are wisely and economically executed. But for the present, at least, transportation remains one of the major problems of Latin America.

The principal obstacles to the development of internal transport have been mentioned in an earlier chapter:[2] the great mountain barriers, deserts, swamps, and rain forests. In a few regions — the Argentine pampas, southern Brazil, and Cuba — conditions are favorable for railway construction, and it is here that the principal commercial expansion of modern times has occurred. In the countries traversed by the Andes or the Cordillera, railway construction has been justified on political grounds or on economic grounds as a means to tap rich mineral deposits. Approach to the Mexican central plateau was simplified by the fact that it tilts gradually toward the United States frontier. Much of the difficulty involved in solving the transportation problems of Latin America is inherent in the fact that many of the political boundaries are illogical from the standpoint of economic unity; it would be easier to devise a satisfactory transportation system for South

1 Royal Institute of International Affairs, *The Republics of South America*, p. 34.
2 Chapter 2, "The Physical Setting."

America as a whole than to attempt to provide unified transportation and economic structures for each of its ten republics.

Rivers. The rivers of Latin America have always been important thoroughfares, despite their shortcomings. The Río de la Plata, which carries the largest amount of traffic, is utilized by four countries extensively and to some extent by a fifth country. The Amazon and its tributaries have a total navigable length of over 22,000 miles. Yet the Amazon basin has a population of less than two million persons. Its period of maximum commercial development was during the rubber boom of the early twentieth century. In Colombia, the Magdalena has always been the chief artery, and it still is, although the improvement of the port of Buenaventura since the opening of the Panama Canal, and the development of rail and road communications from that port to the central plateau region, have reduced the relative importance of the river. Despite the dependence of the commerce of the country upon this stream, it is only in recent years that the mouth of the river has been dredged to permit ocean-going vessels to reach Barranquilla, 10 miles upstream, and the starting point for stern-wheel steamers that ascend 615 miles to the rapids which block further navigation. A narrow-gauge railway carries passengers and freight to a point above the rapids, where the river journey is resumed. Traffic destined for Bogotá is again transferred at Girardot, which is connected by rail with the capital. (The Girardot line does not go through to Bogotá, however, and another change at Facatativa is necessary.) The Orinoco River, which is mainly confined to Venezuela, is larger than the Magdalena, but is of less commercial importance.

The rivers of Middle America have played a relatively minor role in the economic development of the region. The Río Chagres in Panama was used in colonial times but its chief significance has been in its association with the Panama Canal. Likewise, the Río San Juan in Nicaragua, together with Lakes Nicaragua and Managua, provide a route for transit traffic across the isthmus that has been of some importance. In Mexico, the Pánuco, the Tuxpan, and the Coatzacoalcos have become important because of oil-shipping terminals along their banks. Tampico, seven miles from the mouth of the Pánuco, is an ocean-shipping point of some importance. The Usumacinta and the Grijalva, in southeastern Mexico are navigable for flat-bottomed river boats.

On the west coast, most of the rivers are short and turbulent but several Ecuador rivers are navigable for some distance inland and in southern Chile some of the rivers are serviceable.

Railways. The physical obstacles are particularly marked in the case of railways. The majority of Latin American countries have narrow coastal plains, backed by lofty ranges, which stan

guard between the sea and the chief populated centers of the countries. The construction of railways over these formidable mountain barriers is both costly and difficult. The cost of operation and maintenance is also very high. There are numerous bridges and tunnels, washouts are frequent owing to torrential rains, and the grades are so steep in places that only a few cars can be hauled at a time.

The expense of operation is also enhanced by the lack of suitable local fuel in most of the countries. Chile is the only one of the countries that is nearly self-sufficient in coal. In Mexico and some other oil-producing countries, oil-burning locomotives are now being used. Diesel motor coaches have become popular in Argentina. Wood is the principal fuel used in Brazil. Several countries have extensive water-power resources, but only a beginning has been made in electrification of the lines. Brazil has electrified about 370 miles, Chile 270, Cuba 220, Argentina 200, Costa Rica 87, Mexico 65, Venezuela 30, and Bolivia 20 miles.

Railway mileage in Latin America is less than one-third of that in the United States; furthermore, on the average, service is less frequent and less efficient. Only in Cuba does the mileage in relation to the area exceed that in the United States. Approximately one-third of the total Latin American mileage is found in Argentina.

Lack of uniformity in the gauge of the various lines is a serious problem in most of the countries. The transfers entailed in some of the smaller countries by differences in gauge are nothing less than fantastic.

History of Existing Lines. Despite the physical obstacles, about half of the Latin American republics have rail connections of some kind with a neighboring country. Real international service, however, exists in only a few instances. In view of the current interest in promoting inter-American transportation connections, a brief historical sketch of the existing lines may be given. The first, and most important, was the completion of the Mexico City-Nuevo Laredo line in 1888, which connected the Mexican capital with the railway net in the United States. In the following year the Antofagasta (Chile)-Uyuni (Bolivia) line was opened to traffic. The Southern of Peru reached Puno, on Lake Titicaca, in 1876. In 1903, a line from Guaqui on Lake Titicaca to La Paz was completed, providing an outlet for Bolivia by rail and lake steamer to Mollendo, on the Pacific Ocean. In 1910, the Argentine-Chilean Trans-Andean line was opened. A section of this line was washed out in 1934, and has not yet been repaired, although connection by bus is maintained for passengers between the two termini. In 1913 the Arica-La Paz line was completed, and also international train service between Buenos Aires and Asunción was in-

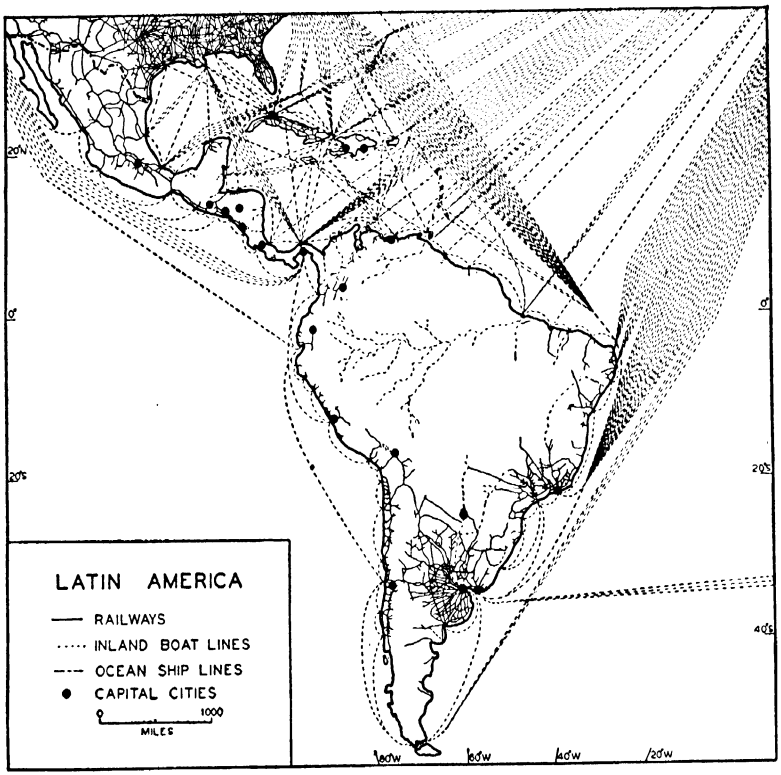


Fig. 6. Transportation Map

Each ocean ship line represents one steamship company before the Second World War. To simplify the map, multiple lines have been merged into a single line from port to port along continental shores. Inland boat lines are shown where there is regular service by steamboat or launch. Railways shown are common carriers of either broad or narrow gauge.

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augurated. With the completion in 1925 of a line from Atocha, Bolivia, to Villazon, on the Argentine border, connection of the Argentine State Railways was established with the Antofagasta-Bolivia line. Although of minor importance, mention may also be made of the international service inaugurated in 1926 from Cucutá, in Colombia, over the Tachira Railway in Venezuela to Encontrados, on the Catatumbo River, which flows into Lake Maracaibo. The rail connection between Guatemala and El Salvador was formally inaugurated at the end of 1929.

NEW PROJECTS. The completion in 1942 of an international railway bridge across the Suchiate River has greatly facilitated overland traffic between Central America and the United States. The bridge connects the town of Suchiate, Mexico, which is the southern terminus of the standard-gauge system of the National Railways of Mexico, with Ayutla, the northern terminus of the narrow gauge lines of the International Railways of Central America. Prior to the opening of the bridge, cargoes had to be unloaded at the rail terminals, transferred by truck or ox-cart to the river bank, and then ferried across the Suchiate on small barges.

The most ambitious railway project in South America is embodied in the 1938 agreement between the Brazilian and Bolivian governments calling for the extension of the Brazilian railway which runs almost due west from the Atlantic port of Santos, on across the eastern lowlands of Bolivia to connect with the Arica-La Paz railway. The completion of the project would thus provide through service across the continent. It was only necessary for the Brazilian Government to extend its lines about 42 miles, from Porto Esperança, on the Paraguay River, to reach Corumbá, on the Bolivian border, and this section was completed in 1941, but the Brazilian Government has also provided technical and financial assistance for continuing the line toward Santa Cruz, about 465 miles from Corumbá. The final section of this transcontinental route, between Santa Cruz and Vila Vila, is to be for the account of the Bolivian Government. A commission headed by Captain Leroy Bartlett of the Corps of Engineers, United States Army, surveyed this route in 1940-1941. In view of the estimated cost of this section, it has been proposed that a highway be built to Santa Cruz from the Bolivian highlands, instead of a railway.

Argentina is also interested in another rail connection with Bolivia, to tap the oil fields in the latter country. A convention between the two countries, signed February 10, 1931, provides for the construction of a railway from Yacuiba, on the frontier, to Santa Cruz. Argentina is advancing the funds for the construction of the first section of about 62 miles, to Villa Montes, to be reimbursed from the yield of the oil fields. The Argentine Government also undertakes to provide a pipe line.

Work is also proceeding, in both Argentina and Chile, toward closing the gaps in the Trans-Andean railway, designed to connect Salta, in northwest Argentina, with the port of Antofagasta. The line was originally proposed as early as 1898. The project has been delayed, not only by the cost and difficulties of construction, but also by political and economic susceptibilities of the two countries. Chilean agricultural interest feared competition in the nitrate fields from Argentine agricultural and pastoral products. The distance from Antofagasta to Salta along the proposed route is about 550 miles, of which 205 miles are in Chile and 357 in Argentina. About 47 miles remain to be completed in Chile and 106 miles in Argentina. The border will be crossed at the Socompa Pass, 12,600 feet above sea level.

FINANCES. Although highway construction has received the lion's share of the transportation budgets of most of the countries in recent years, there has been a revival of interest in extending and rounding out the various railway nets. Until the shipping and supply situations became acute, on account of the war, most of the larger countries were proceeding actively with new lines, financed by the national governments of the various countries. While a large part of the funds required to build the principal railways of Latin America was provided by private foreign investors, comparatively little new private money has been forthcoming since the First World War. Furthermore, in recent years a number of important lines have been taken over by the national governments. The Argentine Government, for example, bought from British interests the Córdoba Central Railway and the Argentine Transandine Railway. Since 1930 the Brazilian Government has taken over the Madeira-Mamoré Railway, the Brazil Railway Company and its subsidiary companies, the Vitória-Minas Railway and the Paraná Railway. Mexico in 1937 expropriated the National Railways of Mexico, in which it already held the majority of the common stock, and it has since expropriated or turned over to the workers several other lines.

PAN AMERICAN RAILWAY. At the first International Conference of American States, an Intercontinental Railway Commission was appointed, and a survey undertaken of a possible route for a Pan American Railway. The report submitted called for a route from New York to Buenos Aires through Mexico, Central America, Colombia, Ecuador, Peru, Bolivia, and Argentina, a total of 10,116 miles. Of this route, 7,126 miles have been constructed.

EQUIPMENT. Latin America imports the major portion of its railway equipment. Mexico produces most of its rail and also miscellaneous supplies, such as spikes, bolts, fish-plates, etc. Box cars and other rolling stock are manufactured or assembled in

some countries. Several of the larger countries also have shops capable of assembling and rebuilding locomotives.

Pipe Lines. Although many tank cars (and tankers) are used in the transportation of crude petroleum and derivatives, pipe lines are an important transport medium in most of the producing countries.

Highways. Since the First World War, highways have come to have an increasingly important place in Latin American transportation plans. Roads can be constructed more quickly and at less cost than railways, and there is more opportunity for the use of local materials and technicians. While some of the countries have imported large amounts of highway-construction machinery, proportionately more hand labor is used than in the United States. Several countries now manufacture stone crushers, concrete mixers, and other types of equipment. Steel must be imported for long or high bridges, but cement is available locally in most countries for construction, paving, or ornamental work. Argentina is deficient in stone and gravel, which are imported in large quantities from Uruguay.

As in the case of railways, the terrain and climate frequently increase the costs of production and maintenance. Drainage is also a problem in large areas, particularly in the river basins of central South America.

History of Highways. Vehicular traffic has never been very important in Latin America.[3] During the colonial period pack animals or human carriers were relied upon primarily. Canoes, barges and small sailing vessels were used on rivers and lakes and along the coast. During the nineteenth century ox- or mule-carts came to be used in some areas, particularly on the Argentine pampas and in the Chilean nitrate fields. Public transport was poorly organized or nonexistent before the advent of railways. The first coach line in Mexico was established around 1850.[4]

The mass production of cheap motor cars suited to New World conditions gave an impetus to road construction during the 1920's. In the beginning most of the development consisted of local stretches of graded roads, giving access to railheads or commercial centers. Most of the early roads in Argentina were designed as feeders to the railways. Gradually interest increased in national highway programs and in international connections. Mexico in 1925 established a National Highway Commission, and shortly thereafter work began on an international highway from the Texas border to Mexico City. Although it was not formally dedicated

3 Note: The famous Inca "roads" were built for pedestrians and llamas. No wheeled vehicles existed in South America before the Conquest.

4 Pablo Macedo, *Tres Monografías* (Mexico, D. F.: 1905), p. 195.

until July 1, 1936, sections of the road had at that time been in use for a decade. In Venezuela, President Gómez devoted part of the revenues derived from oil to highway construction. In addition to paved roads in the vicinity of Caracas and Maracay, a highway was pushed through the mountains to the Colombian border, later to form a part of the Bolívar Highway to Bogotá and Quito. Cuba devoted part of the proceeds of a foreign loan to the construction of the magnificent central highway (1928-1930). During the 1930's the leading South American countries developed national highway programs, which were supported by annual appropriations, revenues from special taxes, or foreign loans.

ALL-AMERICAN HIGHWAY. Plans for an all-American highway, to connect the capitals of all the American republics that can be reached by road or ferry, are now well on the way toward realization. The first official co-operative action in that regard took the form of a resolution adopted by the Fifth International Conference of American States, at Santiago, Chile, in 1923. The first Pan American Highway Congress was held at Buenos Aires in 1925. Three additional Pan American Highway Congresses have since been held. A convention calling for the speedy completion of the highway, and providing for technical and finance committees to devise ways and means, was approved by the Inter-American Conference for the Maintenance of Peace, held at Buenos Aires, in 1936. The ratifying governments have proceeded with the organization prescribed by the convention.

Although most of the expenses involved in highway construction have been met by the various countries out of current revenues, or from national bond issues, some assistance has been granted by the Export-Import Bank of Washington in the form of loans to over half of the republics. In addition, the Congress of the United States has made special financial grants to most of the Central American republics in connection with that portion of the all-American highway which extends from Mexico to the Panama Canal, now known as the Inter-American Highway. The first grant of $50,000 was made in 1930 to initiate reconnaissance surveys, and subsequently larger appropriations for surveys and construction, totalling approximately $23,000,000 by the end of 1941, were made. The route of the Inter-American Highway is about 1,550 miles in length. By the middle of 1942 about 1,000 miles were open for traffic.

As has been mentioned, that portion of the Pan American Highway between Laredo, Texas, and Mexico City — 762 miles — has been open for several years. As regards the section from Mexico City to the Guatemalan border — approximately 880 miles — several stretches are now being used, and work is proceeding actively on the remainder.



Fig. 7. Pan American Highway

Courtesy of the *Geographical Review*, published by the American Geographical Society of New York.

About two-thirds of the Highway have been completed in South America. There are two serious gaps in the northern half of the route, one involving the connections between Panama and Colombia, and the other in the transition zone between Ecuador and Peru. The Panama-Colombia gap involves serious difficulties, as it traverses the Darien jungles and the serrated ranges of northwestern Colombia. In order to avoid the delays that the completion of this section may involve, engineers have investigated the route from Dabeiba, the northernmost point in South America reached by the Pan American Highway, to the port of Turbo, on the Gulf of Urabá in the Caribbean, from which point a ferry could transport motor vehicles to Colón, at the northern end of the Canal.

The final choice of routes in Southern Ecuador has not been made. The gap here involves about 210 miles of roadway.

Remarkable progress has been made in Peru since a national highway policy was adopted in 1931. The longitudinal highway from the Ecuadoran border to the connection with the Chilean net has been completed, and in addition substantial headway has been made on the Peruvian section of an alternate Pan American Highway route, which, branching off from the other route near Arequipa, passes through Bolivia, and enters Argentina at La Quiaca.

There is a dry-weather road from La Paz to the Argentine border. The Argentine section of this branch of the Pan American Highway is unfinished, in part, but the basic construction is completed and work is proceeding with improvements.

The Santiago-Buenos Aires branch of the highway is open during the summer months. This section crosses the Andes at the Uspallata pass 13,300 feet above sea level, which is blocked by snow about eight months in the year. Since 1942 the Trans-Andean railway tunnel has been open to motor traffic, which makes travel possible most of the year.

Buenos Aires is the hub for four branches of the Pan American system. In addition to the Bolivian and Chilean connections, just mentioned, there is also a link to Paraguay and an artery to Uruguay and Brazil. The latter crosses the Río de la Plata by ferry to Colombia, Uruguay, and thence proceeds to Montevideo and Rio de Janeiro.

The total highway mileage in Latin America in 1940 was around 555,000 miles, or about one-sixth of the highway mileage in the United States. It is probable that at least two-thirds of the Latin American highways were unimproved or nonsurfaced earth roads.[5]

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5 On January 1, 1941, total motor car registrations (including passenger cars, busses, trucks, and Diesel units) in the Latin American republics were 868,000, as compared to 32,452,861 in the United States on that date and 1,477,282 in Canada. — U. S. Department of Commerce, *Industrial Reference Service*, Part 9, No. 39, "World Registration of Motor Vehicles as of January 1, 1941." *Also see* Table 9.

ECONOMIC SIGNIFICANCE OF HIGHWAYS. It is difficult to draw up an economic balance sheet on the highways of Latin America. They have acted as a general tonic, and have tapped some areas that previously lacked any mechanical means of transport. A substantial part of the highway mileage parallels previously existing railways, which have suffered from the competition. The new roads have given a fillip to travel and tourism. The expenditures of American tourists in Mexico have gone a long way to pay for the cost of highway construction.

But whatever the economic benefits, at bottom the highway programs are primarily political and national, rather than commercial. They are one of the instruments of national political and social unity. In Peru, for example, considerable attention is being given to the construction of transocean highways which will afford closer links between the commercial centers on the coast and the Montaña, or Amazonian region. The first of these roads, Lima-Huánuco-Pucallpa, has been finished, and thus connects the capital with the head of navigation of the Ucayali river, a branch of the Amazon. From Pucallpa, river steamers can go to Iquitos, the commercial center of the Peruvian-Amazonian region. Previously communication between Iquitos and Lima, other than by air, had required a trip down the Amazon river to its mouth, thence through the Panama Canal, and a trip down the west coast to Callao.

Aviation. HISTORY OF AVIATION. While the Latin American development of highway, rail, and river transportation is not very impressive, the area makes a better showing as regards air transport. The first successful commercial air line in the world was the *Scadta,* in Colombia, established in 1919. In 1939 there were more miles of regularly operated airlines in Latin America than in Europe or the United States. This notable development has come about primarily because of the obstacles to transport by land and water. In Colombia, for example, the plane trip from Barranquilla to Bogotá requires only a few hours, while two weeks or more are needed to make the journey up the Magdalena River. Likewise in Brazil, aviation has been a tremendous help in keeping the outlying regions in touch with the national capital. For this purpose military air-mail service was established between sections not served by commercial lines.

TYPES OF CARGO. The airplane is used to carry many unusual cargoes in Latin America. In Ecuador and Peru, planes are used to transport mining machinery and supplies to inaccessible mining camps, and likewise to bring out the ores or metals. In Guatemala, national legislation requires all chicle to be transported to coastal shipping points by airplane. This regulation is designed not only to facilitate the movement but also to control operations and pre-

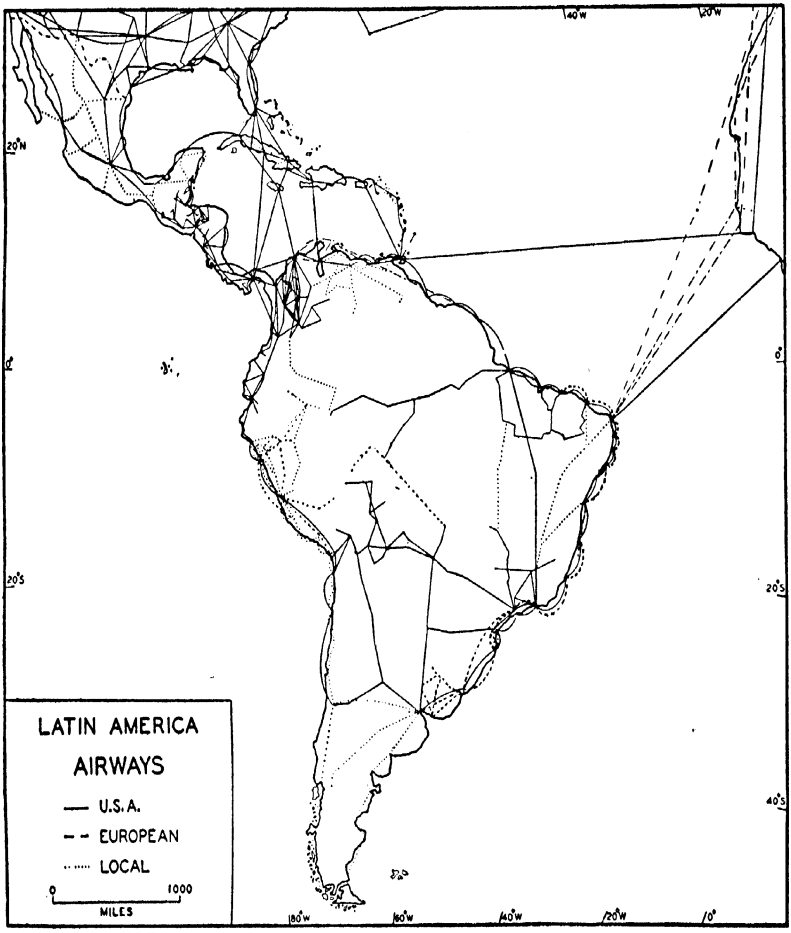


Fig. 8. Latin American Airways

Reproduced with permission from *Latin America,* by Robert S. Platt, published by McGraw-Hill Book Company, New York, 1942.

vent smuggling. Commercial air service in Mexico grew out of the operations of a company that carried payrolls for the oil companies to prevent hold-ups and to reach remote camps promptly. Baby chicks are transported to Caribbean countries that are building up their poultry industries. The reverse of this was the transport by plane to the United States from Chile of thirty-six pairs of chinchillas, to found a fur-breeding industry on the West Coast. In international trade, the time saved through the transmittal of shipping and banking documents by air results in substantial savings in interest charges and other costs. Since the outbreak of war, cargo transport services have been organized to move to the United States various strategic materials of great value in relation to bulk, such as quartz crystals, diamonds, mica, and rubber, and likewise to carry to Latin America materials and equipment needed in connection with the war effort.

EQUIPMENT AND OWNERSHIP. There is no aircraft-manufacturing industry in Latin America. Planes are assembled in four or five countries, and there are repair facilities in several. In 1942 the Curtiss-Wright company announced plans to manufacture engines in Brazil. Most of the pioneer work in connection with the establishment of regular lines, such as the construction of airports, the organization of weather-reporting services, and the training of pilots and mechanics, has been carried out by foreign companies, but the larger countries have made substantial progress in these fields. Most of the local transport lines are now in the hands of nationalized companies. Prior to the outbreak of war German-controlled subsidiaries operated an extensive net throughout most of South America, but in 1941-1943 these properties were taken over by local governments and organized as national enterprises. Financial and technical assistance in carrying out this reorganization was provided by the Defense Supplies Corporation, a subsidiary of the United States Reconstruction Finance Corporation. Several hundred Latin Americans received training in United States schools as pilots, mechanics, and weather forecasters.

INTERNATIONAL AIR SERVICES. Taking advantage of the South Atlantic "narrows," regular air-mail services between South America and Europe were established by French, German, and Italian companies. The German and French lines discontinued operations in 1939 and 1940, respectively, but the Italian *Lati* lines operated irregularly until 1943.[6]

The first regularly established international air-mail service to the Latin American countries was inaugurated by the Pan Ameri-

6 Melvin Hall and Walter Peck, "Wings for the Trojan Horse," *Foreign Affairs* (January, 1941), pp. 347-369, and William A. M. Burden *The Struggle for Airways in Latin America* (New York: 1943).

can Airways, in 1927, with a short line from Key West, Florida, to Habana, Cuba. Following the enactment of the United States foreign air-mail act in 1928, services were extended to include eventually all of the American republics. At mid-1942, the Pan American Airways and affiliated companies were operating over 57,000 miles of air routes in Latin America. At that time the Clippers were transporting 26,000 passengers monthly, and also, mail and express cargoes amounting to 750,000 pounds a month.[7]

Air transport has done much to bring Latin America closer to the world centers of commerce and industry, but its significance is primarily in connection with mail, passengers, express, and some military cargoes. The great bulk of the commercial traffic must continue to move by water, except as between certain pairs of countries, such as the United States and Mexico. The situation as regards ocean shipping is therefore of vital importance and should be examined in some detail.

Harbors. South America is perhaps the least accessible of continents, from the standpoint of good natural harbors, and the Middle American countries are none too well provided in that respect. The west coast is particularly deficient. Valparaiso and Callao, the two principal ports, are partly protected by artificial breakwaters, but the abruptness of the coast makes adequate construction difficult. Most of the other ports are open roadsteads; passengers and cargoes must be unloaded into lighters. Several rivers are navigable for some distance; for example, Guayaquil is located thirty-three miles from the mouth of the Guayas River, and Concepción, Chile, is some six miles upstream on the Bio-Bio River.

The north coast of South America is also fairly inhospitable. Lake Maracaibo, the chief indentation on this coast, carries considerable traffic, but it has been necessary for the oil companies to build special tankers of shallow draught in order to enable them to clear the sand bar at its mouth.

The east coast is better favored. Rio de Janeiro has a fine natural harbor. The estuary of the Río de la Plata, despite its drawbacks, admits world commerce on a scale sufficient to give sustenance to several thriving cities, of which Buenos Aires is the largest.

In the West Indies, Habana has been an important port from colonial times, owing to its strategic location. Mexico's chief Gulf ports are Veracruz and Tampico. The former has a somewhat difficult approach and is inadequately protected; the latter, as has been mentioned, is located a short distance up the Pánuco River. Central America has some bays and indentation that offer

7 *Bulletin* of the Pan American Union (June, 1942), p. 359.

possibilities of development. The Gulf of Fonseca, on the west coast, is particularly well situated, since three countries border on it.

Port improvement has received considerable attention in recent years. In Peru, the sheltered port of Matarani has been built to replace Mollendo as the Pacific terminus of the railway to Arequipa and La Paz. Work has begun on the construction of a port at the Bay of Chimbote, into which the Santa river flows. This is also expected to be the site for extensive industrial developments. Venezuela has improved Puerto Cabello and constructed a new oil port in the eastern section of the country, at Puerto de la Cruz.

Shipping. Shipping is an exceedingly international business, and Latin American ports are visited annually by the vessels of many nations. British and German ships normally predominate, but the vessels of a dozen other European nations participate in the traffic. Japan in the 1930's improved its services to the east and west coasts of South America and to Caribbean ports. American-flag services have been expanded considerably within the last decade. Under the Merchant Marine Act of 1936, a construction program was launched to provide ships suited to the needs of the Western Hemisphere. As of September 15, 1940, the United States fleet in inter-American trade aggregated 128 ships of 813,000 gross register tons, exclusive of tankers.[8]

There is no Latin American shipbuilding industry. Most of the countries have some merchant marine, but it is engaged principally in coastwise, river, or lake traffic. While many of the republics have ocean-going vessels registered under their flags, most of these fleets are foreign-owned. Only Brazil and Chile have in the past operated overseas merchant marines to any important extent. Most of the countries reserve coastwise shipping to national vessels, but there are numerous exceptions, particularly as regards passenger traffic, owing to the inadequacies of the local services. Brazil has the largest merchant marine under local control. This is explained by the extent of the coastline, the length of navigable waterways, and the lack of overland transportation. Brazilian Government-supported lines have also long operated to Europe and the United States. Brazil in 1939 bought 14 cargo vessels in the United States to augment its merchant marine. Chile also during the 1930's acquired several small modern merchant ships, which, before the war, made triangular trips between Chilean ports, German ports, and New York. Some private Argentine ships ply on the New York run, and in addition in 1941 the Argentine National Merchant Marine was created, consisting principally of vessels purchased from Germany and Italy. At the end of 1942, the Argen-

8 *Inter-American Maritime Conference*, p. 23.

tine National Merchant Marine consisted of 28 vessels of 189,015 dead weight tons.

Argentina and Mexico have about a dozen tankers each. The Government-controlled oil companies in both countries are anxious to increase their shipping facilities.

Telecommunication. TELEGRAPH. In the field of telecommunications, the situation has been similar to that as regards shipping: Latin America has had practically no industry of its own, but adequate connections with Europe and the United States, as well as between the various Latin American countries, have been established by foreign companies. The first international telegraph communication between South American countries was established by the British, when a cable was laid across the mouth of the Río de la Plata in 1866 to bind Buenos Aires and Montevideo. In 1872 a trans-Andean land line was laid between Buenos Aires and Valparaiso, and shortly thereafter the Western Telegraph Company (British) connected Montevideo and Brazilian ports by submarine cable. In 1874 the British company established communication with Europe by the opening of a cable between Pernambuco and Lisbon, through St. Vincent and Madeira. In succeeding years cables were laid down the west coast of South America from Lima to Valparaiso.

Meanwhile, farther north, United States companies were pushing communications southward. A cable between Florida and Cuba was opened to the public in 1866. In 1878 two American companies were organized to develop communications with Latin America. The first, the Mexican Telegraph Company, laid cables connecting Galveston, Texas, with Veracruz and by land wires with other cities in Mexico. The second company, the Central and South American Telegraph Company, in 1882, completed a system of cables connecting New York with the Isthmus of Panama and the principal cities on the west coast of South America as far south as Peru. This system was later extended to Valparaiso, and in 1892 the Central and South American Telegraph Company obtained control of and reconstructed the trans-Andean telegraph. It was not until 1919, however, that the American company (now known as All-America Cables, Inc.) was able to perfect its right to enter Brazil, as a British company had previously held a monopoly concession for submarine telegraphic communication between Brazil and the republics of Uruguay and Argentina. As the British company continued to hold rights to port-to-port communications in Brazil, the American company established separate lines with Santos and with Rio de Janeiro.

A French cable from Dakar to Pernambuco was laid in 1892, and in 1910-1911 a German route was established from Emden

via Teneriffe to Monrovia and then to Pernambuco. An Italian route was provided in 1925.

RADIOTELEGRAPH. The big development of radiotelegraphy did not come until after the First World War, but already in 1913 the United Fruit Company had organized a service in the Gulf of Mexico and the Caribbean, land stations being erected at New Orleans, Boston, and points in Central America.[9]

The Radio Corporation of America established a radiotelegraphic circuit between New York and Buenos Aires in 1924. A decade later direct circuits were operating to most of the Latin American countries. Circuits were also established between South America and Europe.

TELEPHONE. Cuba and the United States were connected by telephone, through a submarine telephone cable, as early as 1921. In 1927 long-distance telephone service between Mexico City and United States cities was inaugurated. Subsequently international connections were established to the more remote countries by radiotelephone. International radiotelephone facilities between New York and Buenos Aires were opened to the public in 1930, and thereafter to most of the Latin American countries. Argentina, Chile, and Uruguay are connected by land or subfluvial telephone lines.

For national internal communications, the telegraph and the telephone were introduced at an early period. As in Europe, the national telegraph systems have been operated for the most part by the respective governments. The principal railway companies operate their own systems. Since telephone service involves a large investment for installation and operation of equipment, most of the telephone development was supplied by outside capital, originally from Europe. Since about 1925 United States capital has supplemented Latin American financial resources in replacing European control of the telephone systems in almost every country where it existed.

Telephone service has expanded considerably in recent years in Latin America, but the development is still very slight in comparison with the United States. In 1914 there were about 238,000 telephones in Latin America. This had increased to more than 1,200,000 by the end of 1939. At this latter date there was less than 1 telephone per 100 persons (87 per cent, to be exact) in Latin America, as compared to 15.4 telephones per 100 of the population in the United States. Forty-five per cent of the Latin American telephone installations are in Argentina.

NEWS SERVICES. The extension of cable lines and the expansion of radiotelegraphic facilities has greatly improved the distri-

9 J. M. Herring and G. C. Gross, *Telecommunications*, p. 78.

bution of inter-American news. The development of radio broadcasting has also resulted in the widespread distribution of news, propaganda, entertainment, and advertising.

GENERAL REFERENCES

Burden, William A. M. *The Struggle for Airways in Latin America.* New York: 1943.

Burke, Thomas. "Inter-American Communications," *Bulletin* of the Pan American Union (April, 1940).

Duncan, Julian S. "British Railways in Argentina," *Political Science Quarterly,* Vol. LII (December, 1937), pp. 559-582.

——. *Public and Private Operation of Railways in Brazil.* New York: 1932.

Haag, Alfred H. "A Quarter Century of Ocean Transportation in the Western Hemisphere," *Bulletin* of the Pan American Union (July, 1940).

Hall, Melvin, and Walter Peck. "Wings for the Trojan Horse," *Foreign Affairs* (January, 1941), pp. 347-369.

Hanson, Simon G. "The Farquhar Syndicate in South America," *Hispanic-American Historical Review,* Vol. XVII (August, 1937).

Herring, James Morton, and Gerald C. Gross. *Telecommunications.* New York: 1936, p. 544.

Lanks, Herbert C. *By Pan American Highway through South America.* New York: 1942.

Lissitzyn, Oliver James. *International Air Transport and National Policy.* New York: 1942.

Rippy, J. Fred. "Dawn of the Railway Era in Colombia," *The Hispanic American Historical Review,* Vol. XXIII, No. 4 (November, 1943), pp. 650-663.

——. "The First Steam Railways of Latin America," *Bulletin* of the Pan American Union, Vol. LXXVIII, No. 5 (May, 1944), pp. 259-268.

——. *Latin America and the Industrial Age.* New York: 1944.

Roper, George S. "Taca Makes History over Central America," *Inter-American Quarterly,* Vol. III, No. 1 (January, 1941), pp. 36-51.

Royal Institute of International Affairs. *The Republics of South America.* London: 1937. Chapter II, "Communications."

Rudolph, William E. "Strategic Roads of the World: Notes on Recent Developments," *Geographical Review* (January, 1943), pp. 110-131.

Sánchez Mejorada, Javier. "Communcations and Transportation," *Annals of the American Academy of Political and Social Science,* special issue, "Mexico Today" (March, 1940), pp. 78-93.

Tannenbaum, Frank. *Whither Latin America?* New York: 1934.

U. S. Congress. *Cable Landing Licenses.* Hearings before a subcommittee of the Committee on Interstate Commerce, 66th Congress, 3rd Session, on Senate 4301, a bill to prevent the unauthorized landing of submarine cables in the United States, 1921.

U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce:-

Trade Promotion Series No. 5. *Railways of Central America and the West Indies,* 1925.

Trade Promotion Series No. 16. *Railways of Mexico,* 1925.

Trade Promotion Series No. 32. *Railways of South America.* Part I, "Argentina," 1926.

Trade Promotion Series No. 39. *Railways of South America.* Part 2, "Bolivia, Colombia, Ecuador, the Guianas, Paraguay, Peru, Uruguay, and Venezuela," 1927.

Trade Promotion Series No. 129. *Shipping and Shipbuilding Subsidies,* 1932.

Warner, Edward P. "Atlantic Airways," *Foreign Affairs* (April, 1938).

CHAPTER TWELVE

Credit Institutions

Banking and credit operations in Latin America is a field that has been seriously neglected by research students. Most of the studies that are available relate primarily to questions of currency and the operation of the foreign exchanges. International trade has overshadowed domestic commerce, and the organization of the internal money markets has in the past been considered relatively unimportant. But with the creation of central banks in most of the republics, and the shift in interest to the organization of the national economies, it may be expected that these subjects will receive more attention in the future.

History of Banking. In most of the countries banking and commercial functions have become differentiated only in comparatively recent times. For the most part, during the nineteenth century, credit operations were carried on under the general commercial codes, although some banks with issue or other special functions were chartered from time to time. Before the establishment of specialized banking institutions, commercial houses performed banking functions, including the issuance of *vales,* or certificates, which circulated as notes convertible into legal currencies.

The first Bank of Brazil, which lasted from 1808 to 1829, is said to have been the first bank of the South American continent.[1] The first important commercial bank was opened at Rio de Janeiro in 1833. In Chile, the first general banking law was enacted in 1860, but it placed few restrictions on operations.[2] Mortgage banks, established with Government funds or under Government supervision, are among the oldest and most important of the Latin American banking institutions. The National Mortgage Bank of Chile (*Caja de Crédito Hipotecario*), established in 1855 and still in existence, has been the principal source of long-term agricultural credit in that country. Private mortgage banks have subsequently been established. The National Mortgage Bank of Argentina (*Banco*

1 J. F. Normano, *Brazil,* p. 167.
2 G. Subercaseaux, *Monetary and Banking Policy of Chile,* p. 57.

Hipotecario Nacional), created in 1886, issues cedulas which are a favorite type of investment for Argentines and foreigners.

Foreign Banks. Branches of foreign banks were established in the leading countries beginning in the 1860's, and soon came to occupy a leading place in banking. It is only since about 1930 that the predominant position of the foreign banks may be said to have come to an end.

The English banks were the first to enter the field. The Bank of London and the River Plate was established in 1862; branches were opened in Argentina, Uruguay, Brazil, and Chile. In the same year the London and Brazilian Bank was created, and in the following year the British Bank of South America. The London Bank of Mexico and South America opened a branch in Mexico in 1864. The Anglo-South American Bank, which originated in a small Chilean bank established in 1888, later absorbed the London Bank of Mexico and South America and purchased a majority interest in the Commercial Bank of Spanish America (organized in 1904), which made it for a time after the First World War the largest foreign bank operating in Latin America, but it became involved in difficulties during the depression years at a moment when it was heavily involved in the Chilean nitrate industry. The Bank of London and South America, a subsidiary of Lloyds Bank, has now become the heir of most of these British banking interests. It took this title in 1923, when the London and River Plate Bank and the London and Brazilian Bank were amalgamated; and in 1936 arrangements were completed for it to take over the business of the Anglo-South American Bank.

The English banks were followed, in some of the countries, by organizations representing Spanish, Portuguese, Italian, French, German, and other Continental interests. The Bank of Italy and the River Plate (*Banco de Italia y Río de la Plata*), for example, was founded at Buenos Aires in 1872 under the auspices of the Bank of Genoa, the Bank of Deposit and Discount of Milan, and various commercial interests in Genoa. It opened branches and agencies in all important towns in Argentina, and after 1921 established branches in Genoa, Milan, and Turin, in Italy. The *Banco Italiano* was established at Lima, Peru, in 1889. It established branches or agencies throughout Peru, and became the leading banking institution in the country. Its name has been changed to *Banco de Crédito,* and its control is now considered to be Peruvian.

The *Deutsche Bank* became interested in a local Argentine bank in 1874, but this bank was liquidated in 1885, and in the following year the *Deutsche Uebersee Bank* was created. A Buenos Aires branch of this bank was opened in 1887. In 1892-1893, this institution was reorganized as the *Deutsche Ueberseeische Bank,* and branches were established in Argentina, Uruguay, Brazil, Chile,

Bolivia, Peru, and Spain. Later the *Disconto Gesellschaft* established a branch in Brazil, but in 1929 a merger was effected between the subsidiaries of the *Deutsche Bank* and the *Disconto Gesellschaft,* under the name of *Banco Allemão Transatlántico,* in Brazil, and *Banco Alemán Transatlántico,* in the Spanish-speaking countries. The *Deutsche- Sudamerikanische Bank* (*Banco Germánico*) opened a branch in Chile in 1911 and thereafter in Bolivia and Peru. The *Ueberseeische Bank* began operations in Chile in 1895 and in Peru and Bolivia in 1905.

The International Banking Corporation of New York was the first American banking institution to open a system of foreign branches. It began operations in 1902, with its chief interests in the Philippines and China trade. It subsequently installed branches in the Canal Zone, in Santo Domingo, in Mexico City, and in Medellin, Colombia. Some of these were later closed or transferred to the National City Bank of New York. The Mercantile Bank of the Americas, organized in 1915, created a number of affiliated corporations in Latin America, under joint American and local management. The American Mercantile Bank of Peru, incorporated in 1916, was the first of these to be organized. In 1922, it was reorganized as the Bank of Central and South America, and in 1925 was sold to the Royal Bank of Canada, which has an important string of branches in the Caribbean.

The first foreign branch of the National City Bank of New York was opened at Buenos Aires on November 10, 1914. Branches were subsequently opened in other cities of Argentina and in Brazil, Cuba, Colombia, Chile, Uruguay, Venezuela, Panama, and Mexico. The First National Bank of Boston opened a branch at Buenos Aires in 1917 and in Habana in 1923.

In addition to the Royal Bank of Canada, the Bank of Montreal and the Canadian Bank of Commerce have established branches in the Caribbean area and in South America.

The Yokohama Specie Bank had a branch at Rio de Janeiro.

Among the factors accounting for the importance of the foreign banks during the period 1860-1930 are the following:

(1) The large foreign loans floated by the various national and local governments;

(2) The heavy influx of foreign investment funds;

(3) The relative importance of international trade, and the dominance of foreign firms in many branches of that trade;

(4) The almost entirely foreign control of shipping serving Latin American ports; and

(5) The lack of interest on the part of Latin America in commercial matters, and the preference of local investors for real estate or foreign securities.

Nationalization of Banking. Government-controlled banks and credit institutions have long played an important role in Latin America, and their importance has increased materially during the last two decades. Some of the oldest of these, as has been mentioned, are mortgage banks. The oldest banking institution in Mexico is the Monte de Piedad, established in 1775, which is operated as a savings bank and a pawnshop. In several countries there have also been large governmental or semigovernmental institutions doing a general banking business, in competition with the private banks. In Argentina, the Bank of the Nation, established in 1890 with official funds, has acted as fiscal agent for the Government, but has conducted a general banking business as well. During the critical days after the outbreak of war in 1914, this bank, for the first time, did some rediscounting of paper held by other banks. The Bank of the Republic of Uruguay at that time performed similar functions.[3]

Since the First World War, most of the countries have set up special institutions to perform central bank functions. A reserve bank was established in Peru in 1922 (reorganized as the Central Reserve Bank in 1931), in Colombia in 1923, in Chile in 1926, and in Bolivia and Ecuador in 1927.

There is now a National Bank or Central Reserve Bank in each of the six Central American republics. In Nicaragua, the National Bank of Nicaragua, originally established by American interests in 1912, was reorganized in 1940 with more definite official responsibilities and control. The National Bank of the Republic of Haiti was reorganized in 1941 simultaneously with the abolition of the office of Fiscal Representative; the board of directors of the reorganized bank consists of six voting members of whom three are citizens of Haiti and three are citizens of the United States. The Dominican customs receivership was also abolished in 1941, and a Reserve Bank established. The Central Bank of Venezuela was organized in 1940. In Paraguay, the Bank of the Republic was established in 1908, with one-third Government participation.

MEXICO. In the larger republics, too, there have been created or reorganized central banking institutions with expanded resources and powers. In Mexico, the founding of the Bank of Mexico in 1925 and of the National Bank of Agricultural Credit in 1926 laid the cornerstone for a policy of nationalization of banking and credit. A new law of credit institutions, of June 28, 1932, imposed certain restrictions on the operations of foreign banks. In 1934, further changes in banking legislation increased the difficulty of operation of foreign-owned branch banks; the branches

3 W. H. Lough, *Banking Opportunities in South America*, U. S. Department of Commerce, Special Agents Series No. 106, p. 101.

of two large Canadian banks and an English-owned bank, as well as the offices of a New York bank, closed their doors in that year. During the early years of its operation, the Bank of Mexico did a general banking business, and opened numerous branches throughout the country that competed with the private banks. In 1932, the Bank of Mexico was converted into a central bank and it was divested of much of its commercial business.

The first law of credit institutions was issued in Mexico in 1897. Under this law, banking facilities were greatly expanded, with both Mexican and foreign capital. During the revolutionary period which began in 1911, most of the banks became insolvent or unable to provide cover for their excessive note issues. With the return of more stable conditions, a general moratorium was decreed by the Government, and a period of liquidation established. Only a few of the old institutions were able to reorganize and continue operations. With the establishment of the Bank of Mexico, it became the sole bank of issue. Since 1932 a large number of new banks have been organized.

ARGENTINA AND BRAZIL. In Argentina and Brazil, the position of local banking institutions has been greatly strengthened in the last decade or two. A number of formerly foreign-controlled credit institutions have been nationalized or have passed into the control of local interests. By far the larger part of the banking business in those countries is now in the hands of local institutions. In both countries the establishment of control over exchange operations has been the entering wedge for the restriction of foreign banking and the extension of Government intervention in credit and national economic policy in general. In Brazil, the difficult situation in which the country found itself at the end of World War I led to exchange restrictions in 1921. At that time exchange operations, which were very profitable, were mostly in the hands of foreign banks. The foreign banks then turned more to the development of domestic business, but the Brazilian banks have continued to make great progress, and have come to control the larger part of the credit transactions.[4]

The banking system of Argentina underwent a fundamental revision in 1935, at which time a Central Bank of the Argentine Republic was established and a commercial bank law was enacted for the first time in the history of the country. The new Central Bank took over from the Bank of the Argentine Nation the man-

4 Article 145 of the Brazilian Constitution of 1937 provided for the nationalization of banks of deposit, subject to a period of grace to be fixed by subsequent legislation. A decree-law of April 9, 1941, fixed July 1, 1946, as the date beyond which banks of deposit may continue to function only if all of their shareholders are Brazilian citizens. A subsequent decree-law (No. 3786 of November 1, 1941) extended indefinitely the authorization for "American" banks to continue to operate. A Canadian and a British bank also were authorized to continue to operate.

agement of the clearing system and was assigned new duties in connection with the regulation of the volume of credit. The Bank of the Argentine Nation remains as an important Government-controlled banking institution.

CHILE AND PERU. The evolution of the banks as instruments in the execution of national policies in connection with social objectives or in relation to foreign economic affairs is also illustrated in the case of the Central Bank of Chile, which is nominally a private institution whose shares are owned by the Government, the banks, and the public. The Bank has been increasingly subject to official intervention in the last decade, and various special laws have diverted specified portions of its resources to the assistance of various special groups. Likewise in Peru, the Central Reserve Bank has lost the autonomous character which the reorganization of 1931 was designed to give it.

Owing to the relatively undeveloped state of the local money markets, control over credit or bank rates has not been a very effective instrument in Latin America. Hence the importance that is attached to exchange control and to measures of direct intervention.

CUBA. Cuba does not have a central bank. For many years the United States dollar has been legal tender in Cuba, and dollar currency and dollar deposits have been the principal medium of exchange. The larger part of the banking is handled by branches of United States and Canadian banks. There are four Cuban-owned banks, but their combined deposits are less than 10 per cent of the total deposits in Cuba. Three large Cuban banks were closed during the depression which followed World War I. Despite the numerous advantages of this situation, especially in view of the large trade and travel relations between Cuba and the United States, Cuba has been anxious to develop its own currency and banking system. In 1941-1942, an American technical mission, appointed at the request of the Cuban Government, prepared recommendations for monetary and banking reform, but these recommendations have not yet been carried out.

Specialized Banks. AGRICULTURAL. A number of specialized banking institutions, such as agricultural, mining, and industrial banks, have been established in various Latin American countries, particularly in recent years. As has been mentioned, the mortgage banks in Argentina and Chile are among the oldest financial institutions in those countries. These banks issue their own bonds, or cedulas. The land banks which have been established under official auspices in recent times have been designed, for the most part, particularly to render assistance to small or medium-sized farmers, and are sometimes vested with extensive powers in the

general field of economic development or social improvement. In Mexico, the Government-controlled land banks play an important part in the management of the agrarian reform program in that country. The National Bank of Agricultural Credit was originally created in 1926, but was reorganized in 1934-1935. It provides credit for small farmers who own their own lands and work them personally without the assistance of hired helpers. Farmers who are large enough to employ laborers must look to the commercial banks. The Bank has a Commercial Department which exercises considerable control over the marketing of the crops of borrowers. It makes four types of loans: Commercial, for periods not exceeding 180 days; crop loans (*avío*), for periods not exceeding 18 months; *refaccionario* loans, for periods from 1 to 5 years, to finance the preparation of new land for cultivation, the purchase of livestock, etc.; and *inmobiliario* advances, up to 30 years, for permanent improvements. There is also a National Bank for Ejido Credit, which assists credit associations formed of the members of *ejidos,* or village communities, whose lands are inalienable. It was organized in 1935. The Ejidal Bank, operating through its zone headquarters, may be said to organize and direct the agrarian economy of the ejidal system, which embraces a large proportion of the total cultivated area of the Republic. In co-operation with the Ministry of Agriculture, it determines what crops will be grown and directs the methods of cultivation. It operates tractor and machinery centers, and sells implements and livestock to the members of the credit societies. It also organizes the public services, and has carried out a program of hygiene and education. The capital of both the agricultural banks has been provided by the Federal Treasury, and the banks operate almost entirely on these funds, although some short-term funds are borrowed from private investors.

In Chile, a Caja de Crédito Agrario was created in 1926, to supplement the activities of the older mortgage banks. Its original capital was furnished by the Government, and it has received loans from the Central Bank of Chile at low rates of interest.

The semiofficial Mortgage Bank of El Salvador, established in 1935, is the strongest credit institution in El Salvador. At the end of 1942, its balance was greater than the combined balances of the three commercial banks in that country. The Mortgage Bank of Nicaragua was established in 1940. In Bolivia, an Agricultural Bank was established early in 1942, with capital provided by the Government and the Central Bank. Its principal activity in its first year was in extending loans to rubber producers.

In July, 1937, there was created in the Bank of Brazil the Carteira de Crédito Agricola e Industrial (Department of Agricultural and Industrial Credit) to extend assistance to agriculture

and manufacturing enterprises. In addition, there are mortgage banks in some of the Brazilian states. The various "institutes" which have been organized since 1930, such as the Cacao Institute of Baia, also provide credit to their members, and have taken steps to bring down the exorbitant rates of interest previously charged to small producers. It was reported on good authority that, prior to the organization of the Institute, interest rates ranged from 12 to 18 per cent per annum, and sometimes higher.[5]

MINING. Special mining banks or *cajas,* designed to assist small operators of local nationality, and to promote the development of new areas, have been established in Bolivia, Chile, and Peru. In May, 1942, the Bank of the Argentine Nation was authorized to grant loans to develop mines, up to individual amounts of 200,000 pesos, repayment to be made over five years with interest at the rate of 4 per cent per annum. In Uruguay, mining is virtually a State monopoly under the U.T.E. In Mexico, small miners receive special consideration at the hands of the State-controlled credit institutions, and there are also several private banks which give special consideration to the development of mining properties.

INDUSTRIAL. The growing interest in industrialization has led to the establishment of Government-supported industrial banks or "institutes" in several countries, notably Chile, Peru, Colombia, Venezuela, and Mexico. In Brazil, as has been noted, a department of the Bank of Brazil provides special facilities for agricultural and industrial enterprises. In Argentina, industrial development has been left more to private initiative. There are several private banks which specialize in this type of business, and Argentina also has the only important underwriting house in Latin America.

Local Financial Resources. Local financial resources in Latin America have increased notably in recent years from various sources, among which may be mentioned the influx of refugee funds from Europe, the repatriation of deposits and investments by Latin American firms and individuals, the growth of local insurance companies, increased local savings, the accumulation of social security reserves, and the huge export surpluses built up since 1939. In 1942 the bank deposits in Latin America were at the highest point in history. Substantial amounts from the United States also came from people who sought investment, in real estate, in cedulas or government bonds, in industrial shares, or through participation in local industrial or commercial enterprises.

There are strong local insurance companies in several Latin American countries, and some do considerable business outside

5 Paul Nortz, in *Brazilian-American* (Rio de Janeiro), (May 2, 1936), p. 4.

their national borders. Recent legislation has tended to restrict the operations of foreign companies, to require reinsurance to be placed locally, and also to require the local investment of reserves.

The expansion of social security systems has created an important source of investment funds. In Chile, for example, the Social Security Institute has invested in a variety of industrial undertakings.[6]

The domestication of banking has been hastened by World War II. One of the first steps of the Brazilian Government, following the declaration of war in September, 1942, was to close the branches of the two German banks and to begin their liquidation.

Foreign Credits. The expansion of local credit facilities has by no means eliminated the need for foreign financial assistance; however, most of the countries have continued to look abroad for assistance in connection with highway construction, railway development, and the purchase of equipment for industrial installations. The Export-Import Bank of Washington has been an important source of such credits. It has made advances to aid highway construction and the purchase of railway equipment in a number of countries and also financed the construction of steel mills in Brazil and Mexico.[7]

The Export-Import Bank and the subsidiaries of the Reconstruction Finance Corporation have given substantial financial assistance in the development of new sources of strategic and essential materials in Latin America.

Inter-American Bank. For more than a half-century, proposals for an inter-American bank have recurred. A resolution favoring the establishment of such an institution was adopted by the first International Conference of American States, held at Washington in 1889-1890. The idea has cropped up subsequently in various forms. A new project for an Inter-American Bank was drafted and approved by the Inter-American Financial and Economic Advisory Committee in 1940. A convention to establish the Bank was signed by the United States and seven other republics on May 10, 1940, and by Brazil on May 13. The convention is to come into force when the ratifications of five of the signatory countries which have subscribed at least a total of 145 shares of stock have been deposited with the Pan American Union. Since the convention has not yet been ratified by the United States Senate, further action by other countries is temporarily in sus-

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6 See *International Labour Review* (August, 1936), p. 176, for an interesting article, "The Investment of Social Insurance Funds with Special Reference to the Countries of Latin America."

7 As of December 31, 1942, the Export-Import Bank's outstanding loans to all of the Latin American republics totaled $83,053,024.55 and undisbursed commitments to all of Latin America aggregated $349,495,904.38.

pense. The Bank would be an intergovernmental institution, with participation in the share capital based on the volume of foreign trade. The powers of the Bank are stated in broad and elastic terms, including the stabilization of currencies, the increase in international trade, the encouragement of research, and the promotion of industry, mining, agriculture, and public utilities in the Western Hemisphere.

Some of the Latin American countries, notably Argentina, have been indifferent to the Bank, and the idea has been criticized in the United States on the grounds that the power of decision as to who should receive loans and on what terms was disassociated from the responsibility of sharing in any resultant losses.[8] The question also arises as to whether there is need for a regional bank, and whether the problem could not best be handled by an international institution, such as the International Bank for Reconstruction and Development.

GENERAL REFERENCES

Asociación de Banqueros de México. *Anuario Financiero de México.* Second year, 1941. Mexico, D. F.: 1942.

Board of Governors of the Federal Reserve System. *Federal Reserve Bulletin,* Washington, D. C., following issues:

"Argentine Banking and Monetary Legislation" (July, 1935), pp. 449-458.

"Cuban Currency Legislation" (July, 1934), pp. 468-471.

"New Monetary and Banking Measures in Paraguay" (January, 1944).

"Report to the Cuban Government of the American Technical Mission to Cuba" (August, 1942), pp. 774-801.

"Uruguayan Banking and Currency Legislation" (December, 1935), pp. 817-820.

Bratter, Herbert M. "Foreign Exchange Control in Latin America," *Foreign Policy Reports,* Vol. XIV, No. 23 (February 15, 1939).

Brazil: Ministry of Foreign Affairs. *Brazil 1940-42.* An economic, social, and geographic survey. Rio de Janeiro: 1941.

Conant, C. A. *Banking System of Mexico.* Washington, D. C.: 1910.

Dulles, Eleanor Lansing. "The Export-Import Bank of Washington: The First Ten Years," *The Department of State Bulletin,* Vol. XI, No. 284 (December 3, 1944), pp. 663-673.

Fetter, Frank Whitson. *Monetary Inflation in Chile.* Princeton: 1931.

Foreign Policy Association. "Export-Import Bank Loans to Latin America," *Foreign Policy Reports* (June 15, 1941.).

——. *Problems of the New Cuba.* 1935. Chapter XIV, "The Money and Credit System."

Inter-American Bank. Hearings before a subcommittee of the Committee on Foreign Relations, United States Senate, 77th Congress, 1st Session, May 5 and 6, 1941.

8 For example, Dr. Jacob Viner, in *Proceedings* of the Seventeenth Institute, Norman Wait Harris Memorial Foundation, University of Chicago (July 7 to 15, 1941), p. 97.

McCaleb, Walter Flavius. *Past and Present Banking in Mexico.* New York: 1920.

Macedo, Pablo. *La Evolución Mercantil. Tres Monografías.* Mexico, D. F.: 1905.

Martinez, Albert B., and Maurice Lewandowski. *The Argentine in the Twentieth Century.* London: 1915.

Mexican Year Book, 1909-1910. Issued under the auspices of the Department of Finance.

Normano, J. F. Brazil: *A Study of Economic Types.* Chapel Hill: 1935.

Pandiá Calogeras, João. *La politique monétaire du Brasil.* Rio de Janeiro: 1910.

Phelps, Clyde Williams. *The Foreign Expansion of American Banks.* New York: 1927.

Royal Institute of International Affairs. *The Republics of South America.* New York: 1937. Chapter X, "Financial Development," pp. 227-243.

Simonsen, Roberto C. *Historia economica do Brasil, 1500-1820.* 2 vols. Biblioteca Pedagogica Brasileira, Series 5a, Vols. 100 and 100-A. Companhia Editora Nacional, São Paulo: 1937.

Sterrett, Joseph Edmund, and Joseph Stancliffe Davis. *The Fiscal and Economic Condition of Mexico.* Report to the International Committee of Bankers on Mexico, 1928.

Subercaseaux, Guillermo. *Monetary and Banking Policy of Chile.* New York: 1922.

Triffin, Robert. "Central Banking and Monetary Management in Latin America," in Seymour E. Harris, *Economic Problems of Latin America.* New York: 1944, Chapter IV.

U. S. Department of Commerce. *Banking and Credit in Argentina, Brazil, Chile, and Peru.* Special Agents Series No. 90, by Edward N. Hurley, 1914.

——. *Banking Opportunities in South America.* Special Agents Series No. 106, by William H. Lough, 1915.

——. *The Bolivian Fiscal System.* Trade Information Bulletin No. 201, 1924.

——. *Chilean Public Finance.* Special Agents Series No. 224, 1924.

——. *Colombian Public Finance.* Trade Promotion Series No. 43, 1926.

——. *Financial Developments in South American Countries.* Special Agents Series No. 103, by William H. Lough, 1915.

——. *Peruvian Public Finance.* Trade Promotion Series No. 30, 1925.

Wileman, J. P. *Brazilian Exchange: The Study of an Inconvertible Currency.* Buenos Aires: 1896.

Wooster, Julia L. "The Mexican Agricultural-Credit System," *Foreign Agriculture* (February, 1943).

Young, John Parke. *Central American Currency and Finance.* Princeton: 1925.

Part Three
Foreign Trade

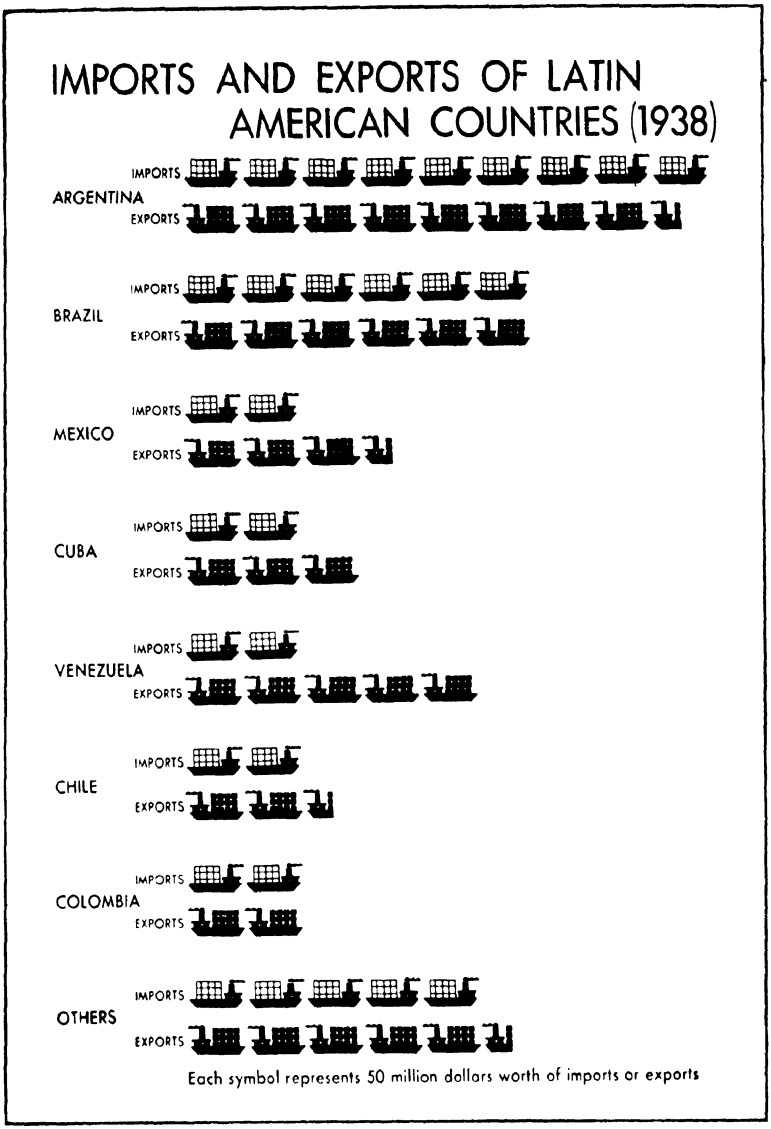
CHAPTER THIRTEEN

Growth and Direction of Foreign Trade

Extent of International Trade. Only one Latin American country ranks among the first ten of the great trading nations of the world. This is Argentina, which before the war was in ninth place, following the United States, Great Britain, Germany, France, Belgium, Japan, Canada, and India.

The aggregate foreign trade of the twenty Latin American republics accounts for only about 7½ per cent of the total movement of trade among the nations of the world, which is considerably less than the United States share, i.e., 11 per cent. These percentages relate only to the trade which crosses the national borders, and have nothing to do with the commercial movement within each country. In Latin America this internal trade is relatively much less than in the more densely populated and more highly industrialized nations, and foreign trade in some instances represents a very high proportion of the total commercial turnover. Furthermore, the Latin American foreign trade is largely concentrated in a few countries, since seven out of twenty republics account for 85 per cent of the total; and in a number of these countries the per capita value of international trade is higher than it is in the United States, where foreign trade, although large in the aggregate, is small in relation to the entire commercial movement.

There is no satisfactory index of changes in the volume of Latin American foreign trade over any considerable period. Foreign trade data have been compiled regularly by some countries over a long period of time, but there are some notable gaps. The instability of Latin American exchanges, and the existence at times of several exchange rates in the same country (such as "official" for one type of imports, "free" for another kind of imports, and still another for exports), greatly complicates the problem of converting to a common denominator the values expressed in twenty different currencies. As many of the exports are staples, both volume and value are subject to considerable fluctuations, and



Pictograph Corporation for Survey Graphic

Fig. 9. Imports and Exports of Latin American Countries

there are no authoritative quantum indices. The aggregate value of Latin American trade reached an all-time peak in 1920, but a large part of the increase was due to inflated prices at the end of the First World War. The average annual value of total Latin American foreign trade (exports plus imports) during the decade 1930-1939, inclusive, amounting to 2,900 million dollars, was almost identical with the total value of the trade in the year 1913 (using current dollar values and making no adjustments for changes in the gold content of the dollar.)[1]

ARGENTINA. The classic period of foreign trade expansion in Latin America came between 1875 and 1912. The growth of Argentine foreign trade was particularly rapid during this period. During most of the nineteenth century Brazil surpassed Argentina in the value of its foreign trade and in general economic importance, as it did in size and population. Up until the mid-1880's, Chile's foreign trade also normally exceeded the Argentine. But the expansive forces set in motion in the latter country during those years — the construction of railways, improvement of ports, influx of immigrants, and the increasing European demand for the meats and cereals it was especially adapted to produce — carried it beyond the neighboring states. By the turn of the century Argentina had definitely passed Brazil and had achieved the undisputed economic leadership of Latin America, a position which it has continued to hold. In fact, it is a considerable distance out in front. In the years preceding the outbreak of World War II, Argentina accounted for 24 per cent of the aggregate Latin American exports and 30 per cent of the aggregate imports.[2]

OTHER COUNTRIES. Brazil occupies second place in the foreign trade line-up, without serious competition. During the period 1900-1928, Cuba ranked third, Mexico usually fourth, and Chile fifth. Since the flamboyant 1920's, there have been a number of profound changes in the economic structure of Latin America which have affected the standing of the various countries. The drastic shrinkage in the value of the Cuban sugar crop has forced Cuba down to fifth place (average for decade 1930-1939), while the rapid rise of the Venezuelan oil industry has brought that country up to fourth place (third, if exports alone be considered). Mexico has come up to third place, thanks to its diversified economy and the additional purchasing power created by tourist expenditures and the silver-purchasing policy of the United States Government. Chile, Colombia, and Peru occupy sixth, seventh, and eighth places, respectively.

1 *See* Table 12.
2 *See* Table 13.

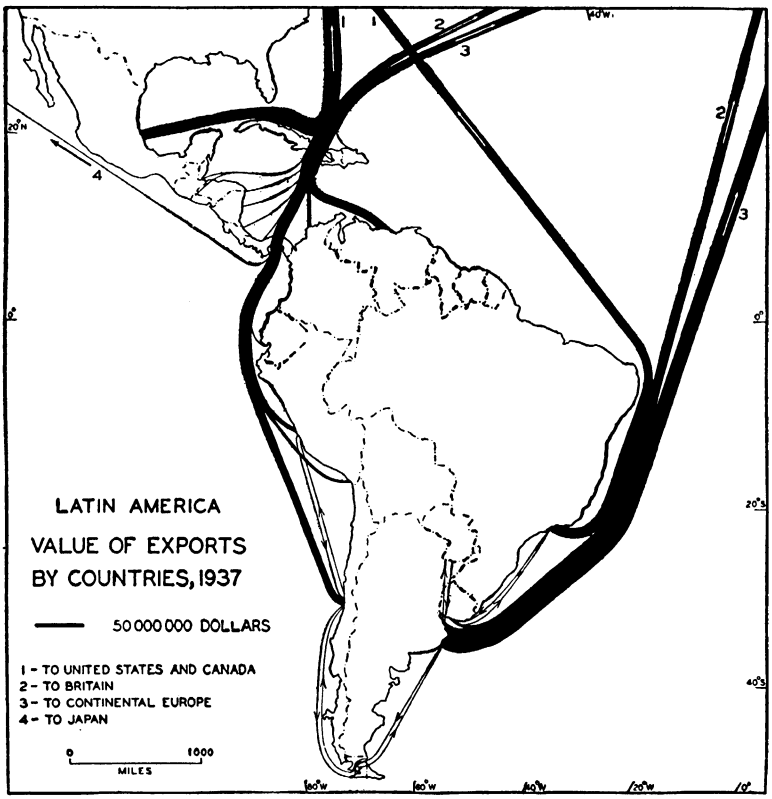


Fig. 10. Value of Exports by Countries, 1937

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The ten republics of South America account for about three-fourths of total Latin American foreign trade.

Excess of Exports over Imports. Latin America as a whole, and most of the countries individually, normally have an excess of exports over imports, which is primarily an expression of the fact that they are shipping out surplus goods to meet the payments due on obligations arising out of other than merchandise transactions, such as shipping services, expenditures of travelers and tourists, interest on the foreign debt, dividends on foreign-held investments, or repayments of borrowed capital. During the decade ended 1939, this excess of exports amounted to roughly 5 billion dollars. Several of the Latin American countries now prepare annual statements which give a fairly good picture of the major items in the international accounts, but these compilations have not yet reached the point which would permit the publication of an authoritative balance of payments for Latin America as a whole in its relations with all other nations.[3]

Patterns of Distribution. All except about 5 per cent of Latin American foreign trade is concentrated in two major areas: Europe (including Great Britain) and the Western Hemisphere. It is a curious coincidence that these two areas normally share about equally in the trade of Latin America, taken in the aggregate, although the ratios of their participation in the imports and exports of individual countries vary considerably. In 1937, for example, Europe purchased 48 per cent of the total Latin American exports, while the countries of the Western Hemisphere took about 47 per cent. Japan received 1.6 per cent, while the other countries of Asia, Africa and Oceania bought less than 1 per cent.[4] The United Kingdom was the largest market in Europe, taking 17.6 per cent, while the combined countries of Continental Europe took about 30 per cent. In the Western Hemisphere, the United States was by far the principal outlet, taking 31 per cent, as against 6 per cent to the various Latin American countries and less than 2 per cent to Canada. The United States' share was really larger than these figures indicate, since the official returns do not include shipments of Chilean nitrate, nor make allowance for imports of Venezuelan petroleum products that have been refined in the Netherlands West Indies. So much for the destination of Latin American exports. The pattern of distribution of imports by countries or origin is approximately the same: Europe furnished about 48 per cent (Britain 13 per cent and continental Europe 34 per cent) and the Western Hemisphere 46 per cent (United

3 A partial balance of payments between the United States and the twenty Latin American republics for the years 1929-1938, inclusive, is given in United States Tariff Commission, *The Foreign Trade of Latin America*, Part I, pp. 56-57.

4 *See* Tables 14, 15, and 16.

States 34 per cent). Asia was more important as a source of imports than as an outlet for Latin American produce, since it furnished nearly 6 per cent of the total imports (textiles from Japan, jute from India, tea and spices from various areas).

Europe. GREAT BRITAIN. Historically Europe has been the principal trade focus, but its share of the total has been declining over a long period. During most of the nineteenth century Great Britain occupied the dominant position. As a pioneer of the industrial revolution, Britain was the leading exporter of cotton goods and iron wares, the two lines in greatest demand in the non-industrialized countries of the Americas. Great Britain also had the largest merchant fleet, and her merchants and bankers were established in all the leading ports and commercial centers. But the British manufacturers have proven to be less adaptable to changing conditions and demands of the market than other more aggressive rivals. The establishment of textile industries in a number of the larger Latin American countries has cut down imports of the most characteristic British article of merchandise. The British had a leading part in the construction of railways in Latin America, and long dominated the market for railway equipment, since a large part of the mileage was owned by British companies. But the railways have suffered severely from highway competition, and an increasing proportion of the lines is coming under the control of local governments, which feel free to buy in any market.

Prior to World War I the United Kingdom was supplying about one-fourth of the aggregate imports of the Latin American republics, with the United States and Germany climbing up rapidly. In 1913, the United States finished ahead of Britain by a nose, with Germany in third place. The British position has continued slowly to deteriorate, until in 1936 Germany passed the United Kingdom for second place as a seller to Latin America. As a buyer of Latin American merchandise, Great Britain has remained second to the United States throughout this period.

British trade has become concentrated largely in the southern half of South America, and particularly Argentina, which was entering upon its career of rapid economic expansion at the time the United States was extending its commercial sway over the Caribbean countries. Britain has provided the principal market for the meats exported from these countries, and also takes large quantities of grains, minerals, cotton, and fruits. The principal items of export from the United Kingdom have continued to be cotton piece goods, thread, woolen manufactures, electrical goods, machinery, railway equipment, iron and steel wares, pottery, and coal.[5]

5 *See* Table 17.

GERMANY. Germany's commercial relations with Latin America expanded rapidly after the establishment of the Empire in 1870. Branches of German banks were opened in the principal countries, and a far-flung net of shipping services was established. Owing to low costs of construction and operation, the German freight and passenger rates have usually been reasonable. Since Germany is deficient in many raw materials required by its industries, it has offered a growing market for fibers, rubber, minerals, and food products. Trade was further stimulated by the presence of many German, Austrian, or Swiss settlers, and their numerous progeny. Latin American imports from Germany have been of three general classes. The first consists of articles of exceptional quality which have been developed by German research laboratories or as the creation of highly specialized workmen with a long tradition in that field, such as chemicals and dyes, precision instruments, certain types of machinery, lenses, binoculars, and toys. In the second class are the low-priced articles in certain lines, such as hardware and electrical supplies, where the higher-priced and better-grade articles are supplied by other countries, principally the United States. In the third category may be placed those specialties which make a particular appeal to the German settlers and others who have acquired a taste for them. Since the rise of the Nazis to power, pressure has been brought to bear on German nationals and others having business relations with Germany to buy German goods. Listed in the order of their importance, Germany's principal exports are normally industrial chemicals and pharmaceuticals, iron and steel mill products, hardware and other manufactures of iron and steel, machinery and electrical equipment, paper and manufactures of paper, cotton and woolen fabrics and yarns, copper articles, pottery and glassware, leather, typewriters, motor vehicles, rubber manufactures, and toys. Most of these articles compete to some extent with normal United States exports, and some have been sharply competitive with typical American specialities, such as typewriters, but on the whole German gains have affected the United States relatively less than they have the exports of other European nations, particularly Britain.

Germany's principal prewar imports from Latin America were cotton, largely from Brazil, coffee (Germany has alternated with France as the largest coffee market after the United States), wool and hides and skins (principally from Argentina and Uruguay, but some from Brazil and Chile), oil-bearing seeds, copper, petroleum, corn, cacao, and nitrate.

Taken over a long period of years, Germany's imports from Latin America have just about equaled her exports to that area. This is in sharp contrast to the position of the other industrialized countries of Europe, and also of the United States, which have

substantial investments in Latin America and take the payments on these investments in the form of an excess of imports over exports. The absence of complications from "invisible" items in the balance of payments facilitated the development of the so-called "barter" trade between Germany and Latin America from 1934 to the outbreak of the Second World War. During these years Germany made large gains in its Latin American trade, but these gains were striking only in comparison to the low level which had prevailed during the postwar years, since Germany's relative position in the total Latin American import trade in 1938 was approximately the same as in 1913, and her position as a buyer of Latin American produce had declined.

OTHER EUROPEAN COUNTRIES. During the nineteenth century France was an important factor in Latin American trade, occupying over a considerable period of years the leading position as supplier or as a market for a number of the countries; but France's position has declined relatively more than that of any other large country. During the period between the two world wars, Belgium came to outrank France, for fourth place, in both the import and the export trade of the twenty Latin American republics considered as a whole. Belgium provides a large market for grain, as well as for various raw materials, and also is normally an important supplier of iron and steel wares, chemicals, and glass. The Netherlands also sometimes rank above France as a market for Latin American produce.

Asia, Africa, and Oceania. As has been seen from the statistics cited at the beginning of this section, the participation of Asia, Africa, and Oceania in Latin American trade is relatively unimportant. For many years raw jute has been one of the major items purchased by Latin America in the Orient, but the importance of this trade is declining as local substitutes are developed.

Japan has appeared on the horizon of Latin American trade since 1932. Japan made startling gains in Latin American imports in 1933 and 1934, which caused a considerable outcry. Most of the impact of the competition fell on cotton goods, and to a smaller extent rayon yarn and piece goods, and was felt principally in the smaller countries like Panama, Haiti, and Ecuador. Since the larger countries have developed textile industries which supply most of the domestic demand for the cheaper grades, Japan could not make much headway in those highly protected markets. Most of the countries also became alarmed at the sudden influx of goods from a country which took practically nothing in return, and resorted to preferential customs duties or exchange restrictions to reduce the flow. By 1936, however, Japan's imports from Latin America exceeded its sales to that area. At that time

Japan was anxious to find alternative sources of supply for raw materials previously purchased in the United States and the British dominions. Japan's principal imports from Latin America have been cotton from Brazil and Peru, wool from Argentina and Chile; hides and skins, wheat, and oil seeds from Argentina; sodium nitrate from Chile; various ores from Mexico and the West Coast countries of South America; also some petroleum, sugar, and hardwoods. Japan's foreign trade suffered in 1938 from the change of Japanese economy to a war basis, and for about two years trade relations with Japan did not prosper.

GENERAL REFERENCES

League of Nations. *Europe's Trade.* Geneva: 1941.

——. *The Network of World Trade.* Geneva: 1942.

Pan American Union. *Foreign Trade Series.* (Separate brochures on the international trade of each of the twenty Latin American republics; also, an annual review of Latin American trade.)

U. S. Tariff Commission. *The Foreign Trade of Latin America.* 3 parts. Report No. 146, second series. 1942.

Wythe, George. "Fifty Years of Inter-American Trade," *Bulletin* of the Pan American Union, Vol. LXXIV, No. 4 (April, 1940), pp. 277-290.

CHAPTER FOURTEEN

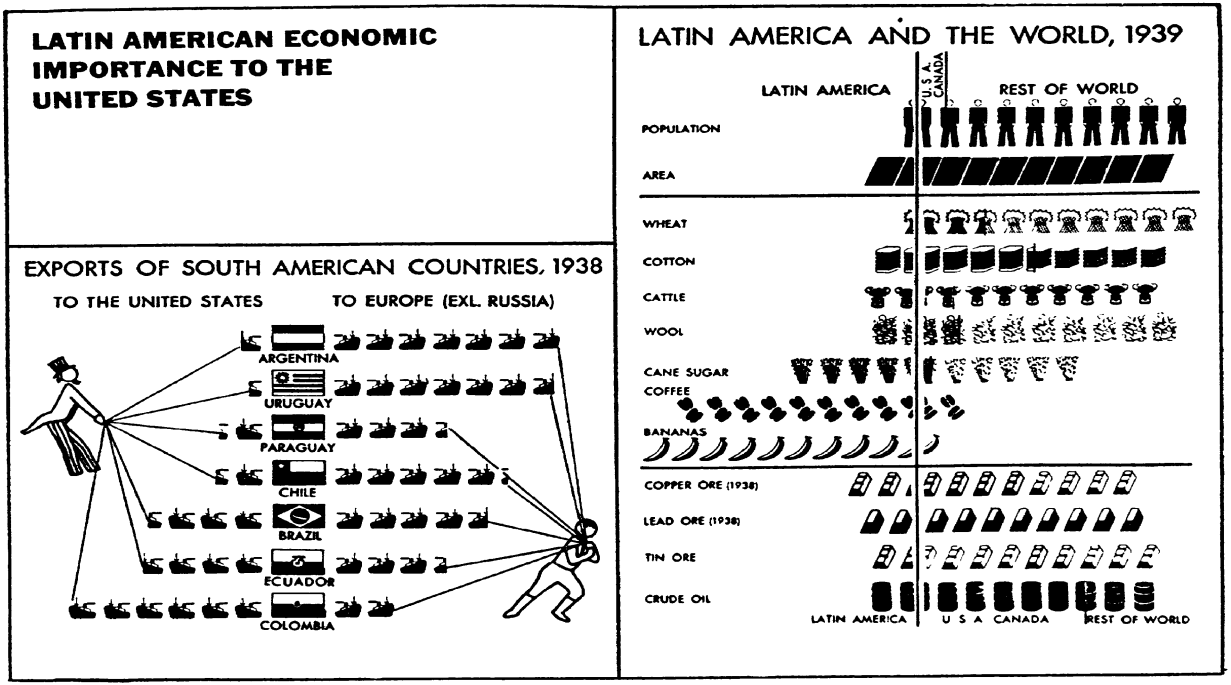
Latin American Trade with Western Hemisphere Countries

It has been noted that around 46.5 per cent of the international trade of Latin America is with countries of the Western Hemisphere, including the trade among the twenty republics of Middle and South America. By far the larger part of this total consists of trade with the United States. The exclusively inter-Latin American trade is normally only about 7 per cent of the total. The statistics show that in some years as much as 8 or 9 per cent of the total Latin American exports go to European possessions in the Caribbean, but most of this movement consists of exports of crude petroleum from Venezuela to Aruba for refining and subsequent re-export to Europe or the United States. There is some trade with Canada, but it comprises only about 1 per cent of the total.

TRADE WITH THE UNITED STATES AND CANADA

Growth of Trade with United States. The United States has had extensive trade relations with the lands to the south from the earliest days of independence, and even dating back to colonial times. The United States early became the best market for some of the Caribbean countries and for Brazil. In addition to the purchases of sugar, coffee, and other tropical produce for consumption in the United States, Latin America was the chief source of the silver coins required by masters of the clipper ships for exchange in the Far East against the silks, tea, and luxury goods of Asia. During the period before the Civil War, the United States had a large merchant marine, which engaged in an important carrying trade. A large part of the goods carried in American bottoms was produced in Europe.

This north-south flow of trade was temporarily interrupted by the Civil War and the subsequent diversion of United States



Each symbol represents 10 per cent of total exports of each country.

Each symbol represents 10 per cent of the world production.

Pictograph Corporation for Survey Graphic

Fig. 11. Latin American Economic Importance to the United States

energies to the opening up of the West. The rise of steam navigation also tended to favor Europe. But the United States soon resumed its position as the leading outlet for the produce of the northern tier of Latin American countries. This period, up to the First World War, was the hey-day of the great triangular trade, in which European-flag vessels loaded rubber, coffee, hides, and wool in South America, changed their cargoes in United States ports for grains, provisions, and specialties destined to Europe, and then returned from English or continental ports to Buenos Aires or Rio de Janeiro, either directly or via New York.

United States as a Seller. Throughout the nineteenth century the United States was much more important as a market for the Latin American countries than as a source of supply for import requirements. Up until around 1890, it furnished only about 15 per cent of the aggregate imports of the Latin American countries, while it purchased, on the average, approximately 33 per cent of the combined exports of Latin America. During this period, natural products, such as flour, lard, lumber, and petroleum, were the principal American commodities in demand. But as the United States rose in importance as a manufacturing nation, its share of the Latin American import trade increased, particularly in adjacent countries like Mexico and Cuba. By 1913 the United States was furnishing 25 per cent of the total imports of Latin America. During the First World War this rose to 55 per cent. After the war there was a decline from these abnormal heights, but its share remained on a higher level than before the war, averaging about 33 per cent from 1929-1938.

United States as a Buyer. Although the volume of United States imports from Latin America increased substantially from the last quarter of the nineteenth century, the relative position of the United States in the export trade of Latin America as a whole has not changed appreciably since around 1870. The percentage has changed as regards individual countries, but it has remained remarkably uniform for the area in the aggregate. During the decade preceding the outbreak of the Second World War, the United States was normally the largest customer for thirteen of the Latin American republics, and the second best market for most of the others. The countries finding their principal market in Europe during these years were Argentina, Urugay, Bolivia, the Dominican Republic, and sometimes Haiti and Peru.

Taking an over-all view for the period between the two world wars, the United States was easily the most important single country in the trade of Latin America, taking roughly one-third of their aggregate exports and supplying about the same proportion of their combined imports. Its position in the export and import

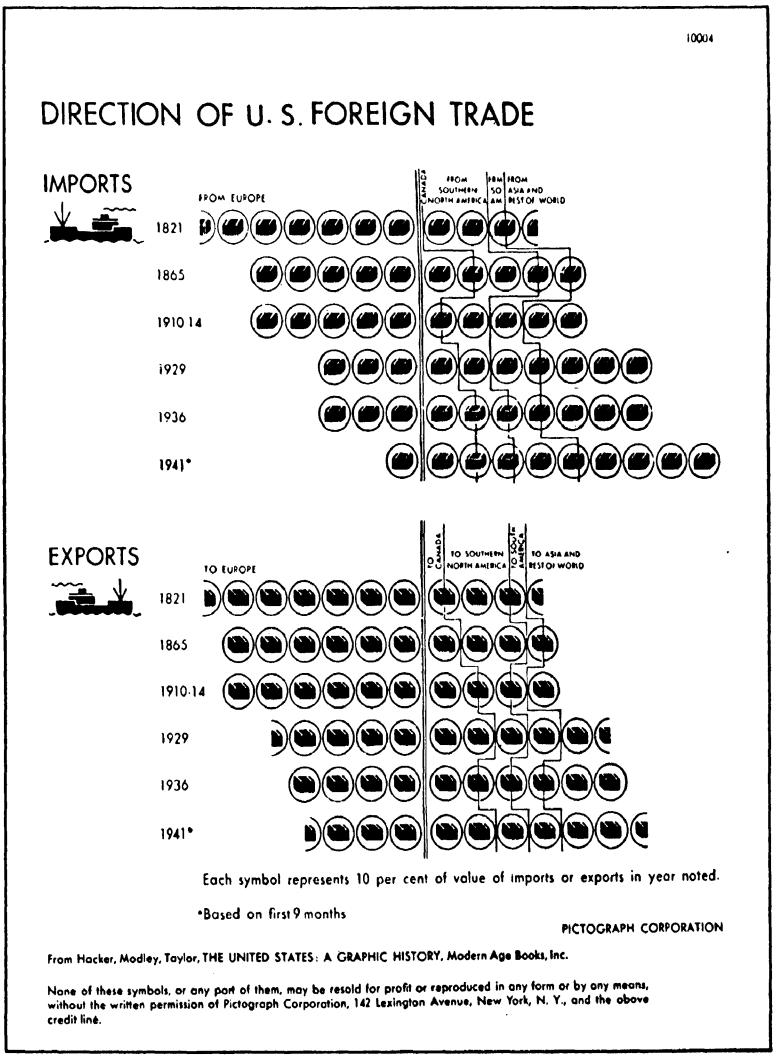
trade of individual countries naturally varied considerably, being largest in the near-by countries of the Caribbean area and diminishing in those countries further removed geographically.

Countries Grouped by Per Cent of Trade with United States.

CARIBBEAN COUNTRIES. The twenty republics may be classified into four groups on the basis of the volume of the total trade (exports and imports) of each with the United States. In the first group may be placed the twelve countries touching on the Caribbean sea, the combined exports of which embrace about 40 per cent of the total value of Latin American exports. Fifty-five per cent of the trade of this group is with the United States.[1] The economic ties between the United States and most of the countries of this group have been strong from the earliest days of independence, not only on account of the geographic proximity, but also because the differences in soil and climate have made the two areas complementary. Substantial American investments have been made in this area, and travel and cultural interchanges are frequent. All but three of the countries of this group send over 60 per cent of their exports to the United States. These three, with the percentages going to the United States in 1938, are: Costa Rica, 45.6 per cent; Haiti, 43.0 per cent, and the Dominican Republic, 32.0 per cent. Costa Rica's principal export is coffee, of a high quality, which traditionally has found its first and second markets in Great Britain and Germany, respectively. But the United States has been taking a larger proportion of the coffee and also most of the banana exports. Coffee is also the major article of export from Haiti, and France was long the outstanding market, but two factors have operated to turn Haitian trade in the direction of the United States: First, since France denounced its commercial convention with Haiti in 1936 steps have been taken to prepare Haitian coffee for the American market, where it now finds acceptance; and secondly, Haitian exports have been diversified. As regards the Dominican Republic, its dominant export product is sugar, which goes largely to the United Kingdom.

BRAZIL. Next removed from the Caribbean lies Brazil, whose principal ports are in fact closer to southern Europe than to New York and New Orleans, but the nature of its economy is such that the United States has for fully three-quarters of a century provided the best market for its produce. Brazilian exports to the United States are usually much larger than imports from that source, but on the average about 30 per cent of Brazil's total foreign trade is conducted with the United States.

1 That is, after adjustment is made for the ultimate destination of Venezuelan crude oil exports, which go first to the Netherlands West Indies for refining.



Pictograph Corporation

Fig. 12. Direction of United States Foreign Trade

WEST COAST. During the nineteenth century, the west coast of South America had its closest commercial ties with Europe, particularly Great Britain. Since the British were the pioneers in establishing steamship connections with the west coast, it was from an early period strongly represented by numerous settlers in the principal ports and commercial centers. Nevertheless, the United States provided a leading market for Peruvian guano, which was used by tobacco planters on the eastern seaboard to replenish their depleted tobacco fields, and, furthermore, California in the heyday of the gold rush provided an important outlet for Chilean wheat. With the opening of the Panama Canal in 1914, United States trade relations with the west coast of South America entered a new phase, and in recent years these countries have transacted about 25 per cent of their foreign business with the United States. This percentage would be even larger if adjustments were made for the ultimate destination of some of the shipments from west coast countries, such as Bolivian tin, most of which formerly went first to Great Britain for smelting, but a large part of which finds an ultimate market in the United States. On the other hand Peru has become more dependent on Europe as a market since 1930-1932, partly as a consequence of the growing importance of petroleum products in its export trade, and partly on account of the influence of the United States' import duties and excise taxes in causing a shift to Europe of exports of copper concentrates, sugar, and long-staple cotton.

RÍO DE LA PLATA AREA. The three countries which border on the Río de la Plata — Argentina, Paraguay and Uruguay — in normal years conduct only from 10 to 15 per cent of their foreign trade with the United States. The climate and soil of this area is suited to the production of the same type of products as our own farms and ranches. Furthermore, Buenos Aires is closer to southern European ports than it is to New York or New Orleans and its shipping connections with Europe have always been more frequent and satisfactory. It has received several million immigrants from Europe, as well as a large inflow of European capital. Nevertheless, Argentina has always looked to the United States as a very important outlet for its produce. During World War I, and again since 1939, the United States has become the leading market for the Río de la Plata countries. Even under more normal conditions the United States is the second largest market — after Great Britain — for the exports of this area. It is also significant that some important Argentine products find their best market in other South American countries, such as wheat exported to Brazil. In fact, the surplus of Argentine exports to Brazil just about balances the excess of Argentine imports from the United States,

with the result that a triangular clearing would permit an even balancing of accounts of merchandise trade.

Excess of United States Imports from Latin America. The principal characteristics of the United States trade with Latin America may now be outlined briefly. Contrary to what appears to be the popular impression, the United States almost invariably buys more from Latin America than it sells to Latin America as a whole. The United States trade statistics show that for only one year in recent history, prior to 1938, did United States "merchandise" exports to Latin America exceed the "merchandise" imports from Latin America. That was in the abnormal postwar year 1921.[2] In these statistics gold and silver are excluded, since they are considered as monetary, or balancing, items. However, in practice most of the Latin American countries are producers of gold and several are also important silver-producing countries; and these precious metals are exported for the profits they bring just the same as any other commodities. Only in the case of Argentina and Uruguay can the movements of gold and silver be considered as having primarily to do with banking transactions. During the twenty years 1919-1938, United States net imports of gold from Latin America averaged $30,130,157 annually, and net imports of silver averaged $46,634,089 annually.

FACTORS WHICH MAKE THIS POSSIBLE. The United States is able to continue, year after year, to import more from Latin America than it sells to Latin America for two principal reasons: First, the trade deficit with Latin America is partly offset by an export surplus with other areas; and secondly, the United States obtains from non-merchandise transactions the credit or exchange required to balance the excess of imports from Latin America. The most important of the current non-merchandise transactions are: shipping services, insurance, expenditures of tourists and travelers, disbursements of Latin American governments, interests on government debts, and dividends on "direct" United States investments in Latin America.

Reasons for Abnormal Years 1938-1940. During the three years 1938, 1939, and 1940, the United States had an excess of exports over imports in its "merchandise" trade with Latin America, but the United States imports of gold and silver from the Latin American republics more than counterbalanced this export surplus. The nature of the circumstances which produced this abnormal situation has been generally misunderstood and needs to be elucidated. The principal factors were as follows:

(1) In 1937 United States "merchandise" imports were ex-

2 *See* Table 18.

ceptionally heavy, thus putting in the hands of Latin Americans large amounts of dollar exchange which were used in subsequent years to buy goods in the United States. It will be recalled that 1937 was a very prosperous year, and there was a heavy demand for raw materials and foodstuffs.

(2) In addition to the merchandise imports by the United States, the United States Government had for several years been buying at favorable prices all gold and silver offered by Latin American countries. United States imports of gold and silver from Latin America (not including Argentina, Uruguay, or Paraguay) during the three years 1938-1940 amounted to approximately $400,000,000, and imports during the preceding three years amounted to $357,000,000.

(3) Large amounts of refugee capital from Europe entered Latin America during these years. The exact amount is not known, but at the middle of 1940 it was estimated that "hot money" was entering Brazil alone at the rate of $1,000,000 a month.

(4) Considerable new money from the United States entered Latin America during these years, either as loans of the Export-Import Bank of Washington, short-term bank advances, purchases of Latin American loans and debentures, or direct investments in branch plants or other enterprises.

(5) Expenditures of American tourists and travelers in Latin America increased, as well as the disbursements in connection with scholarships and other cultural activities.

(6) Many Latin American importers were buying heavily during this period in order to increase their stocks in anticipation of shipping shortages.

(7) These years constituted a period of rapidly increasing industrialization in Latin America. Imports of capital goods, particularly machinery, were heavy. Export-Import Bank loans facilitated shipments of road-building equipment and steel for bridges. In a sense, these years 1938-1940 represented the beginning of a new cycle of lending, with a consequent heavy outflow of goods, exceeding in volume the repayments of and service on the old obligations. In view of the upsurge of industry in Latin America, this phase might have continued for some time had not two powerful factors arising out of the war intervened, namely: A revived demand in the United States for raw materials in connection with the defense program, and the increasing difficulty of obtaining priorities on delivery of various types of equipment and materials. Although new capital continued to enter Latin America, the movement of goods to the United States in 1941 again overtopped the flow in the opposite direction.

Variations for Individual Countries. In this discussion of the balance of payments, the twenty republics of Latin America have been treated as a unit. In the aggregate, it has been seen that the United States normally buys considerably more from Latin America than it sells to that area. But when the countries are taken up individually it will be found that in some instances the United States usually has an export surplus. As long as exchange transfers are unimpeded, these instances cause no difficulty, since the exchange requirements arising from an import surplus with one country can be covered with an export surplus elsewhere (or with exchange arising out of non-merchandise transactions). For example, the value of Argentine purchases in the United States usually exceeds the value of Argentine exports to the United States, but under conditions of free exchange Argentina is more than able to recoup the difference through exports to Brazil, which in turn always has a handsome export balance in its trade with the United States. Since 1931, however, considerable difficulty has been created as the result of widespread exchange control or blockage, whch has forced the smaller countries to attempt bilateral trade balances with every country with which they have commercial relations — except that no country has been known to protest against a "favorable" balance.

Type of Goods Exported and Imported. There is a marked contrast in the type of goods which make up the bulk of United States exports to Latin America, as compared with United States imports from Latin America. Three-fourths of United States exports to Latin America consist of finished manufactures, while semimanufactures (13 per cent) and manufactured foodstuffs and beverages (8 per cent) make up most of the remainder. The manufactures consist principally of the products of mass-production industries and have usually been evolved to meet the peculiar needs of the new world, such as agricultural and industrial machinery, motor vehicles, electrical apparatus, iron and steel products, and office machines and appliances. American agricultural machinery, for example, found a ready market in Argentina, where conditions in many respects resemble those in the American Middle West. American automobiles likewise have been better adapted to local grades and road conditions than competing European cars.[3]

It is only during the present century, however, that machinery, metal manufactures, and other finished manufactures have come to occupy such an important place in the trade. Previously breadstuffs and provisions, together with such natural products as lumber and petroleum, comprised the bulk of the shipments, other items being cotton goods and iron and steel products. The char-

3 *See* Table 19.

acter of United States exports to all countries underwent a rapid change during the early years of the twentieth century. The ratio of manufactures and semimanufactures to the total was increasing steadily during these years. On the other hand, the Latin American countries have, since the First World War, achieved a larger degree of self-sufficiency in various food products which were formerly imported, and have also become important producers of petroleum.

United States imports from Latin America consist principally of crude materials and foodstuffs. In 1938 about 65 per cent of the total was in the foodstuffs group, principally coffee, sugar, bananas, cacao, and canned beef. The next largest group consisted of industrial raw materials of vegetable origin: flaxseed, tobacco, carnauba wax, castor beans, quebracho extract, and henequen. Other large groups were minerals and inedible animal products (wool and hides).

About 60 per cent of United States "merchandise" imports from Latin America, not including gold and silver, consist of raw materials and tropical foodstuffs which are not produced in the United States and which therefore enter free of duty. Sugar is one of the major items in the dutiable category.

Canada's Trade with Latin America. Canada's total trade with Latin America is comparatively small but is fairly important in some items. During the three-year period 1936-1938, Canada's exports to Latin America averaged $14,000,000 annually and imports $19,000,000 annually. Canada's principal exports to Latin America consist of lumber, newsprint, apples, canned salmon, seed potatoes, automobile accessories, and agricultural implements. Imports include hides and skins, linseed, quebracho, canned meats, coffee, bananas, sodium nitrate, petroleum, and fresh vegetables. In 1941 Canada was the largest buyer of Brazilian cotton.

Canada has long maintained trade commissioners in the principal Latin American countries and has shown an active interest in expanding its trade. The Canadian Minister of Trade and Commerce, the Honorable J. A. MacKinnon, made an official visit to six South American countries in the autumn of 1941. At that time trade agreements were concluded with Argentina, Brazil, and Chile. These entered provisionally into force at the time of signing. They were approved by both Canadian houses of Parliament, following their presentation in the House of Commons on February 27, 1942, at Ottawa.[4] The Canadian mission also visited Ecuador, Peru, and Uruguay. A commercial *modus vivendi* was entered into with Ecuador by an exchange of notes, providing for

4 Similar most-favored-nation agreements had previously been made with Uruguay (1937), Guatemala (1938), Haiti (1938), and the Dominican Republic (1940),

the removal of the Ecuadoran surtax of 50 per cent of the regular duty previously levied on Canadian goods because the trade balance was in favor of Canada.

INTER-LATIN AMERICAN TRADE

The trade of the Latin American countries among themselves has never been very large. Prior to 1939, only about 7 per cent of the total international trade of the twenty republics was with Latin American countries. Even during colonial times the commercial relations among the various territories embraced in common allegiance to the Crown of Castile were not extensive, as they were not allowed to trade with one another except by special permission, and every effort was made to canalize the trade of the different areas with the metropolis. Although the evolution of the Hispanic-American countries since independence has tended to accentuate their national distinctiveness, their economic evolution has been along generally parallel lines, with the result that the main lines of communication have led toward the industrialized regions of Europe and North America rather than between neighboring South and Central American states.

Argentina and Brazil. At present the principal currents of inter-South American trade are those between Argentina and Brazil, on the east coast, and between Chile and Peru, on the west coast. On the average, Brazil sends around 5 per cent of its exports to Argentina and obtains 13 per cent of its imports from Argentina. The balance is considerably in Argentina's favor, owing almost entirely to the fact that Argentina supplies most of Brazil's large imports of wheat. On the other hand, Argentina has been developing its own yerba maté plantations and is thus reducing its former large imports of these native tea leaves from Brazil. However, Brazil is supplying a larger proportion of Argentine lumber requirements. (During some of the war years Brazil had an export surplus in its trade with Argentina, owing principally to large shipments of cotton textiles.)

Chile. Chile has for many years purchased from Peru the raw sugar required by its domestic refining industry, and more recently has become a customer for Peruvian petroleum products. In return, Chile exports to Peru a variety of agricultural products, also lumber and some manufactured articles.

Other Countries. In addition to these major movements, there is considerable border, seasonal, and transhipment trade. Practically all of the foreign trade of interior countries like Bolivia and Paraguay must pass through neighboring South American countries. Argentina brings large quantities of Uruguayan build-

ing materials from across the Río de la Plata. In years of crop failure, Uruguay buys potatoes and other agricultural products from Argentina. Ecuador supplies shoes, cotton goods, soap, and other necessaries to the southern part of Colombia, which is inaccessible to the industrial centers of Colombia. In Central America, too, there is considerable border traffic in livestock and food products.

Future Growth of Interchange. With the advance of industrialization in some of the larger Latin American countries, divergencies in the economies are developing, which may provide the basis for a larger inter-Latin American interchange. Argentina and Brazil have made several attempts to integrate their economies by granting reciprocal preferential treatment for the characteristic manufactures and natural produce of the other country, and thus discouraging rivalry in the production of commodities in which the other country has some natural or historical advantage. Argentina is now buying in Brazil various articles which were formerly imported from the United States, such as rice and lumber, as well as some manufactured goods, such as cotton textiles and industrial chemicals. Brazil has shifted to Argentina most of its purchases of breadstuffs.

GENERAL REFERENCES

Pan American Union. "Commercial Interdependence of the Americas," by Julian Zier, *Commercial Pan America,* Vol. X, No. 8 (August, 1941).

U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce. "Summary of the Foreign Trade of the United States — Calendar Year 1940," *International Reference Service,* Vol. I, No. 67 (December, 1941).

CHAPTER FIFTEEN

The Future of Latin American Trade

Basic Factors Affecting Development. Basically there are two principal ways by which the volume and direction of Latin American trade may be affected in the postwar world. The first is through the normal growth of population and increase of production, which would in turn bring about an expanded international trade in which all countries would share through the application of the open-door or most-favored-nation principles, as in the past. The tempo of developments would depend upon various factors that cannot clearly be forecast at this time, such as the policies relating to immigration into Latin America and emigration from Europe, the volume of foreign investments in Latin America, and the extent of the economic upsurge throughout the world.

But the course of the trade may also be vitally affected by the economico-political structure fashioned by the Great Powers after the war, particularly the extent to which policies are affected by political regionalism or the demands of national defense. The influence of these forces has never been entirely absent, but its strength has increased in recent decades.

Decline of Europe's Share. Regardless of the decisions made at the peace, it appears likely that Europe's historic position in Latin American trade is due for further curtailment. The declining birthrate in western Europe and the vigorous efforts of such countries as Germany, France, and Italy to achieve self-sufficiency, in breadstuffs and other food products, constituted a clear warning to the Latin American countries that the era of expanding markets in Europe had closed. The tendency toward closer economic attachment by the European mother countries to their overseas territories also was significant. Beginning around 1930 several of the "free-trade" countries of Europe reversed the historic trend by introducing or extending preferential treatment in their trade relations with their dependencies. All of the European countries having overseas territories — Great Britain, France, Belgium,

Netherlands, Italy, Spain, and Portugal — showed a tendency to concentrate purchases in the regions politically attached to them. Between 1928 and 1938 the percentage of total imports of these countries derived from their overseas territories rose from 27 to 43.[1]

Germany not only developed a war economy at home but also shifted purchases to areas sufficiently near-by to be readily subject to political and military influence. For example, trade with the Danubian basin and the Near East was stimulated, and purchases of bananas were shifted from the Caribbean to the west coast of Africa.

Competition of Africa. Whatever rearrangements may result from the present conflict, the effect of future developments in Africa upon the export position of Latin America should not be overlooked. During the present century Africa has replaced Latin America as the principal producer of gold and cacao, to mention two important items. Production of coffee, bananas, tobacco, cotton, and citrus fruits is increasing. Africa has great reserves of copper and other metals. Africa is an important exporter of vegetable oils, edible and inedible. Sisal, rubber, nuts, pyrethrum flowers, and tea are other African commodities which Latin America produces or hopes to produce for world markets. The population of Africa is somewhat larger than the combined population of Latin America. As a by-product of the recent war, Africa will have acquired a greatly improved net of transportation and communication facilities, new harbors, assembly plants, new equipment, and stimulus to new productive efforts.

These developments are of great significance from the long-run point of view, but this is not to say that Europe can be written off Latin America's economic balance sheet. Although the historic position of that continent has been weakened considerably, it is still enormously important as a market for Latin American products and as the source of tools, luxury goods, and specialties that are not available at comparable prices or in comparable quality elsewhere. Not only is the aggregate volume of Latin American exports to Europe impressive, but the real significance of the European outlet is to be found in the dependence of certain countries and specific products upon the trans-Atlantic markets.[2]

Argentina. About three-fourths of Argentine exports normally go to Europe—35 per cent to the United Kingdom and 40 per cent to the Continent. No major Argentine export product finds its principal outlets on the Continent, but that area normally takes large quantities of grains, linseed, hides, dairy produce, and

1 League of Nations, *Europe's Trade* (1941), p. 27.
2 *See* Table 20.

animal by-products. Great Britain absorbs practically all of Argentine exports of chilled beef and frozen mutton, but the Continent usually buys some frozen beef. Great Britain is also the principal market for wool and butter, and normally takes about one-fourth of Argentine exports of agricultural products, particularly corn. Brazil is the largest single market for Argentine wheat.[3]

Uruguay. The normal distribution of Uruguay's foreign trade is roughly similar to that of Argentina, but the volume is much smaller. The three pastoral products — wool, hides, and canned meats — that comprise the bulk of its exports are in heavy demand in the United States in wartime and in periods of industrial prosperity.

Brazil. About half of Brazil's exports normally go to Europe, principally to the Continent. Germany normally offers the best market for Brazil's tobacco, wool, and hides, and at times for cotton, and is usually the second largest market for coffee, cocoa, and rubber. Furthermore, Germany is an important buyer of iron ore and other metals. The expanding United States market since 1939 has taken care of some of these products, and the reduced volume of exports of others has been partially or totally offset by increased United States purchases of a number of items not previously important in the trade, such as industrial diamonds, oiticica oil, babassu nuts, and insecticide materials. Brazil's expanding cotton crop has found outlets in Great Britian, Germany, and Japan. Before the outbreak of war in 1939, Brazil was increasing shipments of oranges to Great Britain and Canada. Germany has long been interested in effecting an arrangement with Brazil whereby she could obtain Brazilian iron ore in exchange for German manufactured products, but successive Brazilian governments have stood pat on their determination to encourage a local iron and steel industry in preference to the export of ore on a vast scale.

Chile. The United States is Chile's largest foreign market, if nitrate shipments be included, but this country takes comparatively small quantities of the agricultural exports which Chile is ambitious to develop. In 1938, Germany purchased over 46 per cent of the Chilean nonmineral exports, consisting principally of wool, vegetables, and fruits. However, increased United States purchases of Chilean copper and nitrates since 1939 have exceeded these German purchases many times over.

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3 See U. S. Department of Commerce, *Commerce Reports* (March 4, 1939), pp. 212-214, "Argentine Foreign Trade." Similar analyses of the foreign trade of other Latin American countries were published in *Commerce Reports*, as follows: "Brazil," March 11; "Chile," March 18; "Haiti," April 1; "Colombia," April 8; "Peru," April 15; "Nicaragua," May 6; "Venezuela," July 1, 1939. Also see U. S. Tariff Commission, *The Foreign Trade of Latin America*, Part II, and Pan American Union, *Foreign Trade Series*.

Other Countries. As regards most of the other republics, the United States is usually the largest single factor in their export trade as a whole, but in peacetime they are dependent upon other markets for a significant portion of their trade. The United Kingdom, for example, is normally the largest market for Peruvian sugar and cotton, the two leading export crops of that country, as well as for Peruvian wool. In 1938, Germany bought 16 per cent of Latin American exports of coffee, 23 per cent of the exports of wool, 29 per cent of the exports of cotton, 25 per cent of the hides and skins, 19 per cent of the corn, and 20 per cent of the cacao. Even Cuba, whose economy is more closely integrated with that of the United States than any other Latin American country, depends upon Great Britain, and to a lesser extent upon the Continent, for an outlet for a large part of its tobacco crop and the excess of sugar production over the quota established by the United States.

Factors Furthering Inter-American Trade. What will be the future of inter-American trade? Some increase in the interchanges among the Latin American countries themselves may be anticipated. Owing to the interruption of normal channels, this trade has almost doubled since 1939. Not all of this will survive postwar competition, but the following factors, among others, are bringing about more inter-Latin American trade:

(1) Improvement of transport and communications.

(2) The progress of industrialization. But it should be remembered that each of the larger countries is developing manufacturing industries, and that each is anxious to protect its infant industries. All must look to Europe or the United States for the better-quality goods. But there are some divergencies in the types of manufactures and in the stages of development that make for considerable interchange.

(3) Diversification of agricultural production. In some cases, it should be noted, diversification reduces inter-American trade. For example, Argentina has reduced its purchases of yerba maté in Brazil because it has developed plantations within its own borders. But some of the new crops provide a surplus for other Latin American countries having a deficiency, such as rice and vegetable oils.

(4) The exhaustion of natural resources in the United States, and rising costs of production. These factors have enabled some Latin American countries to obtain part of the export trade formerly monopolized by the United States, such as in petroleum products, lumber, and lard.

(5) Regional preferences or economic unions among Latin American countries. This point will be discussed further hereafter, but it may be noted here that these preferences may take many forms other than customs duties — namely, special rates on railway, shipping, and air lines; purchases by government and private agencies; popular tastes, as for Spanish-language films; and purchases growing out of tourist travel.

The United States Market. But whatever the long-range prospects for inter-Latin American trade may be, in the near future the chief reliance for expanded hemisphere trade will depend upon the direction of United States economic energies, particularly the possibility of larger American purchases from the southern republics. It is important to realize in this connection that the United States market is relatively much more important to the majority of Latin American countries than the Latin American market is to the United States. As has been seen, the United States takes about one-third of the aggregate Latin American exports, and in the case of half of the countries the proportion ranges from 50 to 90 per cent. On the other hand, Latin America as a whole has never taken more than 18 per cent of total United States exports. Latin America does figure somewhat more prominently in the United States import trade, furnishing about 23 per cent of the total. Excepting the war years, the relative position of Latin America as a source of United States imports has not changed appreciably during the last half-century.[4] During this same period the proportion of the total furnished by Canada and the Far East has increased considerably, as the demand for Canadian wood pulp, newsprint, and nickel, and for Far Eastern rubber, silk, tin, and copra, has been proportionately greater than the demand for the products furnished by Latin America.

Types of United States Imports. The prospects for larger United States imports from Latin America may be considered from the standpoint of three types of products: (1) Those Latin American exports for which the United States is already the chief outlet, although smaller quantities also normally go to Europe or Asia; (2) those goods finding their principal market outside the Western Hemisphere; and (3) commodities which the United States imports in large volume, principally from non-American areas.[5]

NORMAL IMPORTS FROM LATIN AMERICA. The first group includes coffee, sugar, bananas, cacao, and certain hard fibers; also

4 There has been a percentage gain in imports from *South* America, but these gains have been almost exactly offset by a decline in the share of the total furnished by Middle America.

5 *See* **Table 21.**

forest products like chicle, carnauba wax, quebracho extract, and balsa wood; and certain metals and minerals: gold, silver, manganese, antimony, chromite, platinum, and amorphous graphite. The most valuable item in this group is coffee. As all except a negligible proportion of United States imports of coffee comes from Latin America, and as consumption is comparatively inflexible, there is not much prospect of any large increase in the volume of coffee imports, However, the price obtained is just as important as the volume. Through the Inter-American Coffee Agreement, the value of United States coffee imports was practically doubled. Sugar prices have also been stabilized through the sugar quotas. Latin America produces a variety of hard fibers. At the beginning of the century Mexico had virtually a monopoly of the henequen trade. Plantations of sisal or henequen have since become important in several other Latin American countries and also in West Africa and the Netherlands East Indies. Plantings of abacá, or manila hemp, have been made in Central America. This is a field that offers substantial possibilities of development.

Minerals have always comprised a large part of United States imports from Latin America. The future of these imports is to a large degree dependent upon the tariff and other policies of the United States. The excise taxes levied by the Congress in 1932 on imported copper and petroleum divert these products to Europe and Asia. Under the trade agreement with Venezuela, a substantial quota was admitted at reduced rates. It is possible that declining United States reserves may bring about a more liberal policy toward imports of minerals. The United States is the largest single market for Chilean sodium nitrate, but synthetic plants can take care of all essential needs. The United States takes all of the iron-ore exports from Chile and Cuba, but prior to the outbreak of war, most of the Brazilian exports went to Europe. There is difference of opinion as to prospects for increased imports of iron ore after the war. It appears likely that Brazilian exports will again move to Europe, especially if the deposits of the Bethlehem Steel Company in Venezuela become available.

Imports of handicraft articles, such as taquilla (Panama) hats from Ecuador and harvest hats, serapes, and silverware from Mexico, are items of some importance. During the war, efforts have been made to develop in Latin America sources of supply of various other handicrafts formerly imported from Central Europe and Japan.

While the United States is the chief market for the products mentioned above, in peacetime about 40 per cent of Latin American coffee exports, 33 per cent of the cocoa, 30 per cent of the sugar, and 20 per cent of the bananas, as well as smaller propor-

tions of other items, go to Europe. Japan had become an important factor in the metals markets before November, 1941.

LATIN AMERICAN EXPORTS NOT GOING TO UNITED STATES. The second class of Latin American exports—those going principally to non-American markets—includes corn and fresh meats, which go almost entirely to Europe; wheat, which goes to Europe and Brazil; cotton, which normally goes to Europe and Japan; citrus fruits and apples, which are exported mainly to Great Britain, Canada, and the Continent, but to some extent to other Latin American countries; and such items as wool, hides and skins, flaxseed, tobacco, and certain minerals.[6] The United States is an important, if not the leading, market for several of these commodities, such as flaxseed, tobacco, hides, and coarse wools, especially in times of great industrial activity, but the possibilities for large-scale expansion of the trade appear limited. Some reduction in the import duty on flaxseed was made in the United States-Argentine trade agreement, but domestic producers have a large margin of protection.

NORMAL IMPORTS FROM THE FAR EAST. In view of the likelihood that increases in these items will "not bulk large in our total import trade with Latin America,"[7] it has been suggested that the chief reliance for a permanently enlarged inter-American trade must be placed upon those strategic, critical, and essential materials which have, in recent decades, been imported chiefly from the Far East, such as rubber, silk, tea, tung oil, abacá, coconut oil, cinchona bark (quinine), sisal, rotenone-bearing roots, tapioca, and spices. After Pearl Harbor, the former Far Eastern sources of supply of these articles were cut off entirely. Most of these items have long been produced to some extent in Latin America, and under the pressure of war needs, efforts have been made to enlarge production or to develop suitable substitutes. The financial inducements and technical assistance provided by the United States resulted in considerable increase in output during the emergency. But what of the postwar situation? Will Latin American producers be able to compete on a price basis with former suppliers? If not, should the United States pay a

6 Most of these items, as well as those in the preceding group, need to be analyzed as to types and the particular market for such types, in order to bring out all aspects of the problems involved. For example, special growths of Central American coffee may bring a premium in Europe over what American roasters are willing to pay for them. Likewise the flavor grades of cacao grown in Ecuador and Venezuela bring a premium over the basic grades produced in Brazil and the Dominican Republic. The United States is the largest importer of Cuban leaf tobacco, but does not provide a market for other types grown in Latin America. In peacetime, the United States imports live cattle from Mexico and Canada, and also large quantities of canned meat from Latin America, but in wartime meat supplies must be considered as a whole.

7 Statement by former Vice President Wallace, in article entitled "Inter-American Agricultural Cooperation," in the *Bulletin* of the Pan American Union (April, 1940), p. 270.

higher price, if necessary, for reasons of national defense? Will the southern republics be able to produce sufficient surpluses to supply the needs of the United States? Can a hemisphere or regional policy be harmonized with international commitments and the freedom and expansion of world trade?

Obstacles to Expanding Production. A final answer to these questions is not possible at this time, but some of the conditioning factors may be suggested. As regards physical conditions, favorable soil and climate are not lacking. As has been mentioned, most of the commodities in question are now being produced to some extent, from wild or cultivated trees and plants. But in most instances expansion of production would require the provision of new transport facilities at considerable cost. Enemies to human and plant life are also numerous and formidable in most of the producing areas. While these can be overcome through sanitary engineering and health programs, the initial and recurring costs may be fairly large. The most serious obstacle is the shortage of manpower. Much hand labor is essential in cultivating, harvesting, and processing most of the products. The areas that have heretofore been the chief sources of supply have large and well-trained supplies of labor, and also experienced technical and administrative personnel. In times of boom prices, some labor may be attracted from other occupations in Latin America, but this does not provide a solution to the long-run problem, since it tends to upset the balance of the economy and does not ensure a permanent, trained force, including overseers and technicians, essential to production on a competitive basis. Doubtless some of these handicaps can be overcome through the perfection of new procedures, but it is not certain that all the differentials can be eliminated.

Problems of Policy and Manpower. It also remains to be seen whether, over the extended period necessary to bring extensive new plantations to fruition, the policies of the local political entities and the competing demands for labor and capital will remain favorable. Given a shift in the price and profit situation, will Brazilian producers continue to favor rubber over cotton, or babassu over coffee? All of the Latin American republics are anxious to diversify production, but the comparative advantage may not, in all cases, favor those strategic and critical commodities that are in demand in the United States. Since 1929 the principal new crops developed in Latin America, as the result of the efforts of local governments to broaden the productive bases, have been such things as cotton and citrus fruits in Brazil, apples and pears in Argentina, rice in the Dominican Republic, and dairy and poultry products and edible oils in Cuba. All of these are

competitive, in some degree, with United States production, although the United States imports Argentine pears and grapes, as well as Cuban and Mexican vegetables, on a seasonal basis.

Loss of World Leadership in Certain Items. It is an interesting fact that Latin America was the original home of many of the commodities that it is now desired to re-establish in that area: rubber, henequen, cinchona, cacao, etc. Its failure to hold the world leadership in production of these and other items was due not to lack of suitable physical conditions, but rather to the unfavorable official atmosphere or to relatively inefficient productive methods. Under the co-operative programs launched since 1938, the Latin American governments have had the benefit of the experience of the plant experts of private American companies as well as of the United States Department of Agriculture, and also have received consignments of the best strains of rubber, cinchona, derris-root, and other plants. But a considerable period of time must elapse before large-scale production can be established, and persistence and continuity of favorable governmental action are essential to success.

The decisive factor in many instances may lie with the tariff, tax, and quota treatment accorded by the United States. The increase in imports of babassu kernels from Brazil since 1936, as the result of the trade agreement provision that protected them against import duties or taxes, is a case in point. The babassu nut yields an oil similar in properties and uses to coconut oil, and the two nuts have the same percentage of extraction. Unlike the coconut, which grows along the coast, the babassu tree is found in the interior of Brazil, where transportation is inadequate, and furthermore babassu nuts are harder to crack than coconuts. Brazil's future position in the trade, therefore, depends not only upon the development of transport facilities and the provision of adequate labor to gather and crack the nuts (or the perfection of a cracking machine), but also upon the continuance of a policy favorable to Brazilian suppliers.

Changing Technology and Tastes. United States policy must decide not only as regards competing foreign areas, but also as to the relative advantages and costs of domestic production as against imports. It is possible, for example, to produce synthetic rubber tires that will outlast the life of a motor car. Should the commercial costs of producing synthetic rubber be reduced sufficiently as the result of wartime experience, it is likely that synthetic rubber will partially replace the natural product, just as synthetic nitrates have to a large degree replaced sodium nitrate. Atabrine and other synthetic drugs may also reduce the dependence upon imports of cinchona and other medicinal plant products. On the

other hand, it is likely that some of the new industries growing out of technological developments may create new demands for Latin American products.

Changing technology and tastes may also affect the competitive position of the United States as an exporter as well, sometimes favorably and sometimes unfavorably. During the intervals between the two world wars, the United States occupied the leading position in such industries as motor vehicles, radio, films, etc. that dominated the era. Will it be able to hold this leadership in the characteristic industries of the postwar world? Technological skill alone cannot decide the question; human desires and fashions must also be considered. It appears unlikely, for example, that the American film industry will occupy in the postwar world the relative position that it did in the 1920's. Higher labor costs and taxes may also affect the international position of American producers. But, on balance, it is reasonable to assume that the ingenuity and energy shown by American manufacturers in meeting the wartime schedules should be adequate to confront the problems of the moment after the conflict is over.

GENERAL REFERENCES

Economic Defense of the Western Hemispheres: A Study in Conflicts. A Symposium of the Latin American Economic Institute. American Council on Public Affairs (Washington, D. C.: 1941).

"Hemisphere Trade." Special issue of *Law and Contemporary Problems,* School of Law, Duke University, Durham, North Carolina, Vol. VIII, No. 4 (Autumn, 1941).

Part Four

National Policies and International Relations

CHAPTER SIXTEEN

Pan American Commercial Policy

Periods of United States Policy. The United States has periodically been called upon to redefine its relationships with the other American republics. Since the establishment of the union in 1789 there have been three periods of roughly fifty years each that it is possible to distinguish as regards United States policy toward Latin America. The first period coincides with the consolidation of the independence of the states of the New World. Hamilton proposed a "great American system, superior to the control of all transatlantic force or influence;"[1] Jefferson wrote that the object of United States policy "must be to exclude all European influence from this hemisphere;"[2] President Monroe made this policy explicit in his famous Doctrine. The second period, which embraces the Civil War, was marked by preoccupation with domestic affairs; interest in foreign affairs reached a low ebb. The third period, beginning in 1889, the year the first of the present series of International Conferences of American states met in Washington, extends to the outbreak of the Second World War. At the beginning of this period the United States was becoming an industrial nation and was awakening to a consciousness of its strength and position in the world. It was a period of tremendous economic expansion in both the United States and Latin America. Interest was primarily commercial, although policy was touched with the spirit of the age, the rivalry of Great Powers for colonies, trade routes, and spheres of influence.

During most of the nineteenth century the United States had not been in a position to supply the capital required for the development of new areas outside its own borders, nor more than a small part of the manufactured goods they demanded; it had no surplus population to colonize overseas; and it had lost its former proud position in the world carrying trade with the rise of steam navigation and the decline of the clipper ship. During the 1880's, public

1 *The Federalist*, No. 11.

2 Quoted by A. P. Whitaker, *The United States and the Independence of Latin America, 1800-1830* (Baltimore: 1941), p. 43.

interest in "our friends and neighbors on this continent"[3] revived, particularly in the improvement of transportation and closer connections with the rapidly developing southern portion of South America.

Pan American Union. Although the Pan American Union was originally known as the Commercial Bureau of the American Republics, the economic content of official Pan Americanism has not been large. A proposal for the formation of an American customs union was on the agenda of the first Pan American conference, but opposition was so strong that the topic has not subsequently been revived on a continental scale. Proposals for a customs union between two or more Central or South American countries have made their appearance frequently, but these have been little more than platonic gestures. In practice, little effort has been made to canalize trade along continental lines. The large expansion of inter-American trade since 1900 has come about primarily as the result of individual initiative and the natural evolution of economic forces.

Inter-American Transportation. Transportation questions have received considerable attention at inter-American conferences, but, until recently, action was largely confined to the technical field, such as port formalities, customs procedure, and sanitary police regulations. A project for an inter-American railway, drafted by a commission of experts, has had some influence in advancing the gradual linking up of the railway system of a number of the countries. More significant, however, have been the achievements in connection with the Inter-American Highway, and in the fields of radio and aviation. Several conventions have been adopted relating to trade-marks, copyrights, and patents. The formation of a Pan American Postal Union, although the outgrowth of the Seventh Congress of the Universal Postal Union in 1920, has facilitated commercial and cultural communications, since it provides that the domestic postal tariff within each of the signatory countries shall apply to mail matter destined to other member countries.[4]

International Relations. Inevitably, as the American republics have "come of age" economically, the landmarks of the colonial era have disappeared, and the dependence upon the Old World for capital, for technique, for certain types of manufactures,

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3 James G. Blaine used this phrase in his letter accepting the nomination for President in 1884.

4 Parenthetically, it may be noted that the principal achievements of Pan Americanism have been in such fields as arbitration, conciliation, health, scientific research, and education. The Pan American Sanitary Bureau, organized in 1902, is one of the oldest and most successful of inter-American institutions. More recent organizations relating to international law, child welfare, bibliography, geography, statistics, and agricultural sciences are doing useful work.

and, to some extent, as a market, has diminished. But there has been nothing of an exclusive character about official Pan Americanism. Most of the Latin American countries have been members of the League of Nations, of the International Labor Office, and of other international organizations, and have participated in many of the international conferences held since 1919. Two inter-American labor conferences have been held, one in Chile and one in Cuba, under the auspices of the I.L.O. and with the participation of official representatives of most of the American nations. Resolutions adopted by Pan American conferences during the 1930's repeatedly emphasized the importance of equality of treatment in commercial matters and the need to develop international trade on the widest possible basis. The American Secretary of State was a prime mover in these matters, but this point of view also received the endorsement of most of the other representatives. Dr. Carlos Saavedra Lamas, the Argentine Minister of Foreign Affairs, in 1935 declared: " We must emphasize and strengthen the consciousness of our American geographical unity, incorporating it in the universal system, but strengthening it in its continental sense in order to make it more efficient as a force and element of progress. We must carry out our task of co-ordination, yielding to our most vital necessities, in a more positive manner, not directing it against anyone but with a friendly confidence and a desire to collaborate."[5]

Trade Agreements. In the United States, the Trade Agreement Act of 1934, which has been thrice renewed by Congress, provides that concessions granted under the act to any country (other than to Cuba) shall apply to the same products from all foreign countries, except in cases where a third country is found to discriminate against American commerce. Under this act, agreements have been concluded with fifteen of the twenty Latin American republics.

Regional Blocs. It has sometimes been argued that the American republics should create a preferential tariff system in this hemisphere,[6] but such a system runs counter to the policies of most of the American nations. There have also been some advocates of a Latin American customs union, or of customs blocs on a more limited scale, as in Central America or in southern South America. Chile has long been the champion of this point of view. But experience would appear to indicate that customs unions are

5 United States Department of State, *Report* of the Delegates of the United States of America to the Pan American Commercial Conference held at Buenos Aires, Argentina, May 26 - June 19, 1935 (Washington, D. C.: 1936), p. 7.

6 For example, see Dr. Ethel B. Dietrich, "Inter-American Collaboration," in *The Economic Defense of the Western Hemisphere*, a Symposium of the Latin American Economic Institute (Washington, D. C.: 1941), pp. 76-78.

concomitant to political union. Repeated efforts have been made by Central American countries to form a closer economic union, but like similar attempts at political federation, they have been short-lived and ineffectual.[7] Tariff preferences to contiguous countries to facilitate "border traffic" have constituted a recognized exception to most-favored-nation clauses in commercial treaties. While susceptible of abuse, "regional" tariff preferences have received the endorsement of the Inter-American Financial and Economic Advisory Committee, provided such preferences shall "not be permitted to stand in the way of any broad program of economic reconstruction . . . with a view to the fullest possible development of international trade on a multilateral unconditional most-favored-nation basis."[8] Similar provisions are included in the United States trade agreements with Uruguay and Peru.

Effects of the War. Despite the official acceptance of the "international" approach, as opposed to the hemisphere or continental or regional approach to the solution of economic problems, the war and the pressure of developments in other parts of the world have given some impetus to regional policies, which may have considerable influence upon postwar actions. How far the trend will go in that direction will doubtless depend upon the nature of the politico-economic arrangements worked out at the conclusion of the war. Considerations of national security may be expected to dictate the importance of developing within the hemisphere, or with short and protected lines of supply, sources of as many strategic and critical materials as may be feasible, but the expanding world consumption of most of these products should provide a cushion against possible shocks to the economies of those areas that have heretofore been the principal suppliers. There would appear to be no reason why the inter-American commodity and purchase agreements, such as those affecting coffee, sugar, cocoa, rubber, fibers, and minerals, could not be merged with broader world undertakings. Already such steps have been taken in connection with the International Wheat Agreement and the Food and Nutrition Conference.

Solidarity, Not Self-Sufficiency. The consciousness of a community of interests in the Western Hemisphere has been greatly strengthened by the war. It is, however, a sentiment of solidar-

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7 On November 21, 1941, Argentina and Brazil signed a treaty, the preamble of which called for "the progressive attainment of a regime of free trade intended to lead to a customs union," but it had not been ratified up to the beginning of 1946. In this instance it would appear that the phrase "customs union" is used in a nontechnical sense.

8 This understanding is written into the Argentine-United States Trade Agreement, signed at Buenos Aires, October 14, 1941, and effective January 8, 1943, in the form of an exchange of letters between the Argentine Minister for Foreign Affairs and the American Ambassador at Buenos Aires. — *United States Executive Agreement Series* No. 277 (Washington, D. C.: 1943), pp. 79-80.

ity, not of self-sufficiency. It is unlikely that the people of the United States or of Latin America would accept a regionalism that would isolate the hemisphere from the rest of the world, tend to provoke retaliatory groupings in other regions, or destroy the benefits of international specialization on the widest possible basis.

GENERAL REFERENCES

Behrendt, Richard F. "Inter-American Economic Co-operation and Post-War World Reconstruction," *World Affairs,* No. 2 (1943).

Bemis, Samuel Flagg. *The Latin American Policy of the United States.* New York: 1943.

Chalmers, Henry. "Inter-American Trade Policy," in Seymour E. Harris, *Economic Problems of Latin America.* New York: 1944. Chapter VIII.

——. "Trade Policies of Foreign Countries during 1941," Part III, "Latin America," *Foreign Commerce Weekly* (January 31, 1942) pp. 8, 9, 33.

Humphrey, John P. *The Inter-American System: A Canadian View.* Toronto: 1942.

International Conferences of American States, The. "First Supplement, 1933-1940." Collected and edited in the Division of International Law of the Carnegie Endowment for International Peace. Washington, D. C.: 1940.

Kramer, Roland S., ed. "Our Foreign Commerce in Peace and War," *Annals of the American Academy of Political and Social Science,* Vol. CCII (September, 1941).

Manger, William. *Inter-American Highlights,* 1890-1940. Washington, D. C.: 1940.

Marquez, Javir. *Posibilidad de bloques económicos en América Latina.* El Colegio de México, "Jornadas" 16. Mexico, D. F.: 1944.

Olson, Paul R., and Addison C. Hickman. *Pan-American Economics.* New York: 1943.

Pan American Union. *Eighth International Conference of American States. Special Handbook for the Use of Delegates.* Washington, D. C.: 1938.

——. *Recent Trends in Inter-American Co-operation.* Washington, D. C.: 1943.

Rutter, Frank R. *Tariff Systems of South American Countries.* U. S. Department of Commerce, Tariff Series No. 34. Washington, D. C.: 1916.

U. S. Department of State. *Report* of the Delegates of the United States of America to the Seventh International Conference of American States, Montevideo, Uruguay, December 3-26, 1933. Washington, D. C.: 1934.

U. S. Federal Trade Commission. *Report on Trade and Tariffs in Brazil, Uruguay, Argentina, Chile, Bolivia, and Peru.* Washington, D. C.: 1916.

U. S. Tariff Commission. *Extent of Equal Tariff Treatment in Foreign Countries.* Report No. 119, second series. Washington, D. C.: 1937.

——. *Tariff Bargaining under Most-Favored-Nation Treaties.* Report to the United States Senate. Report No. 65, second series. Washington, D. C.: 1933.

Whitaker, Arthur P., Ed. *Inter-American Affairs.* New York: For years 1941-1945.

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TABLE 1. THE AMERICAN REPUBLICS: AREA AND POPULATION

(1943 or nearest available year)

Country	Area (Square miles)	Estimated Population
South America		
Argentina	1,079,966	13,709,238
Uruguay	72,170	2,146,545
Paraguay	169,266	1,014,773
Chile	286,396	5,178,260
Bolivia	416,040	3,533,900
Peru	503,435[1]	7,395,687
Ecuador	125,000[2]	3,105,541
Colombia	439,828	9,523,200
Venezuela	352,143	3,996,095
TOTAL, Spanish-speaking South America	3,444,244	49,603,239
Brazil (Portuguese-speaking)	3,286,170	43,550,000
TOTAL, South America	6,730,414	93,153,239
Mexico and Central America		
Panama	34,169	631,637
Costa Rica	19,238	672,043
Nicaragua	57,915	1,013,946
Honduras	59,161	1,154,388
El Salvador	13,176	1,862,980
Guatemala	42,364	3,410,762
Mexico	758,258	19,653,552
TOTAL, Mexico and Central America	984,281	28,399,308
West Indies		
Cuba	44,218	4,778,583
Dominican Republic	19,332	1,768,163
Haiti (French-speaking)	10,700	3,000,000
TOTAL, West Indies	74,250	9,546,746
United States (1940)	2,973,776	131,669,000
TOTALS		
Total, 21 Republics	10,762,721	262,768,293
Total, without United States	7,788,945	131,099,293
Total, Spanish-speaking	4,492,075	84,549,293[3]

[1]Includes Peruvian section of Lake Titicaca. Figures are approximate since new boundaries have not been definitely surveyed.

[2]The area of Ecuador is not definitely known; the figure cited is the estimate made by the Government of Ecuador, pending completion of the boundary survey and demarcation.

[3]64 per cent of the aggregate population of the 20 Latin American republics.

TABLE 2. BIRTHS AND DEATHS: RATES PER 1,000 INHABITANTS, 1931-1935

LATIN AMERICAN REPUBLICS	Birth Rate	Death Rate	Infantile mortality: deaths under one year per 1,000 living births Av. 1931-1935
Mexico[1]	42.4	24 3	134
Argentina	26.4	12.1	94
Chile	34.0	24.7	248
Colombia[1]	30.1	14.6	...
Costa Rica[1]	42.8	20.6	159
Ecuador	....	....	145
Guatemala[1]	34.6	18.7	105
El Salvador[1]	41.0	23.0	140
Uruguay	21.6	10.4	100
Venezuela[1]	27.9	17.6	149
Brazil[2]—1934	22.9	8.8	...
Cuba[2]—1939	16.7	10.6	...
Dominican Republic[2]—1938	32 8	8.9	...
OTHER SELECTED COUNTRIES			
United States	16.9	10.9	59
Canada	21.4	9.7	75
Germany	16.6	11.2	74

[1]Figures in part approximate.

[2]Incomplete.

NOTE:—Since the general rates depend, among other factors, on the age structure of the population, they show merely the numerical change occurring in a given population: thus they neither provide a measure of the differences in the fertility or mortality of populations of dissimilar age structure, nor are they indicative of the future development of a given population.

SOURCE:—League of Nations, *Statistical Yearbook*, 1939-1940.

TABLE 3. VALUE OF 22 LEADING PRODUCTS EXPORTED BY THE 20 LATIN AMERICAN REPUBLICS, 1938

(Values in Millions of United States Dollars)

1. Mineral exports	
Petroleum and derivatives	$317.4
Gold and silver (estimated from production)	145.0
Copper	106.7
Tin	24.8
Other industrial metals	73.1
Nitrate	31.5
Total	$698.5
(A few nonmetallic minerals like sulphur and graphite are not included. With these items, the value of mineral exports would exceed $700,000,000, or roughly 40 per cent of the total value of exports.)	
2. Food products	
Coffee	$233.5
Meats	124.1
Sugar	115.7
Wheat	61.4
Corn	59.3
Edible nuts, oils, etc. (estimated)	10.0
Cereals, other than wheat, corn, and linseed	32.1
Bananas	28.1
Cacao	21.7
Total foodstuffs (roughly 40% of all exports)	$685.9
3. Fibers	
Wool	$92.2
Cotton	76.5
Hard fibers	9.1
Total fibers (10% of total exports)	$177.8
4. Other important items	
Hides and skins	$62.5
Linseed	59.6
Waxes, oils, chicle, etc. (inedible), total estimated	27.7
Cabinet woods, quebracho, etc.	21 7
Total	$171.5
Totals	
Total of items listed above—94% of total	$1,733.7
Aggregate value of exports from the 20 Latin American Republics (gold and silver not included in trade returns of some countries)	$1,833.7

TABLE 4. PERCENTAGE OF WORLD PRODUCTION AND EXPORT OF SELECTED RAW MATERIALS SUPPLIED BY THE 20 LATIN AMERICAN REPUBLICS, 1938

Commodity	Per Cent of World Production Furnished by Latin American Republics	Per Cent of World Exports Shipped from Latin American Republics
Bananas	....	60.2
Barley	1.1	11.0
Cocoa beans	31.1	30.0
Coffee	85.0	83.9
Copper	22.5	25.9
Corn	10.9	73.6
Cotton	10.4	14.4
Gold	7.2	....
Henequen (and sisal)	42.5	34.6
Hides and Skins:		
Cattle hides	17.5	75.0
Sheep and lamb skins	13.5	18.5
Goat and kid skins	12.7	15.8
Iron ore	1.3	....
Manganese ore	6 5	12.2
Meats:		
Beef and veal	28.2	75.6
Mutton and lamb	12.0	16.9
Pork products	3.1	3.5
Canned meats	....	3.7
Nitrate	7.9	61.6
Oats	1.3	53.1
Oil bearing Seeds and Nuts:		
Flaxseed	49.5	84.0
Castor beans	45.0	....
Cottonseed	10.0	....
Petroleum	14.2	37.7
Rubber	2.0	2.0
Silver	42.7	....
Sugar	18.4	30.3
Tin	18.0	....
Tobacco	6.3	10.0
Wheat	8.0	28.9
Wool	16.4	23.7

TABLE 5. RELATIVE IMPORTANCE OF CERTAIN GROUPS OF COMMODITIES IN TOTAL IMPORT TRADE OF CERTAIN LATIN AMERICAN COUNTRIES FOR SELECTED PERIODS

(Expressed as percentage which imports of each group make of the total value of imports during same period.)

	Argentina	Brazil	Chile	Colombia	Peru	Mexico
1. Foodstuffs and beverages						
average 1911-13..	11.6	23.3	.....	14.9	15.13	14.2
average 1925-27..	9.7	22.2	14.3	11.5	23.51	16.4
average 1933-35..	9.2	19.4	16.9	4.0	15.79	.....
2. Leather and manufactures						
average 1911-13..	1.0	1.9	.....	.....	1.71	.....
average 1925-27..	.5	1.5	.....	.....	.61	.....
average 1933-35..	.2	0.8	.....	.....	.69	.....
3. Textile manufactures						
average 1911-13..	20.2	9.9	23.4	42.0	22.08	11.97
average 1925-27..	20.3	8.3	26.1	35 0	16.17	13.0
average 1933-35..	26.6	3.0	20.6	29.6	18.71	8.7
4. Chemicals; pharmaceuticals and cosmetic preparations; paints, varnish, and lacquers						
average 1911-13..	4.2	3.0	2.3	4.4	8.01	6.31
average 1925-27..	4.8	5.2	9.0	4.6	7.56	6.2
average 1933-35..	7.0	10.2	15.3	12.0	10.84	11.9
5. Metal manufactures						
average 1911-13..	15.63	12.7	.....	.....	13.77	.....
average 1925-27..	23.06	9.2	8.7	.....	12.90	.....
average 1933-35..	14.3	9.2	10.2	9.5	10.36	.....
6. Machinery						
average 1911-13..	3.06	11.0	12.6	.....	8.3	12.54
average 1925-27..	2.9	12.5	13.5	.....	11.65	12.1
average 1933-35..	3.1	16.2	9.7	13.2	9.70	19.2
7. Rail and road vehicles, airplanes, and boats						
average 1911-13..	9.1	4.0	.....	.....	1.5	4.42
average 1925-27..	.....	7.3	7.3	.....	6.31	7.7
average 1933-35..	2.7	5.6	4.9	5.4	7.58	14.0
8. Groups 5, 6, and 7 combined, plus electrical equipment and supplies where not already included with other groups						
average 1911-13..	30.0	28.7	.....	.....	24.51	.....
average 1925-27..	22.4	29.0	29.5	.....	34.70	.....
average 1933-35..	22.0	31.0	24.8	28.1	32.45	.....

NOTE:—The commodity groupings shown in this table are only roughly comparable as between countries (owing to differences in bases of classification) or as regards different periods for the same country (owing to changes in classifications).

TABLE 6. RELATIVE POSITION OF PRINCIPAL COMMODITIES IN THE EXPORT TRADE OF LATIN AMERICAN COUNTRIES, AVERAGE 1936 AND 1937

Country	Leading Commodity	%	2nd Commodity	%	3rd Commodity	%	All Others %
Argentina	Corn	26.9	Linseed	12.8	Wheat	10 3	50.0
Bolivia	Tin	71.4	Silver	12 3	.....	..	16.3
Brazil	Coffee	45 5	Cotton	19.1	Cocoa	5.3	30.1
Chile	Copper	38 0	Nitrate	28.2	.....	....	33.8
Colombia	Coffee	58.4	Petroleum	17.9	Gold	13 2	10.5
Costa Rica	Coffee	57.5	Bananas	23.5	Cocoa	10 4	8.4
Cuba	Sugar	72.7	Tobacco	5.9	.....	....	21.4
Dominican Rep.	Sugar	59.8	Cocoa	13.3	Coffee	7.2	19.7
Ecuador	Cocoa	21.1	Minerals	19.2	Petroleum	13.1	46.7
El Salvador	Coffee	89 2	Gold and silver	5.7	.....	....	5.1
Guatemala	Coffee	70.2	Bananas	25.0	.....	....	4.8
Haiti	Coffee	62.1	Cotton	15.3	Sugar	8.1	14.5
Honduras	Bananas	82.3	Gold and silver	9.0	.....	....	8.7
Mexico	Silver	21.9	Lead	9.9	Petroleum	5 6	62.6
Nicaragua	Coffee	45.5	Bananas	38.0	Gold	8 5	8.0
Panama	Bananas	73.6	.....	....	.....	....	26.4
Paraguay	Cotton	28.4	Quebracho extract	21.7	Hides	12.3	37.6
Peru	Cotton	27.3	Petroleum	23.2	Copper	12.8	36.7
Uruguay	Wool	40.4	Meats	9.4	Hides	7.6	42.6
Venezuela	Petroleum	89.0	Coffee	5.2	.....	....	5.8

SOURCE:—João Jochmann, "Exportação do Brasil em Confronto com A de Outros Paises," *Revista Brasileira de Estatistica*, Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística, ano 1, no. 1 (Janeiro-Marco de 1940), p. 125.

TABLE 7. PETROLEUM: PRODUCTION IN LATIN AMERICA, AVERAGE 1936-1939, AND BY YEARS, 1940-1941

(Quantity in Millions of Barrels)

Country	Average 1936-1939		1940		1941	
	Quantity	Per cent of total	Quantity	Per cent of total	Quantity	Per cent of total
Total Latin America	281.9	100.0	291 3	100.0	327.4	100.0
Venezuela	183.7	65.2	184 8	63.5	223.8	68.4
Mexico	42 2	15.0	44 1	15 1	43.8	13.4
Colombia	20.7	7 3	26.1	9.0	24.5	7.5
Peru	16 1	5.7	13 4	4 6	11.9	3.6
Argentina	16 9	6.0	20 5	7 0	21 7	6.6
Ecuador	2.1	0.8	2.3	0.8	1.5	0.5
Bolivia	0.2	....[1]	0.1	....[1]	0 2	....[1]

[1]Less than .01 per cent.

SOURCES:—Data for 1936-1940 from U. S. Bureau of Mines, Department of the Interior, *Minerals Yearbook, Review of 1940*, p. 1017. Data for 1941 from U. S. Bureau of Mines, Department of the Interior, *Minerals Yearbook*, 1941 (in preprint, pamphlet form), p. 90.

TABLE 8. PETROLEUM REFINERIES IN LATIN AMERICA[1]

Country	Company	Location of Plant	Crude Capacity (bbl. dly.)	Type of Refinery
Argentina	Compañía Argentina de Petróleo, "Astra," Buenos Aires	Comodoro Rivadavia	2,200	Skimming
	Compañía El Condor, Avellaneda, Buenos Aires	Buenos Aires	500	Skimming-Lubricating
	Compañía Ferrocarrilera de Petróleo, Buenos Aires	Comodoro Rivadavia	6,300	Skimming-Cracking
	Compañía General Asfaltos, Buenos Aires	Wilde, F.C.S., Buenos Aires	200	Skimming-Lubricating
	Compañía "La Isaura," Buenos Aires	Bahía Blanca	2,200	Skimming-Cracking
	Compañía Nativa de Petróleos, Buenos Aires	Bahía Blanca	2,000	Skimming-Cracking
	Compañía Nativa de Petróleos, Buenos Aires	Campaña	16,000	Skimming-Cracking
	Compañía Ultramar, S.A. Petróleo Argentina, Buenos Aires	Buenos Aires	4,400	Complete
	Diadema Argentina S.A. de Petróleo (Shell), Buenos Aires	Buenos Aires	12,580	Skimming-Cracking
	Lottero, Papini Compañía, Buenos Aires	Avellaneda, Buenos Aires	575	Skimming-Lubricating
	Ramon Goreleri y Compañía, Buenos Aires	Quilmes, Buenos Aires	150	Skimming-Lubricating

SOURCE:—*Oil and Gas Journal*, Dec. 26, 1940, Vol XXXIX, pp 93, 94, 97, 99, 100, and 103.

TABLE 8. PETROLEUM REFINERIES IN LATIN AMERICA—(Continued)

Country	Company	Location of Plant	Crude Capacity (bbl. dly.)	Type of Refinery
Argentina (Cont.)	Standard Oil Co., S.A., Argentina, Buenos Aires	Embarcación	1,000	Skimming
	Standard Oil Co., S.A., Argentina, Buenos Aires	Plaza Huincul	250	Skimming
	Yacimientos Petrolíferos Fiscales, Buenos Aires	Campaña	2,200	Skimming-Cracking
	Yacimientos Petrolíferos Fiscales, Buenos Aires	Godoy Cruz	650	Skimming
	Yacimientos Petrolíferos Fiscales, Buenos Aires	La Plata	31,450	Complete
	Yacimientos Petrolíferos Fiscales, Buenos Aires	Plaza Huincul	1,575	Skimming
	Yacimientos Petrolíferos Fiscales, Buenos Aires	San Lorenzo	9,500	Skimming-Cracking
	Yacimientos Petrolíferos Fiscales, Buenos Aires	Vespucio	500	Skimming
	Total for Argentina		94,230	
Bolivia	Yacimientos Petrolíferos Fiscales Bolivianos, La Paz	Camira	350	Skimming

TABLE 8. PETROLEUM REFINERIES IN LATIN AMERICA—(Continued)

Country	Company	Location of Plant	Crude Capacity (bbl. dly.)	Type of Refinery
Bolivia (Cont.)	Yacimientos Petrolíferos Fiscales Bolivianos, La Paz (Both above refineries built by Standard Oil Co. of Bolivia.)	Sanadita	375	Skimming
	Total for Bolivia		725	
Brazil	Industrias Matarazzo de Energía, S.A., "IME," São Paulo	São Caetano	2,500	Skimming
	Ipiranga, S.A., Companhia Brasileira de Petróleos, Rio Grande	Rio Grande	1,800	Skimming
	Standard Oil Co. of Brazil, Rio de Janeiro	São Paulo	2,160	Skimming
	Total for Brazil		6,460	
Chile	Compañía de Salitre, Iquique	Iquique	300	Skimming
	Maritano, Miguel, Talcahuano	Talcahuano	60	Skimming
	Sociedades Establecimientos Fuimicos, Viña del Mar	Del Mar	175	Skimming
	Total for Chile		535	
Colombia	Colombian Petroleum Co., New York, N. Y.	Petrólea	500	Skimming
	Tropical Oil Co., El Centro	Barranca Berméja	14,000	Skimming
	Total for Colombia		14,500	

TABLE 8. PETROLEUM REFINERIES IN LATIN AMERICA—(Continued)

Country	Company	Location of Plant	Crude Capacity (bbl. dly.)	Type of Refinery
Cuba	Standard Oil Co. of Cuba, Havana	Belot	4,200	Skimming-Cracking-Lubricating-Asphalt
Ecuador	Anglo-Ecuadorian Oilfields, Ltd., London, England	La Libertad	2,200	Skimming
	Ecuador Oilfields, Ltd., London, England	Cuativo	100	Skimming
	Refinery Viggiani, Salinas	Carolina	50	Skimming
	Total for Ecuador		2,350	
Mexico	Petróleos Méxicanos, Mexico, D. F.	Arbol Grande	10,400	Skimming
	Petróleos Méxicanos, Mexico, D. F.	Bella Vista	1,000	Complete
	Petróleos Méxicanos, Mexico, D. F.	Ciudad Madero	29,000	Complete
	Petróleos Méxicanos, Mexico, D. F.	Mata Redonda	11,900	Complete
	Petróleos Méxicanos, Mexico, D. F.	Mexico City	16,000	Skimming
	Petróleos Méxicanos, Mexico, D. F.	Minatitlan	24,000	Complete
	Petróleos Méxicanos, Mexico, D. F.	Poza Rica	7,500	Skimming-Asphalt
	Total for Mexico		99,800	
Peru	Compañía de Petróleo Ganso Azul, Ltd.	Aguas Calientes	1,000	Skimming

TABLE 8. PETROLEUM REFINERIES IN LATIN AMERICA—(Continued)

Country	Company	Location of Plant	Crude Capacity (bbl. dly.)	Type of Refinery
Peru (Cont.)	Establecimiento Industrial de Zorritos, Callao	Zorritos	1,000	Skimming
	International Petroleum Co., Ltd., Ontario, Canada	Talara	20,000	Skimming-Cracking
	Total for Peru		22,000	
Uruguay	Administración Nacionale de Combustibles Alcohol y Portland, Montevideo	Montevideo	5,000	Complete
Venezuela	British Controlled Oilfields, Ltd., Caracas	El Mene de Acosta	75	Skimming
	Caribbean Petroleum Co. (Shell), Maracaibo	San Lorenzo	25,000	Skimming
	Colon Development Co., Ltd. (Shell), Maracaibo	Casigna	950	Skimming
	Colon Development Co., Ltd. (Shell), Maracaibo	El Calvario	270	Skimming
	Colon Development Co., Ltd. (Shell), Maracaibo	La Rivera	280	Skimming
	Compañía de Petróleo Lago, Caracas	La Salina	13,000	
	Mene Grande Oil Co., Maracaibo	Cabimas	1,500	
	Standard Oil Co. of Venezuela, Caracas	Caripito	35,000	Skimming-Cracking
	Tocuyo Oilfields of Venezuela, Ltd., Caracas	El Mene de Acosta	250	Skimming
	Total for Venezuela		76,325	

TABLE 9. BASIC ECONOMIC DATA CONCERNING

Country	Population		National income[2]		Literacy (per cent)	Newspaper circulation[3]	Radio sets
	Year	Number	Total (in thousands)	Per capita			
Argentina	1943	13,906,694	$2,531,020	$182	85	1,906,960	1,336,000
Bolivia	1942	3,533,900	120,150	34	20	76,400	40,000
Brazil	1942	43,550,000	4,750,000	109	50	840,000	898,000
Chile	1943	5,237,432	564,710	106	76	355,300	250,000
Colombia	1943	9,620,800	721,560	75	43	189,750	175,000
Costa Rica	1943	706,596	94,680	134	82	20,000	25,000
Cuba	1943	4,778,583	551,000	115	45	266,000	250,000
Dominican Rep.	1944	1,969,773	100,460	51	10	27,000	13,000
Ecuador	1943	3,105,541	107,000	34	29	98,000	29,000
El Salvador	1943	1,880,000	103,400	55	21	39,000	11,000
Guatemala	1943	3,450,732	303,660	88	33	25,000	40,000
Haiti	1941	2,719,474	54,390	20	8	.....	5,000
Honduras	1943	1,173,032	68,040	58	52	19,800	11,800
Mexico	1943	21,153,321	1,776,880	84	55	699,422	750,000
Nicaragua	1942	1,030,700	62,870	61	30	8,500	6,000
Panama	1940	631,637	45,000	71	65	62,800	26,000
Paraguay	1941	1,040,420	20,810	20	25	15,000	14,500
Peru	1943	7,395,687	458,530	62	42	162,000	78,000
Uruguay	1941	2,185,626	255,720	117	65	373,380	125,000
Venezuela	1941	3,951,371	790,270	200	30	146,900	100,000
Total	.....	133,021,319	13,480,150	Av. 101	..	5,331,212	4,183,300

[1]From official sources, except as otherwise indicated, for the latest available year.
[2]Estimated.
[3]*Editor and Publisher*, International Year Book Number, 1944. Taken from *Resume of Cost and Coverage of Com-*

THE 20 LATIN AMERICAN REPUBLICS[1]

Motion-picture theatre seating capacity	Automotive vehicle registration	Telephones	Railway mileage	Highway mileage	Imports (1941)		Exports (1941)	
					Total (in thousands)	Per capita	Total (in thousands)	Per capita
695,010	302,950	460,857	28,775	253,115	$301,881	$23 48	$436,133	$30 19
18,500	7,174	4,750	1,407	3,710	27,979	7.91	63,201	17.88
900,000	218,564	290,900	21,253	130,000	275,700	6.33	336,400	7.72
143,500	55,516	91,000	5,120	25,334	108,254	20 70	161,068	30 80
140,000	32,042	42,200	2,046	14,245	96,903	10 17	100,396	10 54
32,286	3,987	2,560	408	1,771	17,798	26 48	10,230	15 22
176,000	47,722	68,483	3,088	2,324	133,890	31 67	211,506	50 03
16,800	2,463	3,100	150	3,180	11,739	7 09	17,124	10 34
55,500	5,898	7,100	800	4,240	8,400	2 79	13,300	4 42
41,000	4,074	3,411	431	3,691	8,331	4 47	11,204	6 01
16,500	4,338	2,327	669	3,882	13,416	3 93	12,785	3 75
4,000	2,483	2,000	176	1,545	7,431	2 48	6,657	2 21
19,000	1,342	1,943	830	780	10,255	8 88	10,119	8 76
1,300,000	178,033	175,100	12,740	43,711	188,294	9 32	150,106	7 43
28,000	1,484	1,510	283	3,151	10,438	10 29	11,931	11 76
53,112	18,732	6,640	178	928	32,504	51.46	4,283	6 78
9,776	1,861	3,800	769	4,122	6,562	6 46	8,147	8 02
120,000	30,600	35,151	2,348	18,641	55,050	7.44	76,015	10.28
77,350	65,121	46,656	1,810	8,514	63,135	28 93	70,845	32.42
144,947	34,239	31,850	815	3,456	88,276	22 08	223,634	55 96
3,991,281	1,018,623	1,281,338	84,096	530,340	.....	.....	.....	.....

prehensive Campaign in Latin America in Newspapers, prepared for the War Advertising Council and the Co-ordinator of Inter-American Affairs by the members of the Association of Export Advertising Agencies and other contributing agencies; covers 87 cities only.

TABLE 10. AMERICAN REPUBLICS AND CANADA: PERCENTAGE OF TOTAL NATIONAL REVENUES OBTAINED FROM CHIEF CATEGORIES OF TAXES

Country	Year	Import Duties	Export Duties	Income Tax	Industry and Commerce	Other Taxes
Argentina	1937	29.76	....	8.56	17.64	44.04
Bolivia	1937	16.29	9.00	6.30	3.45	64.96
Brazil	1937	31 04	.....	6.25	24.50	38.21
Canada	1936-37	19.91	.....	22.56	.....	57.53
Chile	1937	50.18	0.04	10.28	9.47	30.03
Colombia	1938	40.57	1.48	13.93	9.49	34.53
Costa Rica	1938	44.82	12.50	.....	21.04	21.64
Cuba	1937-38	38.01	.....	4.55	20.07	37.37
Dominican Republic	1938	41.88	0.85	.....	29.91	27.36
Ecuador	1938	27.39	0.49	4.23	29 38	38 51
El Salvador	1938-39	45.03	.....	2.62	10.99	41.36
Guatemala	1936-37	41.38	15.52	.....	18.10	25.00
Haiti	1935-36	50.58	32.66	1.44	5.78	9.54
Honduras	1938-39	40.87	.....	.....	18.26	40.87
Mexico	1940	17.57	9.53	10.85	22.81	39.24
Nicaragua	1937-38	26.79	.....	.....	23.21	50.00
Panama	1937-38	36.17	1.60	.....	17.02	45.21
Paraguay	1937-38	52.17	5.36	.....	.....	42.47
Peru	1938	22.24	11.30	7.85	12.93	45.68
United States	1937-38	6 35	.....	56.76	17.95	18.94
Uruguay	1937	29.48	.....	2.92	16.81	50.79
Venezuela	1937-38	33.88	.....	.....	15.65	50.47

SOURCE:—*Inter-American Statistical Yearbook 1942*, Table 397.

TABLE 11. UNITED STATES INVESTMENTS IN CANADA AND LATIN AMERICA

(Values in Millions of United States Dollars)

Country	Direct Investments[1] (end of 1940)	Portfolio Investments (end of 1941)						Short-term Investments (end of 1941)
		Dollar Bonds[2]					Miscellaneous Securities	
		Total	Government Issues		Corporate Issues			
			National	Provincial and Municipal	Government Guaranteed	Private		
Grand Total, All Countries of World	**7,000**	**3,011**	**1,456**	**843**	**401**	**311**	**450**	**389**
Canada[3]	**2,099**	**1,353**	**433**	**453**	**254**	**213**	**285**	**40**
Latin America, total	**2,771**	**948**	**610**	**264**	**66**	**8**	**10**	**154[4]**
Cuba	560	57	56	.[5]	.	1	..	11
Dominican Republic	42	7	7	..	..	..	..	..
Haiti	12	6	6	.	..	..	..	..
Other West Indies	60	..	..	..	..	..	..	..
West Indies, total	674	70	68	..[5]	..	1	5	..
Mexico	357	[6]	.	..	..	..	..	8

[1]For further particulars, see U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, Economic Series No. 20, *American Direct Investments in Foreign Countries*—1940 (Washington, 1942).

[2]Par value of bonds held in the United States.

[3]Includes Newfoundland, except for short-term investments.

[4]Includes $6,000,000 in brokerage balances, not allocable by countries.

[5]Less than $500,000.

[6]Maximum issues, long in default, not included.

[7]Includes Canal Zone.

SOURCES:—Direct and Portfolio Investments: U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce.
Short-term Investments: *Bulletin* of the Treasury Department, March, 1942.

TABLE 11. UNITED STATES INVESTMENTS IN CANADA AND LATIN AMERICA—(Continued)

(Values in Millions of United States Dollars)

Country	Direct Investments[1] (end of 1940)	Portfolio Investments (end of 1941)						Short-term Investments (end of 1941)
		Dollar Bonds[2]					Miscellaneous Securities	
		Total	Government Issues		Corporate Issues			
			National	Provincial and Municipal	Government Guaranteed	Private		
Costa Rica	25	6	6	..	..	..	..	..
Guatemala	68	3	2	..	1	..	..	..
Honduras & British Honduras	39	..	..	..	..	..	..	..
Nicaragua	9	..	..	..	..	..	..	..
Panama	37[7]	12	12	..[5]	..[5]	..	..	2[7]
El Salvador	11	4	4	..	..	..	..	..
Central America, total	546	25	..	..[5]	1	..	..	..
Argentina	388	182	122	60	..	..	..	17
Bolivia	27	54	54	..	..	..	..	..
Brazil	240	228	114	111	..	2	..	38
Chile	414	179	108	11	61	..	..	15
Colombia	112	123	37	77	4	5	..	..
Ecuador	5	..	..	..	..	..	..	..
Guianas	6	..	..	..	..	..	..	..
Paraguay	5	..	..	..	..	..	..	..
Peru	81	54	51	3	..	..	..	..
Uruguay	11	33	33	..[5]	..	..	..	..
Venezuela	262	..	..	..	..	..	..	..
South America, total	1,551	852	518	263	65	7	5	..

TABLE 12. FOREIGN TRADE OF THE LATIN AMERICAN REPUBLICS, 1910-1940

(Values in Thousands of United States Dollars)

Year	Imports	Exports
1910	1,098,100	1,308,598
1911	1,200,811	1,317,126
1912	1,300,305	1,588,580
1913	1,398,587	1,489,353
1914	954,963	1,331,296
1915	887,822	1,664,252
1916	1,207,701	1,889,714
1917	1,390,579	2,059,207
1918	1,615,609	2,413,235
1919	2,014,259	3,100,224
1920	2,884,623	3,490,678
1921	2,039,223	2,031,524
1922	1,616,438	2,108,110
1923	2,012,272	2,451,325
1924	2,108,546	2,905,813
1925	2,412,485	2,802,115
1926	2,316,266	2,670,445
1927	2,311,836	2,888,279
1928	2,393,652	3,029,663
1929	2,451,447	2,954,169
1930	1,775,655	1,984,852
1931	985,347	1,493,804
1932	610,448	1,030,393
1933	794,121	1,178,337
1934	1,043,673	1,632,368
1935	1,117,487	1,722,596
1936	1,248,230	1,908,076
1937	1,629,832	2,395,532
1938	1,414,083	1,833,700
1939	1,346,510	1,858,489
1940	1,332,962	1,763,997

SOURCE:—Pan American Union, *Foreign Trade Series.*

TABLE 13. LATIN AMERICAN FOREIGN TRADE IN 1938

(Values in Millions of United States Dollars)

Country	Exports	%	Imports	%	Balance of trade (—means import surplus)
Argentina	437.6	23.9	442 6	29.7	— 5.0
Bolivia	35.2	1.9	24 4	1.6	10.8
Brazil	296.1	16.2	292 7	19.7	3.4
Chile	138.7	7.6	103.2	6.9	35.5
Colombia	91.4	5.0	88.0	5.9	3.4
Ecuador	11.7	0.6	10 3	0.7	1.4
Paraguay	8 0	0.4	8 1	0.5	— 0.1
Peru	77 2	4.2	59 4	4.0	17.8
Uruguay	58 9	3.2	48 6	3.3	10.3
Venezuela	267 3	14 6	104 9	7.1	162.4
Total, South America	1,422.1	77.6	1,182.2	79.4	239 9
Mexico	186.1	10.1	110.0	7.4	76.1
Costa Rica	11.8	0.6	12.2	0.8	— 0.4
El Salvador	13.5	0.7	9.1	0.6	4.4
Guatemala	16.4	0.9	21.0	1.4	— 4 6
Honduras	8.5	0 5	9.1	0 6	— 0.6
Nicaragua	4.6	0.3	3.6	0.3	1.0
Panama	3.9	0.2	17 6	1 2	—13 7
Total, Mexico and Central America	244 8	13.3	182.6	12.3	62.2
Cuba	144.5	7.9	105 9	7.1	38 6
Dominican Republic	15.4	0.8	10.2	0.7	5.2
Haiti	6 9	0 4	7 6	0.5	— 0 7
Total, West Indies	166 8	9.1	123.7	8.3	43.1
Total, Latin America	1,833.7	100.0	1,488.5	100.0	345.2

TABLE 14. PERCENTAGE DISTRIBUTION OF TRADE OF INDIVIDUAL LATIN AMERICAN COUNTRIES BY SELECTED COUNTRIES AND CONTINENTAL AREAS, 1938

Country	EXPORTS					IMPORTS				
	To United States	To Latin America	To Great Britain	To Continental Europe	To Japan	From United States	From Latin America	From Great Britain	From Continental Europe	From Japan
Mexico	67.4	.8	9 4	19 6	.4	57 7	.7	4.1	33 2	1.8
Guatemala	69.5	.8	.3	28 7	.1	44 7	3.1	6.1	44.4	.2
Honduras	86.4	3 9	1.9	7.0	.3	62 0	5.1	3 0	16 0	9.3
Nicaragua	67.3	5 3	2.3	23 0	2.0	59 7	6 5	8 2	21.4	1.6
El Salvador	61.7	6 2	1.4	29.5	....	46 7	6.2	9.2	37.1	....
Costa Rica	45.6	2.6	24 4	24.2	1.2	49 1	4 7	7.3	32.7	6.2
Panama	89.2	1.0	.6	4.2	....	57 6	3.8	5.0	14.7	9.3
Cuba	75 9	1.6	13.7	7.3	.1	70 9	2 3	4 4	14.1	.5
Dominican Republic	32.0	.4	4.0	53.0	....	54 0	1.0	5.0	17.1	10.6
Haiti	43 0	1	13.6	39.9	2.2	54 0	1.2	15.5	17.5	5.3
Colombia	59 0	.8	.4	21.4	.1	49 9	1.8	12.5	32.3	.2
Venezuela[1]	13.2	.6	3.3	5.2	.1	56 4	.9	7 0	32.1	1.7
Brazil	34.3	6.3	8.8	43.5	4.6	24 2	13.9	10.6	43.6	1.3
Ecuador	37.5	22.9	4.7	31.9	2.4	34 6	6.6	7.8	41.4	7.4
Peru	26.8	20.1	20 5	23.6	.6	34 2	10.7	10.2	35.6	3.3
Chile[2]	15.7	4.6	21.8	31.3	1.6	27.8	13.9	10.1	40.7	2.5
Bolivia[3]	4.6	4.0	62.5	28.5	.3	25.5	30.9	7.0	29.4	7.0
Argentina	8.5	11 1	33.7	42.9	1.2	17.7	11.0	18.4	37.5	3.2
Uruguay	4.0	14.1	26.2	51.7	1.7	11.8	19.2	20.3	....	4.8
Paraguay[4]	12.2	48.5	13.0	23.8	....	9.5	42.2	9.6	22 7	14.9
20 Republics	30.5	6.1	17.1	28 6	1.3	33.9	9.4	11.7	35 3	2.6

[1]The larger part of Venezuelan exports of crude petroleum go to the Netherlands West Indies for refining and re-export to Europe and the United States.
[2]Chile's published statistics of trade by countries do not include nitrate shipments. If adjustments are made for this item, the distribution of exports should be roughly as follows: United States 23.6%; Great Britain 22.4%; Continental Europe 39.4%.
[3]Bolivian tin ores and concentrates go principally to Great Britain, but the United States is the largest consumer of refined tin.
[4]A large part of Paraguay's exports pass through Argentina and lose their national identity.

TABLE 15. PERCENTAGE DISTRIBUTION, AMONG LEADING INDUSTRIAL NATIONS, OF THE AGGREGATE VALUE OF EXPORTS OF THE 20 LATIN AMERICAN REPUBLICS, 1910-1942

Year	To United States	To United Kingdom	To Germany	To France	To Italy	To Japan
1910....	33.8	20.5	10.9	8.4	1.22	.06
1911....	34.29	20.92	12.85	9.15	1.66	.08
1912....	33.52	19.74	11.90	7.76	1.84	.06
1913....	30.78	21.24	12.38	7.99	1.99	.09
1914....	38.20	22.32	8.75	6.41	.....	.....
1915 ...	38.65	22.46	0.03	6.60	.....	.....
1916....	46.41	20.57	.....	8 84	.....	.....
1917....	51.72	21.00	.....	8.04	.....	.....
1918....	46.83	24.43	.....	7.12	.....	.....
1919....	44.49	18.11	0.45	11.24	.....	.....
1920....	47.68	17.94	1.80	5.33	.....	.....
1921....	42.01	17.52	4 91	4.26	.....	.....
1922....	44.57	15.10	4.51	5.04	.....	.....
1923....	45.19	16.82	4.76	5.85	.....	.....
1924....	38.92	17.50	6 54	5.93	.....	.....
1925...	38.73	17.84	6 95	6.50	.....	.....
1926....	40.90	15.92	7.10	5.29	.....	.....
1927...	35.28	18.84	11.15	5.58	.....	.....
1928....	34.23	19.39	9.82	5.35	.....	.....
1929....	34.0	18.5	8.1	6.2	.....	.....
1930...	33.4	20.2	7.7	5.8	.....	.....
1931...	35.0	20.1	7.6	6.7	3.1	.....
1932....	32.1	19.2	7 2	6.6	3.1	0.1
1933....	29 4	22.1	6.9	6.2	.....	0.3
1934...	29.4	20.2	7.9	5.0	.....	0.4
1935....	32.8	18.6	8.0	4.7	2 2	0.8
1936....	32.9	18.8	8 0	5.0	1.9	1.9
1937....	31.1	17.6	8.7	4 0	3 1	1.6
1938....	33.2	18.6	10.4	4.1	1.6	1.3
1939....	33.5	16.8	6.2	3.8	1.7	1 5
1940....	43.3	17.2	0.3	2.9	1 9	2.4
1941....	54.0	13.1	0.3	0.1	0 02	2.7
1942[1] ...	53.4	14.8	....[2]	....[2]	....[2]	....[2]

[1]Preliminary.
[2]Not available.
SOURCE:—U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce.

TABLE 16. PERCENTAGE DISTRIBUTION, AMONG LEADING INDUSTRIAL NATIONS, OF THE AGGREGATE VALUE OF IMPORTS OF THE 20 LATIN AMERICAN REPUBLICS, 1910-1942

Year	From United States	From United Kingdom	From Germany	From France	From Italy	From Japan
1910...	22.6	25 0	14.9	8.0	4.86	12
1911...	23.79	25.73	16.72	8.25	4 63	.10
1912...	24.49	24 93	16.73	8.28	5 05	.12
1913...	25.03	24.42	16.55	8.32	4 98	.14
1914...	27.94	23.92	14.62	6.64	.....	.....
1915..	41.82	21.03	1.84	4.71	.....	.....
1916...	51.77	17 88	.....	4.45	.....	.....
1917...	54.79	14.89	.....	3.70	.....	.....
1918 ..	49.48	16.86	....	3 71	.....	.....
1919...	48.79	15.30	0.19	3.28	....	.....
1920 .	50.15	16.70	3.39	4.80	.....	.....
1921..	44.37	16 87	6.52	5.36	.....	.. ..
1922...	35 03	19.19	10 47	4 76	.....	.....
1923 ..	36.29	19.42	10.24	5.42	.....	.....
1924....	37.09	18 16	10.16	5.50	.....	.....
1925.	37.51	17.36	10 06	5.51	.. .	.....
1926 .	39.16	15.26	10.09	5.89	.....	.....
1927....	38.23	15.72	10.00	5 94	.....	.....
1928...	36.66	15.87	10.86	5 94	.....	.....
1929....	38.7	14 9	10.8	5 1	....	.....
1930 ..	35.1	14.5	10.9	4 9	....	.....
1931....	33.5	15.5	10.6	5.3	4.9	.....
1932 ...	32 3	16.3	9 3	4 8	5.4	1.1
1933..	29.2	18.1	11.5	4.9	.....	1.8
1934....	30.11	17.28	9.88	4.6	.....	2.8
1935....	31.7	14.7	13.0	3.7	2.6	3.7
1936...	31.5	13.5	15.4	3 3	2 5	2.9
1937...	34.3	12.6	15.3	2 9	2 6	2.7
1938....	33.4	12.5	16.2	3.3	3 0	2.6
1939....	40.4	10.9	13.1	3.5	2 3	1.8
1940....	51.7	11.8	1 2	2.0	1.9	3.0
1941 ...	62.4	7.8	0 5	0.1	0.1	2.6
1942....	55.3	8.4	....[1]	....[1]	....[1]	....[1]

[1]Not available.

SOURCE:—U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce.

TABLE 17. PRINCIPAL ITEMS IMPORTED BY LATIN AMERICA, WITH PERCENTAGE FURNISHED BY MAJOR INDUSTRIAL NATIONS, 1938

	Recorded Exports in Millions of Dollars	Percentage of Recorded Exports Supplied by						
		United States	United Kingdom	Germany	France	Belgium	Italy	Japan
Chemicals	50.0	43.6	14.6	30.5	6.6	3.5	1.2	....[1]
Coal and Coke	26.4	11.8	62.1	26.1	....[1]	....[1]	....[1]	....[1]
Earthenware, Pottery, etc.	8.4	....[1]	23.2	51.7	3.7	10.8	10.5	....[1]
Glass and Glassware	7.8	....[1]	5.6	65.7	5.0	23.4	....[1]	....[1]
Iron and Steel Manufactures	145.9	37.6	10.6	37.2	4.0	9.9	0.6	....[1]
Other Metals and Manufactures	24.5	39.2	9.0	34.2	12.4	5.3	....[1]	....[1]
Leather and Manufactures	9.0	57.6	2.4	31.5	3.5	4.5	....[1]	....[1]
Lumber and Manufactures	13.4	85.6	....[1]	10.7	2.1	1.8	....[1]	....[1]
Machinery and Vehicles	333.1	60.4	13.0	21.3	1.2	2.6	1.6	....[1]
Machinery and Machine Tools	206.1	59.0	9.3	25.5	1.2	4.1	0.9	....[1]
Vehicles	127.0	65.6	15.7	15.5	1.2	0.1	2.6	....[1]
Paper and Products	16.3	46.0	8.0	33.4	5.0	3.5	3.8	....[1]
Pharmaceuticals	28.4	24.6	1.4	53.7	18.4	....[2]	1.9	....[1]
Rubber Manufactures	11.5	73.0	6.8	15.5	2.3	2.2	....[1]	....[1]
Textiles	156.3	20.0	37.7	12.4	4.9	4.3	13.0	7.7
Cotton	86.1	22.8	41 5	10.5	2.5	3.1	10.4	9.3
Rayon, Silk, etc.	25.0	24.9	10.4	16.8	11.7	....[1]	20.0	16.0
Woolen	28.8	....[1]	56.6	17 7	8.3	....[1]	17.5	....[1]
Other Textiles	16.4	32.9	26.2	6.5	0.8	24.9	8.5	....[1]
Vegetable Foods and Beverages	50.2	69.2	12 1	3.0	8.2	....[1]	7.5	....[1]
Total[3]	881.2	....	....	....	....	....	....	....

[1]Not specified.
[2]Included in chemicals.
[3]This figure is equivalent to about 70 per cent of imports from non-Latin American countries.

SOURCE:—Based on export statistics of the major industrial nations. Data from U. S. Department of Commerce; arrangement from Howard J. Trueblood, "War and United States in Latin American Trade," *Foreign Policy Reports* (December 1, 1939), Table II.

TABLE 18. UNITED STATES MERCHANDISE TRADE WITH THE 20 LATIN AMERICAN REPUBLICS, 1901-1942

Yearly average or year	Exports, including re-exports (thousands of dollars)	Per cent of total United States exports	General imports (thousands of dollars)	Per cent of total United States imports
1901–05....	134,506	9.1	245,450	24.3
1906–10....	224,835	12.4	329,795	23.9
1911–15....	293,338	11.6	477,699	27.4
1916–20....	858,629	12.6	1,209,114	34.4
1921–25...	704,234	16.0	922,199	26.7
1926–30...	801,949	16.8	928,208	23.0
1931–35....	274,883	13.6	389,865	22.8
1936–38. ..	489,356	16.5	542,579	21.8
1929.....	911,749	17.4	1,014,127	23.1
1930.....	628,176	16.3	677,720	22.1
1931.....	312,617	12.9	478,165	22.9
1932.....	194,486	12.1	323,190	24.4
1933.....	215,680	12.9	316,039	21.8
1934.....	307,274	14.4	370,935	22.4
1935.....	344,360	15.1	460,997	22.5
1936.....	395,045	16.1	501,610	20.7
1937.....	578,203	17.3	672,611	21.8
1938.....	480,580	15.5	452,947	23.1
1939.....	548,964	17.3	517,556	22.3
1940.....	682,664	17.0	619,412	23.6
1941.....	901,960	17.5	1,007,992	30.1
1942.....	717,882	8.9	977,464	35.6

SOURCE:—U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce.

TABLE 19. PRINCIPAL COMMODITIES IN TRADE OF THE UNITED STATES WITH LATIN AMERICA

Commodity	Millions of Dollars			Ratio to Trade with All Countries (per cent)		
Exports[1] to Latin American Republics	**1938**	**1939**	**1940**	**1938**	**1939**	**1940**
Total	**489.7**	**562.5**	**718.5**	**16.0**	**18.0**	**18.3**
Agricultural implements	21 9	16 2	14.4	29.0	23.6	18.7
Aircraft, including parts	12 0	10 3	7.5	17.6	8.7	2.4
Automobiles, including parts and accessories	67.6	69 6	74.5	25.0	27.4	29.3
Bituminous coal	3 0	5.1	8.7	7.9	11.9	14.3
Chemicals and related products	28.7	39.2	55.2	22.5	24.1	24.9
Crude petroleum and refined oils[2]	28.3	28.5	25.7	8.3	8 6	9.9
Electrical machinery and apparatus	31.4	34.1	40.6	30.8	32.4	34.8
Industrial machinery	53.1	56.3	61.1	19.7	19.4	15.8
Iron and steel mill manufactures	40.1	61.6	115.3	21.8	26.1	22.3
Lumber and wood products	12.8	13.5	13.5	22.6	22.3	22.0
Meats, fats, milk, and other edible animal products	14.7	17.8	19.8	21.2	23.5	27.8
Paper and paper materials	7.7	10.8	22.7	20.5	26.8	23.0

[1]Exports of United States merchandise.
[2]Includes crude petroleum, gasoline, gas and fuel oil, and lubricating oil.
[3]Imports of merchandise for consumption; gold and silver excluded.
[4]Chiefly unrefined metal for refining and re-export.
SOURCE:—U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce.

TABLE 19. PRINCIPAL COMMODITIES IN TRADE OF THE UNITED STATES WITH LATIN AMERICA—(Contd.)

Commodity	Millions of Dollars			Ratio to Trade with All Countries (per cent)		
Imports[3] from Latin American Republics	**1938**	**1939**	**1940**	**1938**	**1939**	**1940**
Rice, flour, and other vegetable food products	34.7	34 5	37.2	9.6	14.6	22.1
Rubber and manufactures	8 4	10.7	12.3	30.9	27.2	27.7
Other commodities	94 1	112.5	151.8	10.1	11.9	14.0
Total	**447.4**	**495.8**	**593.0**	**22.9**	**21.8**	**23.3**
Bananas	28.5	28.8	28.6	48.1	50 4	54.7
Cane sugar	79 7	75 0	69.7	61.1	60 2	61.5
Cocoa	12.1	13.2	13.1	60.2	47.8	40.8
Coffee	133 8	136 2	124 3	97.1	97.6	98.0
Copper[4]	26.6	30.1	51 9	70.2	68.1	70.6
Crude petroleum and semifinished oils	18.9	23.3	47.6	49.6	56 0	72 7
Flaxseed	19 7	18.3	14.0	99.0	99.5	99 3
Hides and skins	9.8	19.0	24.4	32.8	40.3	48.6
Raw wool	7.8	17 1	46.7	34.5	34.5	55 2
Sodium nitrate	10.7	11 2	12 5	100.0	100.0	100.0
Other commodities	99.8	123.6	160.2	6.9	7.2	8 4

TABLE 20. DESTINATION OF 20 LEADING COMMODITIES FROM THE 20 LATIN AMERICAN REPUBLICS, 1938: PERCENTAGE DISTRIBUTION

Commodity	United States	Other Western Hemisphere	United Kingdom	Leading European Countries	All Others, Partly European
Petroleum	12	72[1]	5	3	7
Coffee	57	0	1	27	15
Meats	5	0	74	14	7
Sugar	72	2	18	2	5
Copper	35	0	23	23	19
Wool	8	0	23	41	28
Cotton	2	0	26	42	30[3]
Metals, other than copper and tin	42	0	10	40	8
Hides and skins	24	0	9	46	20
Wheat	0	53[2]	13	13	20
Flaxseed or linseed	26	0	..	55	18
Corn	0	0	28	47	25
Nuts, vegetable oils, waxes, etc.	52	0	16	19	13
Nitrate	40	0	4	28	27
Cereals, except corn, wheat, linseed	4	0	22	53	21
Bananas	79	4	2	11	4
Tin	2	0	84	12	2
Cabinet woods, lumber	23	17	3	19	38
Cacao	67	0	0	24	9
Hard fibers	62	0	4	17	17

[1]Netherlands West Indies; re-exported largely to Europe and the United States.
[2]Largely to Brazil.
[3]Japan, 17 per cent.

TABLE 21. SELECTED UNITED STATES IMPORTS, GROUPED ON BASIS OF PROPORTION OF TOTAL SUPPLIED BY LATIN AMERICA[1]

(1936-1938 Average; Values in Thousands of United States Dollars)

Commodity	Total U. S. Imports	Imports from Latin America	Per Cent from Latin America	Balance Obtained Elsewhere
GROUP A				
Bananas	29,971	29,971	100.0	
Babassú nuts	2,115	2,115	100.0	
Brazil nuts	2,737	2,737	100.0	
Canned beef	8,652	8,639	99.8	13
Carnauba wax	4,338	4,331	99.8	7
Castor beans	3,104	2,969	95.7	135
Chicle	2,357	2,357	100.0	
Coffee	140,787	135,220	96.0	5,567
Copper	36,933	28,075	76.0	8,858
Flaxseed	24,244	22,743	93.8	1,501
Molasses	11,781	10,287	87.3	1,494
Nitrates	10,497	10,466	99.7	31
Petroleum	20,871	20,288	97.2	583
Quebracho	3,573	3,573	100.0	
Total	**301,960**	**283,771**	**94.0**	**18,189**
GROUP B				
Iron ore	5,470	3,448	63.0	2,022
Sisal and henequen	12,744	6,961	54.6	5,783
Sugar	151,556	94,943	62.6	56,613

[1]**Group A** consists of products which the United States obtains almost wholly from Latin America. Any enlargement of United States imports must come from expanded domestic consumption. This group in 1936-1938 included 53.1 per cent of total U. S. imports from Latin America.

Group B includes items which are supplied in large part by Latin America, but not to such a high degree as products in Group A. In case imports from non-American sources were shut off, increased supplies from Latin America could be obtained on fairly short notice. This group accounted for 20 per cent of U. S. imports from Latin America in 1936-1938.

Group C includes those products of which Latin America supplied from 25 to 50 per cent of U. S. imports. It comprised 11 per cent of U. S. imports from Latin America in 1936-1938.

Group D consists of commodities of which Latin America in 1936-1938 supplied only a small per cent or none at all, but the production and export of which might be developed in Latin America.

SOURCE:—Official statistics of U. S. Department of Commerce; arrangement from Howard J. Trueblood, "Economic Defense of the Americas," *Foreign Policy Reports*, Vol. XVI, No. 10 (August 1, 1940).

TABLE 21. SELECTED UNITED STATES IMPORTS, GROUPED ON BASIS OF PROPORTION OF TOTAL SUPPLIED BY LATIN AMERICA[1]—(Continued)

(1936-1938 Average; Values in Thousands of United States Dollars)

Commodity	Total U. S. Imports	Imports from Latin America	Per Cent from Latin America	Balance Obtained Elsewhere
Total	**169,770**	**105,352**	**62.1**	**64,418**
GROUP C				
Binding twine	3,838	1,244	32.4	2,594
Cacao	35,165	15,887	45.2	19,278
Cottonseed oil	7,014	2,363	33.7	4,651
Hides and skins	51,902	19,304	37.2	32,598
Manganese ore	8,680	2,227	25.7	6,453
Palm nuts	1,205	386	32.0	819
Wool	57,404	16,452	28.7	40,952
Zinc	1,701	422	24.8	1,279
Total	**166,909**	**58,285**	**34.9**	**108,624**
GROUP D				
Abacá (hemp)	5,534	.....	0.0	5,534
Cashew nuts	3,778	6	0.0	3,772
Casings, sheep, lamb, and goat	7,065	743	10.5	6,322
Chromite	5,537	306	5.5	5,231
Coconut oil	14,506	.....	0.0	14,506
Copra	11,580	.....	0.0	11,580
Cotton, long staple	5,730	65	1.1	5,665
Diamonds, industrial	5,028	560	11.1	4,468
Kapok	2,853	77	2.7	2,776
Ossein	1,709	.....	0.0	1,709
Palm oil	12,197	.....	0.0	12,197
Platinum	4,756	814	17.1	3,942
Pyrethrum	1,880	22	1.2	1,858
Rubber	178,596	1,499	0.8	177,097
Tapioca	5,804	100	1.7	5,704
Tin	74,865	.....	0.0	74,865
Tungsten	1,532	70	4.6	1,461
Vanilla beans	2,572	523	20.3	2,049
Total	**345,522**	**4,785**	**1.4**	**340,737**

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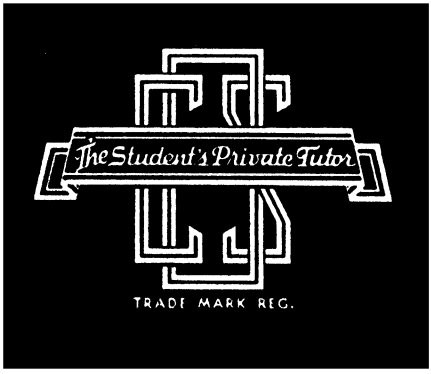
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