# IMPORT SUBSTITUTION AND INDUSTRIALIZATION IN LATIN AMERICA: EXPERIENCES AND INTERPRETATIONS*

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THROUGHOUT MOST OF THE FIFTIES AND SIXTIES MANY LATIN AMERICAN GOVERNments adopted Import Substitution Industrialization (ISI) as their principal method to achieve economic growth and socio-economic modernization. By the opening of the Seventies, however, there is considerable doubt about ISI's success in solving the region's development problems. In many countries the possibilities for further import-substitution had disappeared. Industrial growth had slowed, job opportunities in industry for Latin America's rapidly growing urban population were scarce, income distribution had in many countries either remained unchanged or had become more concentrated than in the early post-World War II years, and most industrial goods produced within the region were priced so high that export possibilities were severely limited.

Considerable debate has taken place among economists and policymakers over the merits of ISI as a strategy for economic development, the performance of ISI in various countries, over the nature of post-ISI problems which these countries have faced, and over policies to deal with these post-ISI problems.

In this review article I shall first describe the nature of ISI in Latin America, its occurrence prior to World War II, and its development in the decades of the Fifties and Sixties. I shall then review the problems which developed as ISI reached maturity and review various analyses developed to explain these problems. Finally, I shall examine various strategies which have been suggested for the post-ISI period.

## THE NATURE OF ISI IN LATIN AMERICA

ISI is an attempt by economically less-developed countries to break out of the world division of labor which had emerged in the nineteenth century and the early part of the twentieth century. Under this division, Latin America (and most areas of Asia and Africa) specialized in the export of food and raw materials, while importing manufactured goods from Europe and the United States. Import substitution consists of establishing domestic production facilities to manufacture goods which were formerly imported. It follows that all countries which industrialized after Great Britain, went through a stage of ISI; that is, all passed through a stage where the larger part of investment in industries was undertaken to replace imports. ISI would

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come to a close when most investment was channeled towards the construction of capacity to produce for new incremental demand.

The ISI wave in Europe and the United States occurred in the middle and second half of the nineteenth century.[1] It is a well-known fact that in this early ISI process governments played an active role in encouraging and protecting the development of infant industries. Another characteristic of nineteenth century ISI is its "national" character. Although in some countries finance for infrastructure investment was obtained from abroad, industries were for the most part in domestic hands, while the design of machines and skilled manpower to run them were often imported from England in the early industrialization period.

Once Western Europe and the United States had undergone their initial industrializations, import substitution did not come entirely to an end. However, it ceased being mainly a mechanism of industrialization, and became in the twentieth century part of a continuing process of growth and of a changing pattern of industrial specialization among economically advanced countries.[2]

There are various historical reasons why the countries of Africa, Asia and Latin America did not undergo ISI at the time of, or right after, the European ISI's. Colonial policies of European countries provide much of the explanation for the former two cases, while socio-economic structure helps explain the Latin American case. The presence of attractive external markets for the region's primary exports, which benefited the elites, meant that there was little political desire to change the structure of the economies. Also in the nineteenth century and early part of the twentieth century, Latin American countries did not have the entrepreneurial classes, labor force, infrastructure, market size, or administrative capacity to cope with an extensive industrialization process. Also in the case of some countries, like Brazil, European powers had enough leverage to force governments to maintain free trade policies, thus in effect blocking any possibility of ISI.[3]

## ISI BEFORE AND DURING THE SECOND WORLD WAR

Latin America was not completely devoid of manufacturing activities prior to World War I. It has by now been well documented that in the latter part of the nineteenth century workshops and small factories in textiles and food products industries had developed in some parts of Argentina, Brazil, Mexico and other larger countries. Also, machine tools and spare parts workshops developed to service railroads, sugar refining mills, etc.[4] These activities were usually started by importers of equipment. There were some isolated attempts to raise tariffs both to protect incipient industries and to stimulate the creation of new ones.[5] It would be mistaken, however, to speak of "industrialization" prior to World War I. The bulk of manufactured goods consumed in Latin America were either imported or produced by small domestic workshops, while exports consisted almost entirely of primary products.[6] Except for Argentina, the population was primarily rural, and the primary export sector was the pacesetter of economic activity, while workshops and small industries were appendages to general economic activity.

It should be noted, however, that on the eve of World War I the primary ex-



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port sector with its complementary activities in services (banking, merchandizing, government) and social infrastructure (communication, transportation, etc.) had in many Latin American countries created a fairly substantial middle class which consumed large quantities of imported manufactured consumer goods.

### ISI INDUCED FROM ABROAD

World War I, the Great Depression of the Thirties and World War II induced pronounced spurts of ISI in most larger Latin American countries.[7] The interruption of shipping and the decline of non-military production in Europe and the United States during World War I created severe shortages of imported manufactured goods in Latin America, raised relative prices of such goods, and increased profitability of ISI investment. Textiles, food products, and various other light consumer goods industries were the principal fields of ISI in that period. In the Twenties many of these newly created ISI industries stagnated because of renewed U. S. and European competition and the general refusal of policy makers to protect infant industries of recent vintage. It was generally thought that World War I had been an aberration from the natural order of things, which was reflected in the world division of labor of the nineteenth century. Hence policy makers were reluctant to tamper with a movement back to "normalcy."[8]

The depression of the Thirties resulted in renewed shortages of imported goods. The fall of foreign exchange receipts from exports forced most countries of the region drastically to curtail imports. The decline resulted at first in increased use of productive capacity which had been underutilized in the Twenties, and later in the creation of new industrial capacity.[9] As in World War I, the depression-induced ISI occurred primarily in light consumer goods industries, although in some cases, especially Brazil,[10] steel and capital goods industries were developed on a relatively small scale.

World War II had a stimulating effect on ISI industries: shortages of foreign manufactured goods led to full utilization of industrial capacity;[11] some investment in new capacity occurred when capital goods could be imported; and even some textile products were exported by Argentina, Brazil, and Mexico.

### ISI IN THE FIFTIES AND SIXTIES

But it was only after World War II that ISI became a deliberate policy tool for economic development. Most of the larger countries of Latin America implicitly or explicitly accepted the ECLA analysis of the hopelessness of gearing their economies towards the traditional world division of labor.[12] Continued reliance on the export of food and primary products was thought to be precarious because of the instability of such exports, which would not be conducive to long term development because of the relatively slow growth of world demand for such products.[13] It was thought that ISI would introduce a dynamic element into the Latin American economies and increase their rates of growth. The latter were deemed essential to deal with the population explosion of the region and to meet the demands of the increasingly urban population for the ways of life of the masses in more advanced countries. It was also



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thought that ISI would bring greater economic independence to Latin American countries: self-sufficiency in manufactured goods would place Latin American economies less at the mercy of the world economy.

The principal policy instruments used to promote and intensify ISI were: protective tariffs and/or exchange controls; special preferences for domestic and foreign firms importing capital goods for new industries; preferential import exchange rates for industrial raw materials, fuels and intermediate goods; cheap loans by government development banks for favored industries; the construction by governments of infrastructure especially designed to complement industries; and the direct participation of government in certain industries, especially the heavier industries, such as steel, where neither domestic nor foreign private capital was willing or able to invest.[14]

The promotion of ISI industries was indiscriminate, that is, there were not attempts to concentrate on industrial sectors which might have had a potential comparative advantage. In some countries ISI occurred for considerable periods of time in consumer goods industries only. A concise summary is given by David Felix: ". . . the initial industries are generally consumer goods or building materials producers with a relatively simple technology and a low capital requirement per worker and per unit of output. They are then followed by consumer goods industries requiring a more sophisticated technology and larger capital outlay, shading subsequently into industries producing relatively complex consumer durables, steel, engineering and chemical products."[15] This description is especially relevant in the cases of countries such as Argentina, Chile, Venezuela. In other countries, especially Brazil, the government was anxious to promote maximum vertical integration, i.e., to promote both final consumer goods industries and intermediate and capital goods sectors.

In some cases, where the initial thrust of ISI was on final consumer goods industries, a built-in resistance to backward vertical integration developed.[16] That is, firms which established themselves in the first ISI period pressured governments not to develop domestic intermediate and capital goods industries, since these would produce inputs at substantially higher prices than imported inputs. However, as the areas for further ISI declined, most countries pressed on with backward integration efforts.

An important feature of Latin American ISI in the Fifties and Sixties was the participation of foreign capital. Although its proportion of total savings was often substantially below 10 per cent, it was instrumental in setting up key manufacturing industries by transferring know-how and organizational capabilities. This was also true in infrastructure investments and heavy industries owned by governments, which depended on foreign financing and technical aid.[17]

## THE RESULTS OF ISI

Tables 1 through 5 present a summary of the impact of ISI on the principal economies of the region and on the Latin American economy as a whole. In Table 1 we have various measures of the changes in the percentage distribution of the Gross Domestic Product. It should be noted that for countries where the data are available,



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TABLE 1

*Changes in the Structure of the Economies of Selected Countries*
(Percentage Distribution of Gross Domestic Product According to Principal Sectors)

ARGENTINA

| | 1960 Prices | | 1937 Prices | |
|---|---|---|---|---|
| | 1927–9 | 1963–5 | 1927–9 | 1963–5 |
| Agriculture | 27.4 | 17.1 | 30.5 | 18.4 |
| Oil & Mining | 0.3 | 1.5 | 0.6 | 3.5 |
| Manufacturing | 23.6 | 33.7 | 13.4 | 18.6 |
| Construction | 4.2 | 3.6 | 3.1 | 2.6 |

Source: Díaz-Alejandro, *Essays*.

BRAZIL

| | Current Prices | | | | | 1953 Prices | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1939 | 1947 | 1953 | 1960 | 1968 | 1947 | 1953 | 1960 | 1968 |
| Agriculture | 25.8 | 27.6 | 26.1 | 22.6 | 17.9 | 30.0 | 26.1 | 22.2 | 20.5 |
| Industry | 19.4 | 19.8 | 23.7 | 25.2 | 28.0 | 20.6 | 23.7 | 28.0 | 29.3 |
| Other | 54.8 | 52.6 | 50.2 | 52.2 | 54.1 | 49.4 | 50.2 | 49.8 | 50.2 |

Source: Fundação Getulio Vargas, Centro de Contas Nacionais.

MEXICO

| | Current Prices | | | | | |
|---|---|---|---|---|---|---|
| | 1900 | 1910 | 1930 | 1940 | 1950 | 1960 |
| Rural | 34.6 | 27.9 | 25.9 | 24.3 | 22.5 | 18.9 |
| Extractive | 6.4 | 9.1 | 13.5 | 8.5 | 5.7 | 5.4 |
| Commerce & Transp. | 23.4 | 23.4 | 23.4 | 28.5 | 31.0 | 30.6 |
| Mfg., Construc. & Elec. | 13.2 | 13.7 | 16.7 | 22.6 | 24.5 | 27.7 |

Source: Reynolds, *Mexican Economy*.

LATIN AMERICA

| | Current Prices | | Annual Rates of Growth | | |
|---|---|---|---|---|---|
| | 1950 | 1967 | 1950–60 | 1960–67 | 1950–67 |
| Produc. of Goods | 52.4 | 52.3 | 4.9 | 4.6 | 4.8 |
| Agriculture | 25.2 | 20.5 | 3.5 | 3.5 | 3.5 |
| Mining | 4.1 | 4.4 | 6.1 | 4.1 | 5.3 |
| Manufacturing | 19.6 | 24.1 | 6.2 | 5.8 | 6.0 |
| Construction | 3.5 | 3.3 | 4.6 | 4.1 | 4.4 |
| Basic Services | 7.2 | 8.3 | 5.5 | 5.7 | 5.6 |
| Other Services | 40.4 | 39.4 | 4.8 | 4.4 | 4.6 |
| Commerce & Finance | 18.0 | 18.8 | 5.1 | 4.9 | 5.0 |
| Misc. Services | 22.4 | 20.6 | 4.5 | 3.9 | 4.2 |
| Total | 100.0 | 100.0 | 4.9 | 4.6 | 4.8 |

Source: Naciones Unidas, CEPAL, *Estudio económico de América Latina, 1968* (New York, 1969), p. 18.



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TABLE 2

a) *Distribution of Economically Active Population*
(per cent distribution)

ARGENTINA

| | 1925–9 | 1960–1 |
|---|---|---|
| Rural Sector | 35.7 | 21.7 |
| Oil and Mining | 0.3 | 0.6 |
| Manufacutring | 22.0 | 26.0 |
| Construction | 5.5 | 6.0 |
| Public Utilities | 0.5 | 0.8 |
| Transport | 4.6 | 5.7 |
| Communications | 0.5 | 1.0 |
| Commerce, Finance and Housing | 13.6 | 14.3 |
| Government Services | 4.6 | 10.4 |
| Other Services | 12.6 | 13.6 |

Source: Díaz-Alejandro, *Essay*.

BRAZIL

| | 1940 | 1950 | 1960 |
|---|---|---|---|
| Primary | 71.0 | 64.4 | 58.5 |
| Secondary | 8.9 | 12.9 | 12.7 |
| Tertiary | 20.1 | 22.7 | 28.8 |
| Total | 100.0 | 100.0 | 100.0 |

Source: Various Brazilian Demographic Censuses.

MEXICO

| | 1910 | 1940 | 1950 | 1960 |
|---|---|---|---|---|
| Agriculture | 67.1 | 65.4 | 58.3 | 54.1 |
| Mining | 1.9 | 1.7 | 1.2 | 1.2 |
| Mfg., Construc. & Power | 13.1 | 11.0 | 14.8 | 17.7 |
| Services | 17.8 | 21.9 | 25.7 | 27.0 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Reynolds, *Mexican Economy*.

LATIN AMERICA

| | 1950 | 1960 | 1965 | 1969 |
|---|---|---|---|---|
| Agriculture | 53.4 | 47.2 | 44.5 | 42.2 |
| Mining | 1.1 | 1.0 | 1.0 | 1.0 |
| Manufacturing | 14.4 | 14.4 | 14.0 | 13.8 |
| (artisan) | ( 7.5) | ( 6.8) | ( 6.4) | ( 6.1) |
| Construction | 3.8 | 4.1 | 3.9 | 4.5 |
| Basic Services | 4.2 | 5.1 | 5.3 | 5.5 |
| Other Services | 23.1 | 28.2 | 31.3 | 33.0 |
| (commerce & finance) | ( 7.8) | ( 9.0) | ( 9.5) | (10.1) |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

Source: CEPAL, 1969.

b) *Growth of Employment by Sectors and Population Growth*
(yearly rates of growth)

| | Employment Growth | | | Population Growth | |
|---|---|---|---|---|---|
| | 1950–60 | 1960–69 | | 1950–60 | 1960–69 |
| Agriculture | 1.3 | 1.5 | Total | 2.8 | 2.9 |
| Manufacturing | 2.6 | 2.3 | Urban | 4.8 | 4.4 |
| (artisan) | (1.5) | (1.6) | Rural | 1.4 | 1.4 |
| Mining | 2.0 | 2.2 | | | |
| Construction | 3.2 | 4.0 | | | |
| Basic Services | 4.6 | 3.4 | | | |
| Other Services | 4.7 | 4.6 | | | |

Source: CEPAL, 1968.

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industry already represented a significant proportion of GDP in the earlier decades of the century.[18] However, as mentioned earlier, these industries consisted to a large extent of small workshops; in 1950 still over half of the work force in manufacturing was engaged in artisan-type of activities (see Table 2a). By the Sixties, industry had become the dominant sector in Argentina, Brazil, Mexico, and Chile. The annual rates of growth of various sectors shown in Table 1 indicate the extent to which industry was the pace setter in the post-World War II decades. We shall comment later on the other tables.

## CRITIQUES OF ISI

Let us now turn to the various critiques which have been made of Latin American ISI. The critics can be divided into two groups which I shall designate as the "market critics" and the "structural critics." Although some arguments are common to both sets of critics, there is a certain philosophic-analytical similarity of the views within each camp which seem to justify the division I have made.

### *a) The Market Critics*

Many economists in this category view Latin America's ISI as an inefficient way of using resources to develop the region's countries.[19] The more conservative economists believe that since world production can be best be maximized by having each country (or area of the world) specialize in the sectors where it has the greatest comparative advantage, Latin America should have continued to specialize in the

TABLE 3

a) *Real Rate of Growth (annual) by Sectors for Latin America and Selected Countries*

| | 1955–60 | 1960–65 | 1955–60 | 1960–65 | 1955–60 | 1960–65 |
|---|---|---|---|---|---|---|
| | Latin America | | Argentina | | Brazil | |
| Agriculture | 2.7 | 4.8 | —0.4 | 2.1 | 3.7 | 6.9 |
| Manufacturing | 6.6 | 5.6 | 3.8 | 4.1 | 10.3 | 4.9 |
| Construction | 4.2 | 5.9 | 4.3 | 2.0 | 7.2 | 2.8 |
| | Chile | | Mexico | | Colombia | |
| Agriculture | 2.3 | 3.1 | 3.0 | 3.9 | 3.5 | 3.0 |
| Manufacturing | 3.2 | 6.7 | 8.1 | 8.0 | 6.1 | 5.9 |
| Construction | 1.4 | 4.6 | 8.1 | 5.9 | —0.2 | 1.9 |

Source: Naciones Unidas, *Estudio económico de América Latina, 1965.*

b) *Latin America: Growth Rates of the Total Gross Domestic Product and of Industrial Product (Annual Cumulative Rates)*

| | Total Product | Industrial Product |
|---|---|---|
| 1940–50 | 5.0 | 6.8 |
| 1950–60 | 4.7 | 6.3 |
| 1960–68 | 4.5 | 5.4 |

Source: United Nations, *Economic Bulletin for Latin America,* Second Half of 1969.



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TABLE 4

a) *Growth of Urban Population and Industrial Employment*
(Average Annual Rates of Growth: 1950–60)

| | Urban Population | Industrial Employment |
|---|---|---|
| Argentina | 3.0 | 1.7 |
| Brazil | 6.5 | 2.6 |
| Mexico | 5.6 | 4.8 |

Source: Table in Little, Scitovsky, and Scott, *Industry and Trade*, p. 84.

b) *Growth of Industrial Product and Industrial Employment*
(Annual Growth Rates: 1950–68)

| | Industrial Product | Industrial Employment |
|---|---|---|
| Argentina | 4.5 | 2.2 |
| Brazil | 7.3 | 2.2 |
| Colombia | 6.2 | 2.4 |
| Chile | 4.6 | 2.2 |
| Peru | 7.8 | 3.4 |
| Mexico | 6.7 | 4.7 |
| Latin America | 6.0 | 2.8 |

Source: Raúl Prebisch, *Transformación y desarrollo: la gran tarea de América Latina,* (Washington, D.C., 1970), p. 45.

production of primary products. This specialization would have maximized world output and made possible a higher income level in all parts of the world.

Because of the declining share of food and primary products in world trade, more moderate critics recognize the need for some ISI.[20] But they criticize the indiscriminate way in which ISI was carried on, that is, by across-the-board promotion of industries without regard even to potential comparative advantage. The Latin American ISI strategies are seen as drives towards national self-sufficiency in total disregard of the advantages of an international division of labor along newer lines. This emphasis on autarky is seen as prejudicial to rapid economic growth for a number of reasons.

Given small markets, limited capital, and a dearth of skilled manpower, autarkic industrial growth leads to the development of inefficient and high-cost industries. The situation becomes especially pronounced in industries having high fixed costs. These industries require large-scale output in order to bring costs down to levels prevailing in more advanced industrial countries. Outstanding examples are the steel and automobile industries which have been established in most of the larger Latin American countries. In the case of automobiles, the situation was worsened because a large number of these countries permitted the establishment of many firms, thus completely eliminating the possibilities of economies of large scale production. In the late Sixties, the annual output of cars and trucks in eight Latin American countries was 600,000, which was produced by ninety firms (an average of 6,700 per firm).[21] The situation is well summarized by Scitovsky: "Protection usually confines the protected manufacturer to the domestic market and so inhibits the exploitation of



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TABLE 5

a) *Latin America's Participation in World Trade*
(Latin America's Exports as a Per Cent of World Exports)

| | |
|---|---|
| 1948—10.9% | 1960—7.0% |
| 1950—10.6% | 1964—6.4% |
| 1957— 7.8% | 1968—5.0% |

Source: *Regional Integration and the Trade of Latin America,* Committee for Economic Development, Jan. 1968; and *International Trade, 1968*, GATT.

b) *Changes in Latin America's Import Coefficients*
(Value of Imports of Goods and Services as a Per Cent of GDP)

| | 1928 | 1938 | 1948–9 | 1957–8 | 1962 | 1960* | 1967* |
|---|---|---|---|---|---|---|---|
| Argentina | 17.8 | 12.1 | 11.2 | 5.8 | 7.1 | 8.0 | 6.6 |
| Brazil | 11.3 | 6.2 | 6.6 | 5.8 | 4.5 | 7.8 | 5.6 |
| Chile | 31.2 | 14.9 | 11.5 | 9.5 | 11.3 | 15.7 | 15.7 |
| Colombia | 18.0 | 11.0 | 10.6 | 8.2 | 8.8 | 12.2 | 8.8 |
| Mexico | 14.2 | 7.0 | 8.5 | 7.8 | 6.8 | 7.8 | 7.8 |
| Peru | | | 9.6 | 16.1 | 13.6 | 19.0 | 28.1 |
| Latin America | | | 10.2 | 9.9 | 8.7 | 10.0 | 9.9 |

Source: Joseph Grunwald and Philip Musgrove, *Natural Resources in Latin American Development* (Baltimore, 1970), p. 20.
* CEPAL, 1968.

c) *Imports as a Percentage of Total Supplies by Categories*

| | Consumers' Goods | Intermediate Goods | Capital Goods |
|---|---|---|---|
| Brazil | | | |
| 1949 | 9.0 | 25.9 | 63.7 |
| 1955 | 2.9 | 17.9 | 43.2 |
| 1959 | 1.9 | 11.7 | 32.9 |
| 1964 | 1.3 | 6.6 | 9.8 |
| Mexico | | | |
| 1950 | 2.4 | 13.2 | 66.5 |
| 1955 | 2.3 | n.a. | 63.4 |
| 1960 | 1.3 | 10.4 | 54.9 |
| 1965 | n.a. | 9.9 | 59.8 |

Source: Little, Scitovsky, and Scott, *Industry and Trade*, p. 60.

economies of scale, especially in small countries and in industries where scale economies are important and call for very large-scale operations. Moreover, governments anxious to secure the benefits of competition often encourage many firms to enter industry in order to create domestic competition where protectionist policies have suspended foreign competition." The result, however, is contrary to what is aimed for, since such government policy ". . . restricts the scope for economies of scale yet further and often leads to the emergence of too many firms, each with too small an output capacity, and frequently with too small a market to utilize fully even that capacity."[22]



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In the last few years the concept of "effective protection" has been used by numerous economists to analyze distortions which have arisen during the ISI process. Nominal tariff rates measure only the percentage by which prices of protected goods exceed their world prices. This amount is also the difference by which domestic substitutes can exceed the international price. The "effective" tariff or rate of protection ". . . shows the percentage by which the value added at a stage of fabrication in domestic industry can exceed what this would be in the absence of protection; in other words, it shows by what percentage the sum of wages, profits, and depreciation allowances, payable by domestic firms can, thanks to protection, exceed what this sum would be if the same firms were fully exposed to foreign competition."[23] Thus, if a product uses a considerable amount of imported inputs on which there is no tariff or on which the tariff rate is lower than the tariff on the finished product, protection is higher than is indicated by the nominal tariff, since the margin available for domestic value added is larger than the difference indicated by the tariff. In a number of Latin American countries the effective tariff on consumer goods was found to be much higher than for intermediate or capital goods.[24] Such high levels of effective protection eliminate incentives to increase production efficiency and make it difficult to bring the cost of production to international levels.

The stress on autarky—on maximizing internal vertical industrial integration (promoting not only final goods production, but also intermediate and capital goods)—impedes growth because resources are not used in sectors where they will produce the highest possible output. Had Latin American countries specialized in only a few products with the greatest potential comparative advantage, and exported a large surplus while importing other goods, total output available would have been higher and these nations would have grown more rapidly than they actually did. As it happened, autarky was practiced in each country, and no attempt was made until the late Sixties to at least promote ISI on a regional basis; in other words, to promote a complementary industrial structure within Latin America.

A study by Baranson of automobile industries in developing countries (which includes information on Argentina, Brazil, and Mexico) illustrates many of the problems of autarkic development. He contrasts the proliferation of automobile firms in developing countries with the quest by European producers for increased exports and consolidation with competitors, both inside and outside their countries, in order to keep down unit cost.[25] He finds that among the main deficiencies are ". . . underdeveloped supplier capacities, inadequate quality control systems, and a dearth of qualified technicians and managers. By creating a 'sellers' market', protection and import substitution tend to undermine quality."[26] Thus, Baranson found that many ". . . basic materials that are considered standard stock in open economies often must be procured locally or specially ordered in small batches at considerably higher cost or at inferior quality. . . . Lack of uniformity in raw materials and semi-finished goods such as castings and forgings creates special problems in milling and machining to required specifications. In high-volume production, precision and uniformity are built into automated equipment. Developing countries with limited markets are much more dependent upon the very machine labor skills in which they are defi-



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cient." Also, considering the many parts which go into an automobile, Baranson found that outside plant procurement averages about 60 per cent by value in advanced economies, while in countries like Mexico and Brazil this factor amounts to only 40 per cent. Such a condition further reduces the possibility of economies of large scale production.[27] As a result, Baranson found that factory costs in Argentina, Brazil, and Mexico were about 60 per cent to 150 per cent higher than in the United States.[28]

Similar problems were found in many other industries. A study of the manufacture of heavy electrical equipment in developing countries found that in Argentina ". . . excessive diversification, unused capacity, large inventories because of import controls, and difficulties in obtaining outside finance explain the high price level. . . ."[29] ECLA has also provided numerous illustrations of the problems discussed above. It found that in 1964, ". . . the paper industry (excluding newsprint) had 292 plants of which only 25 had a capacity of 100 tons daily, which is considered the minimum economic size. In the chemical industry, too, there are a great many instances in which there is a wide gap between the plant sizes most frequently found in the region and the sizes constructed in the industrialized countries."[30]

Some economists have been concerned about the domestic resource cost involved in the type of ISI which has been promoted in Latin America. They have stressed the need to calculate for various industries the value of domestic resources required to save a unit of foreign exchange. The rate of transformation between domestic and foreign resources thus obtained should be compared to the appropriate exchange rate.[31] The higher the former is over the latter, the greater presumably is the "waste" of resources; that is, if domestic resources had been used for export purposes, the foreign exchange earned would have fetched more goods than the goods produced by using the resources domestically.[32]

Policies employed to stimulate industries have often been prejudicial to the functioning of the more traditional agricultural sector. The allocation of investment resources (credit) to new industries has often meant that a few resources were available to increase agricultural efficiency. Overvalued exchange rates, which favored industries by providing cheap imported inputs, hurt agriculture by making its goods less competitive on the international market and/or by making it less profitable to export agricultural products. Finally, the combination of higher industrial prices caused by protection and by price control of agricultural goods, turned the internal terms of trade against agriculture. All these factors hurt agricultural production and exports. Argentina is probably the outstanding example of ISI occurring to the detriment of agriculture and agricultural exports.[33]

Critics have also pointed to the detrimental results of neglecting exports during the heyday of ISI. Some stress the negative effects of ISI policies on the production and exportation of traditional goods, while others emphasize the failure to diversify the export structure in accordance with the changing internal economic structure which ISI brought about. While, as was mentioned earlier, the contribution of industry to GDP became dominant in the years after World War II, the commodity composition of Latin America's exports remained almost unchanged. For example, in



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the late Sixties, over 90 per cent of Argentina and Brazil's exports still consisted of traditional primary and food products, while about three-quarters of Mexico's exports consisted of such products. Until the Sixties, little efforts were made by Latin American countries to stimulate non-traditional exports. And while in the early Sixties the development of the Latin American Common Market, the Central American Common Market, the introduction of drawbacks and rebates on domestic taxes for export efforts in some countries (Argentina, Mexico, Colombia) represented attempts to stimulate non-traditional exports, the net effects by the late Sixties were still slight.

The neglect of exports during the ISI period in Latin America, that is, the failure to stimulate traditional exports and to diversify the export structure, could have serious consequences. The original advocates of ISI had hoped that their policy would lead Latin American countries to greater self-sufficiency and would make their economies more independent of the vicissitudes of international trade. It appears, however, that there is a lower limit to the import coefficient (import/GDP ratio) for most economies, as becomes clear by examining Table 5(b). While ISI was taking place, not only was the import coefficient reduced,[34] but the commodity composition of imports changed. An increasingly larger proportion of imports consisted of raw materials, semi-finished products, and capital goods. These represented the inputs of the ISI industries which were not available domestically, and were thus the principal reason for the increasing downward stickiness of the import coefficient.[35]

It is thus ironic that the net result of ISI has been to place Latin American countries in a new and more dangerous dependency relationship with the more advanced industrial countries than ever before. In former times, a decline in export receipts acted as a stimulus to ISI. Under the circumstances, a decline in export receipts not counterbalanced by capital inflows can result in forced import curtailments which, in turn, could cause an industrial recession. Such results have been experienced by Argentina and Colombia, and other countries face the same danger.

To guard against such a situation, Latin American countries would have to make increasing efforts to diversify exports. Such actions, however, assume that they are able to compete in the international market. Considering the high cost structure of many Latin American ISI industries, the many bureaucratic obstacles exporters have faced, and the lack of an adequate credit mechanism to export manufactured goods, export diversification is not an easy task.[37]

*b) Structural Critics*

Since World War II, most Latin American countries have experienced a population explosion. Annual population growth for the entire region increased from 1.9 per cent to over 2.8 per cent in the late Fifties and Sixties. During the same period, migration from the countryside to the cities increased dramatically. One may see in Table 2(b) that the urban population growth rate in the post-World War II period was over three times as large as the rural growth rate. The same table also shows that the rate of labor absorption in industry was substantially smaller than the rate of growth of urban population. In Table 2(a), it is clear that after two decades of in-



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dustrialization, the proportion of the labor force employed in manufacturing industry in Latin America as a whole actually declined somewhat, and that almost half of these workers were still engaged in artisan workshops. In some of the individual countries shown, the proportion rose a few points, but very modestly compared to the changes in the contribution of industry to GDP. The failure of ISI to create direct employment opportunities has worried both "structural" and "market" critics.[38]

The latter blame the low labor absorption rate on price distortions. Most countries used certain types of subsidies to capital in order to stimulate industrialization. In a number of countries, domestic and foreign firms were given special exchange rate privileges to import capital equipment. Development banks gave cheap credit (often at negative real rates of interest) to help finance investment in favored industries. At the same time, wages in industry were relatively high because of labor legislation which had been introduced in the Thirties and Forties in such countries as Argentina, Brazil, and Chile. Thus, there were no incentives to adopt labor-intensive techniques of production. On the contrary, the relative price structure of capital and labor was such as to actually stimulate the search for and adoption of capital-intensive techniques.[39]

The structural critics of ISI worry about low labor absorption rates not only because of the services social problems of urban unemployment or underemployment which result, but also because of their implication for income distribution. With an unequal distribution of income, a fiscal system which does not redistribute income, and a leading growth sector (industry) whose incremental capital/labor ratio is high (usually substantially higher than the economy's average capital/labor ratio), the tendency will be for income to become even more concentrated than before. The evidence available for Latin American countries tends to confirm this trend.[40]

Because of the concentration of income, the growth of demand for industrial products may not be sufficient to maintain the initial ISI momentum. What makes this situation worse is the lumpiness of many ISI industries. Because of indivisibilities, many industries were forced to build substantially ahead of demand. Thus, the existence of excess capacity which is not being rapidly filled by growing demand dampens the incentive to invest.[41]

This situation could, of course, be avoided by various types of redistributive policies of governments—redistribution by income groups, by sectors of the economy, and by regions. Progressive tax measures and/or appropriate wage policies could be used to redistribute incomes among social groups; government credit and fiscal policies could redirect resources to neglected sectors (such as agriculture, housing, road building) and geographical regions.

Potential domestic demand for industrial products exists in most Latin American countries because the ISI process occurred in an unbalanced fashion. We have already mentioned the trends towards the concentration of income which could be reversed by appropriate policies and thus result in considerable demand expansion. However, there were other imbalances. As ISI proceeded, such sectors as agriculture, low income housing, transportation, and other infrastructure facilities were often neglected, threatening countries with severe bottlenecks. In the larger countries, ISI resulted



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in a strong regional concentration of industry and income, especially in Brazil, Mexico, and Argentina. Although such regional concentration made sense when taking into account external economies to firms settling close to suppliers, to decent infrastructure facilities, and to skilled labor supplies, etc.,[42] it was of a self-reinforcing nature. Increasing regional concentration of wealth presented many countries with the political need to redistribute income on a regional basis. All these forces make it possible to generate new demand through government policies.[43]

Georgescu-Roegen, however, called attention to a problem which might arise from post-ISI redistribution efforts.[44] The profile of the productive structure which resulted from the ISI process reflects the demand profile which existed at the time when the process was started. This demand profile was based on a distribution of income which, in most cases, was quite unequal. Efforts to change the distribution of income in the post-ISI era in order to achieve greater social justice, increase aggregate demand, diminish inter-sectoral and/or inter-regional imbalances, will change the demand profile. Such changes could result in a substantial amount of imbalance or lack of synchronization between the country's productive and demand profiles. The degree of such imbalance depends, of course, on the flexibility of various productive sectors. For example, to what extent can the productive facilities of the consumer goods and capital goods industries be converted from producing luxury goods to producing mass consumption goods?

The greater the inflexibility of the country's productive structure, the greater the "structural-lock" dilemma of the country. Thus, the full use of the existing productive capacity would imply the necessity for the type of income distribution which would produce the requisite demand profile, i.e., a very unequal distribution of income.[45] The alternative, a more egalitarian distribution of income, might imply considerable capacity in a number of industries.[46]

This "structural lock" dilemma should be set off, however, against the import constraint problem. It has been claimed that high income inequality encourages a more import-intensive demand profile. That is, higher income groups consume technically more sophisticated goods which have relatively high direct and indirect import requirements. Thus, although a greater degree of income concentration could avoid a "structural lock" problem, it could lead to stagnation caused by import constraints.[47]

## EVALUATION AND OUTLOOK FOR THE FUTURE

In my general attitude towards the critiques which I have summarized, I fully subscribe to the views of Bergsman and Candal in their evaluation of the Brazilian ISI experience: "Hindsight makes it easy to point out specific mistakes, even to suggest some modifications in policy that clearly would have avoided the greatest inefficiencies. It is much harder to compare actual results with those that might have come from some totally different policy that would not have included industrialization.[48]

It is clear that in most, if not all, Latin American countries, industrialization was carried out on too wide a spectrum, given limited capital and human resources and very narrow markets. Also, excessively high effective production did not lead re-



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sources into fields which would have the highest possible potential comparative advantage, and protection gave a comfortable enough profit margin to all inside the market to neglect the search for greater efficiency. However, outright condemnation of inefficiencies has to be qualified. For political reasons, ISI within the context of a larger Latin American Common Market was not feasible in the immediate postwar period. A more specialized export-oriented ISI not only depended on the possibilities of Latin American economic integration, but also on the willingness of the United States and Europe to accept Latin American manufactured imports. If one admits that an international division of labor can no longer be based on nineteenth century lines (given the relative decline of primary products in world trade), one has to expect structural changes in both the developing and the developed parts of the world. For example, one would expect the United States and Europe to accept a decline in the textile industry in order to make room for such imports from the Third World. Given the unwillingness to do this, one should temper one's condemnation of Latin American countries for not being more selective in their choice of industries.[49] This does not excuse the proliferation of many firms in small markets (e.g., automobiles) which produced unnecessary high costs.

Many economists have the bad habit of generalizing from limited experience and evidence. This is especially true in the ISI discussions. The development of an integrated industrial structure might not make much sense in a small country like Chile, while it does make some sense in a country like Brazil. Although an elegant argument about industrialization having been promoted at the expense of agriculture can be made with empirical evidence from Argentina, it would be difficult to apply this argument to the Brazilian case. Coffee output was not sacrificed for the sake of industrialization.[50]

The explanation of the labor-absorption problem in terms of factor price distortion is based on good deductive reasoning in economic theory, but there is little empirical evidence to back the explanation. In some industries the technological choices are limited.[51] In most Latin American automobile industries the equipment installed was second hand and thus the assembly line operations are technologically substantially behind the more automated plants in Europe and the United States. The equipment in most of Latin America's textile industries is so old that various missions have recommended a thoroughgoing modernization in order to make these industries profitable and competitive. There exists, of course, the possibility of placing greater efforts in discovering more labor-intensive techniques, which might be achieved if Latin American countries would increase the resources earmarked for scientific and technological research. Only 0.5 per cent of Latin America's GNP goes into such efforts, as compared to over 3 per cent for the United States.[52] It remains doubtful, however, whether price distortions explain Latin America's labor absorption problem.

Although the argument about the necessity for export diversification is well taken, the pontification of many economists concerning the past neglect of industrial exports is open to some criticisms. It seems that many forget that a large number of the key manufacturing industries of Latin America were constructed by or with the



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aid of foreign capital. The chief attraction of the latter was the promise of a growing protected market. It might have been rather difficult to convince firms to establish themselves in Brazil, Argentina, and other countries on the condition that from the beginning 40 to 50 per cent of the output should be exported. Had there been a genuine interest by domestic and foreign firms to export manufactured goods, I suspect that the bureaucratic and exchange rate obstacles to such exports might have fallen earlier.

It could also be asserted that the high-cost structure of Latin America's industries makes export diversification difficult. Here, of course, there might be a dilemma. If the high-cost structure is in large part caused by the narrow market which raises unit costs, only increased sales could reduce the latter. And thus we might face an interesting chicken-egg problem. But even if this could be resolved through subsidies, exports of manufactured goods would still have to face non-price competitive factors such as credit terms, brand names, delivery terms, marketing organizations, etc. Since the importance of price vs. non-price competition in the international trade of manufactured and capital goods has never been firmly established, it is difficult to claim that the high cost structure is one of the principal barriers to export diversification. We have already mentioned the political problem of penetrating European and American markets.

Since most economists' intellectual energies in the last few decades have been spent worrying about the efficient allocation of resources, it is natural that those economists who have devoted their attention to developing countries should have spent most of their time examining and recommending how factors of production are or should be allocated. Relatively little thought was given to the fact that concern about development should include concern about the development of factors of production, not just their allocation. The many "inefficiencies" might prevent a developing country undergoing ISI from realizing its maximum crude growth rate in the short-run. This cost has to be weighed against the modernization or development which ISI brings about.[53] Little work along these lines, that is, on the measurement of changes in the quality of factors of production, has been done in Latin America or in other parts of the developing world.

## FUTURE POLICIES

By the late Sixties many Latin American countries were taking measures to eliminate some of the grosser distortions which ISI had brought along. In a number of countries the tariff level was brought down (e. g., Brazil, Argentina). This was not done to encourage more imports, but to decrease the level of effective protection and monopoly profits and thus give an incentive to firms to rationalize their operations. Measures were taken in such countries as Brazil, Argentina, and Peru to reduce the number of automobile firms and thus encourage lower cost production by scale economies.

There has been a constant effort by ECLA and the Inter-American Development Bank to push for greater economic integration via the Latin American Common Market. It is hoped that such integration would increase and diversify the exports of



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individual countries and that there would also result a rationalization of production throughout the continent by making the Latin American economies more complementary to each other. Besides trade in finished goods, attempts have been made to encourage "complementation agreements," in which there would be a division of labor along vertical lines (for example, the Chilean automobile industry specializing in the production of certain parts which would be assembled in Brazil).[54] Unfortunately this process has not made as much progress as its advocates had hoped. It seems that a division of labor within Latin America would not necessarily result in national economic structures which would be to the liking of individual countries.[55]

The problem of post-ISI stagnation, i.e., the finding of a new dynamic source of growth, has preoccupied many Latin American governments as the decade of the Seventies opened. In Brazil the government of President Emilio Medici has stated that its principal aim would be to develop a "program of social integration" which would increase the labor force participation in the national product, to develop the internal frontier of Amazonia, and to begin a gigantic road building program which would more effectively link various regions of the country and better link farming areas to markets. Peru is currently experiencing some drastic social reforms—land reform, programs of worker profit-sharing schemes, etc. The new Mexican president has also emphasized the need for income redistribution.

It remains to be seen if a redistribution of income and a growth of industrial exports will provide the same dynamism to the Latin American economies as the period of ISI.[56] Turning from the demand to the supply side, one should also consider the effects of high population growth rates and social equity policies on the capital/output ratio. The latter will probably be much higher than in the past, which means that the growth produced by each unit of investment will be lower than in the past. Thus many economies in the future might have to balance the conflicting claims arising from the need for higher saving to attain growth rates similar to those in the ISI days, and the pressures for more egalitarian socio-economic policies which tend to depress the capacity to save.

The employment problem will probably be the most difficult to cope with. At this writing it is doubtful that industry will be able to absorb a substantially larger proportion of the economically active population. Can the service sector effectively make use of the burgeoning urban masses? Can agrarian reforms be instituted in such a manner as to absorb manpower, or will agricultural modernization of necessity have to result in an increased expulsion of labor from the countryside? Even if there is no food problem, is there any possible economic structure in Latin America which will effectively employ all those who are employable? Or is the only solution to the dilemma the development of a population policy? These are probably the most interesting questions which economists doing relevant work in Latin America will have to struggle with in the Seventies.

## NOTES

1. For an interesting analysis of continental Europe's emulation of England's industrial develop-



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ment during the nineteenth century, see David S. Landes, "Technological Change and Development in Western Europe, 1750–1914," In: *The Cambridge Economic History of Europe,* H. J. Habakkuk and M. Postan, eds., VI: 274–601 (Cambridge, England, 1966). The description Landes gives of the effects of the Napoleonic wars sounds quite familiar to contemporary students of import substitution: "To be sure, war and isolation had some favourable effects. . . . Technology, for example, was stimulated by the need to create substitutes for overseas imports. . . . The trouble was that not all of these wartime anomalies were ready to disappear once peace returned. For every substitute that died quietly . . . another remained as a vested interest. . . . Thus mechanized textile manufacture in central Europe, essentially a product of wartime shortages, made a strong effort to convert monetary advantage into permanent privilege, with some success . . ." (373).

2. The importance of trade relations, i.e., division of labor, among industrialized countries is demonstrated by the following data on trade among these countries as a proportion of world trade:

1953—31.7% 1960—42.3% 1965—46.8% 1968—49.3%

(Source: Annual Reports of GATT—*International Trade.*)

For perceptive explanations of changes in trade specialization among developed countries, see Raymond Vernon, "International Investment and International Trade in the Product Cycle," *The Quarterly Journal of Economics* (QJE) (May 1966); Albert O. Hirschman, *National Power and the Structure of Foreign Trade* (Berkeley and Los Angeles, 1945; reprinted 1969).

3. Stanley Stein and Barbara Stein, *The Colonial Heritage of Latin America* (New York, 1970), have succinctly summarized the main obstacles to earlier industrialization in Latin America:

> Ex-colonies, then and now, cannot readily shed the economic legacy of centuries of colonialism, they cannot rapidly close the gap between backwardness and modernity, between primitive and advanced technology, between low and high levels of income, saving, and investment, between literacy and illiteracy, between obscurantism and enlightenment, between closed and open society. . . . It is not surprising, then, that Latin America did not begin to modernize its economy through industrialization until a century after independence. Under these circumstances the major consequence of the anti-colonial movements in Latin America between 1810 and 1824, the crushing of the ties of the transatlantic empire led . . . to neo-colonialism. . . . We can see how the economic growth of Latin America through diversification and industrialization could not occur while colonial patterns of production, capital accumulation and investment, income distribution and expenditure survived (136).
>
> The backwardness of the Iberian metropolises in capital and technology opened the way to English entrepeneurs. Their textiles and hardware undersold those of their competitors; their capital resources facilitated long-term operations including the payment of high import duties; they extended their credits to Latin American merchants at half the interest rate of their competitors . . . (154).

In his research on the economic history of Brazil, Carlos M. Pelaez has found substantial evidence to show that in the period 1898–1945 the effects of coffee and monetary policies were more to blame for the retardation of industrialization than the neo-colonial influence of European countries and the U.S.

4. Warren Dean, *The Industrialization of São Paulo, 1880–1945* (Austin, Texas, 1969); Carlos F. Díaz-Alejandro, *Essays on the Economic History of the Argentine Republic.* chs. 1–3 (New Haven, 1970); Clark W. Reynolds, *The Mexican Economy: Twentieth Century Structure and Growth,* ch. 5 (New Haven, 1970).

5. Dean, *Industrialization,* ch. 5; Díaz-Alejandro, *Essays,* ch. 4.



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6. Comisión Económica para la América Latina de los Naciones Unidas (CEPAL), *El proceso de industrialización en América Latina*, 14–17 (New York, 1965).

7. For some case studies, see: Díaz-Alejandro, *Essays,* chs. 1–3; Celso Furtado, *The Economic Growth of Brazil,* chs. 30 and 31 (Berkeley and Los Angeles, 1963); Werner Baer, *Industrialization and Economic Development in Brazil,* ch. 2 (Homewood, Illinois, 1965); Carlos M. Pelaez, "Acêrca de politica governamental, da grande depressão e da industrialização do Brasil," *Revista Brasileira de Economia* (RBE) (1969); Markos Mamalakis, *Growth and Structure of the Chilean Economy: 1840–1968,* chs. 2 and 6 (forthcoming); Oscar E. Muñoz, "An Essay on the Process of Industrialization in Chile since 1914," *Yale Economic Essays* (1968); CEPAL, *El proceso de industrializacion . . .*, 17–37.

8. Reviewing the experience of Argentina during the first three decades of the twentieth century, Díaz-Alejandro, *Essays,* ch. 3, states that, ". . . contrasted with later periods, the growth of manufacturing during 1900–29 may be explained primarily by the expansion of exports and domestic demand, with a relatively small contribution by import substitution."

9. In the case of Brazil this alteration has been documented in two studies: Annibal V. Villela, *Fontes de crescimento da economia Brasileira* (mimeographed, 1970) I: 406 and II: 218; Carlos M. Pelaez, "A balança comercial, a grande depressão e a industrilização Brasileira," RBE (1968), 15–47.

10. Baer, *The Development of the Brazilian Steel Industry, ch.* 4 (Nashville, Tennessee, 1969); Pelaez, "O desenvolvimento da industria do aço no Brasil," RBE (1970) 191–217; Nathaniel H. Leff, *The Brazilian Capital Goods Industry, 1929–1964,* 8–20 (Cambridge, Mass., 1968). According to Don Huddle's calculations, "Postwar Brazilian Industrialization: Growth Patterns, Inflation, and Sources of Stagnation," In: *The Shaping of Modern Brazil,* Eric N. Baklanoff, ed., 96 (Baton Rouge, Louisiana, 1969), ISI in Brazil ". . . had already been carried very far by 1939. Thus continued across the board import substitution between 1939 and 1963 was necessarily somewhat limited."

11. In a quantitative analysis of five Latin American countries, Henry J. Bruton "Productivity Growth in Latin America," *American Economic Review* (AER), 57: 1110 (1967), found that as a result of being forced to use domestic capacity to the fullest extent, firms had to ". . . find ways to use their existing capital stock with increasing effectiveness. Improvisation and adaptation of existing equipment were common, and one can find many examples of ingeniously and indigenously devised machines producing various items for household and business use. . . . The war then not only provided 'protection' from foreign competition, but also helped to create an environment within which entrepreneurs had incentives to use available resources with increasing effectiveness."

12. The initial position of the Economic Commission for Latin America (ECLA) was contained in *The Economic Development of Latin America and its Principal Problems* (United Nations, 1950); and an elaboration of these views appeared in Raúl Prebisch's "Commercial Policy in the Underdeveloped Countries," AER, 49: 251–273 (1959). There exists a vast literature attacking and defending the Prebisch-ECLA position. See, for instance: Baer, "The Economics of Prebisch and ECLA," *Economic Development and Cultural Change* (EDCC) 10: 169–182 (1962); June Flanders, "Prebisch on Protectionism: An Evaluation," *Economic Journal* (EJ) 74: 305–326 (1964); Gottfried Haberler, "Terms of Trade and Economic Development," In: *Economic Development for Latin America,* Howard S. Ellis and Henry C. Wallich, eds., 275–297 (New York, 1961). An ECLA-type model which avoids the controversial terms of trade arguments, yet builds a similar case for industrialization can be found in Dudley Seers, "A Model of Comparative Rates of Growth in the World Economy," EJ 62: 45–78 (1962).



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13. See, for example, the projections for world trade found in Bela Belassa, *Trade Prospects for Developing Countries* (Homewood, Ill., 1964) and UNCTAD, *Trade Prospects and Capital Needs of Developing Countries* (New York, 1968).

14. For policies followed in individual countries, see Díaz-Alejandro, *Essays*; Baer, *Industrialization,* ch. 3; Joel Bergsman, *Brazil, Industrialization and Trade Policies,* chs. 3 and 4 (New York, 1970); Reynolds, *The Mexican Economy,* ch. 7; Timothy King, *Mexico: Industrialization and Trade Policies Since 1940,* chs. 3–5 (New York, 1970); Mamalakis, *Growth and Structure*, chs. 6 and 7 (forthcoming); CEPAL, *El proceso de industrializacion . . .* ,ch. III.

15. David Felix, "Monetarists, Structuralists, and Import-Substituting Industrialization: A Critical Appraisal," In: *Inflation and Growth in Latin America,* Werner Baer and Isaac Kerstenetzky, eds., 383 (Homewood, 1964; 2nd printing, New Haven, 1970).

16. Albert O. Hirschman, "The Political Economy of Import-Substituting Industrialization in Latin America," QJE, 82: 17–24 (1968).

17. For example, all automobile plants were built and run by foreign firms. Almost all government steel mills in Latin America were built with foreign financing and planned and constructed under the supervision of foreign consulting firms. For some interesting comparative data on the macroeconomic impact of foreign financing, see I. Little, T. Scitovsky, and M. Scott, *Industry and Trade in Some Developing Countries: A Comparative Study,* 47–59 (New York, 1970).

18. It has been argued by a number of economists that even if measured in constant prices, taking a base year where relative prices of manufactured goods were not at their highest, the contribution of manufacturing is exaggerated. Some have tried to measure the contribution of the sector by valuing manufactured products at world prices. But even such deflation of industry's contributions do not erase the basic trends. Little, Scitovsky, and Scott, *Industry and Trade*, 7.

19. The region's countries vary substantially as to potential for ISI. However, most of the market critics whose views are summarized here have dealt with the larger Latin American countries.

20. The growth of manufactures as a proportion of world trade was quite spectacular in the forty years, 1928–68, as shown by the following data:

    1928—39%; 1938—40%; 1953—45%; 1960—54%; 1968—67%.

    Richard N. Cooper, *The Economics of Interdependence* (New York, 1968); GATT, *International Trade 1968.*

    It should also be noted that in the post-World War II period, Third World countries have drastically lost their shares in world trade. Their share of world exports declined from 34 per cent in 1950 to 19 per cent in 1968; see various annual reports of GATT, *International Trade.* Finally, it should be noted in Table 5(a) that in the twenty year period 1948–68, Latin America's share in world trade declined from 10.9 per cent to 5.0 per cent.

21. Tibor Scitovsky, "Prospects for Latin American Industrialization within the Framework of Economic Integration," In: *The Process of Industrialization in Latin America,* 43 (Washington, D.C., 1969). The average number might be somewhat misleading. For example, in Brazil, Volkswagen produces more than half the passenger cars, thus benefitting more from scale economies than most other plants. See Bergsman, *Brazil,* 120–130. For an interesting case study of the Chilean automobile industry, which was characterized by a small market being served by twenty firms operating more than one thousand miles away from the principal market, see Leland J. Johnson, "Problems of Import Substitution: The Chilean Automobile Industry," EDCC 15: 202–216 (1967).

22. Scitovsky, "Prospects," 42.



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23. Little, Scitovsky, and Scott, *Industry and Trade*, 39.

24. It has been estimated that effective protection for manufactured products in Brazil in 1966 was 254 percent as compared with product protection of 99 percent. Bergsman, *Brazil*, 42; for other countries see Little, Scitovsky, and Scott, *Industry and Trade*, 174.

25. Jack Baranson, *Automotive Industries in Developing Countries*, 15 (Baltimore, 1969).

26. Baranson, *Automotive Industries*, 22.

27. Baranson, *Automotive Industries*, 25–26.

28. Baranson, *Automotive Industries*, 28. He also found that Brazil's costs as compared to those of Argentina are lower because the former's market is larger, the industry is older, and many producers have written off capital costs for machines which are still in good working order, and Brazilians have had a longer period to develop suppliers, improve quality, and reduce costs (39). It is of interest to mention some specific numbers cited by Baranson: he found that in Argentina materials and parts averaged 3.3 times the U.S. cost level; administrative and selling costs are twice as high in Mexico as in the U.S.; special tooling amortization is almost three times as expensive per vehicle in Brazil and Mexico as in the U.S. (39). A yet unpublished study of the Brazilian automobile industry by José Almeida, of the Fundação Getúlio Vargas, presents similar conclusions. One of the principal reasons for the high cost of Brazilian automobiles was found to be the extreme autarky of the industry. The domestic content of Brazilian vehicles amounts to 98 percent. Decreasing this content to a level of 50 percent to 60 percent would substantially lower costs.

29. Ayhan Cilingiroglu, *Manufacture of Heavy Electrical Equipment in Developing Countries*, 31 (Baltimore, 1969).

30. "Industrial Development in Latin America," *Economic Bulletin for Latin America*, 13 (1969).

31. For a thorough discussion of problems in defining the appropriate exchange rate and the domestic resource cost, see William F. Steel, "Import Substitution Policy in Ghana in the 1960's," 53–80 (unpublished Ph.D. dissertation, MIT, 1970).

32. The theoretical literature on this topic is rather lengthy. See, for instance, Bela Balassa and Daniel M. Schydlowsky, "Effective Tariffs, Domestic Cost of Foreign Exchange, and the Equilibrium Exchange Rate," *The Journal of Political Economy* (JPE), 76: 348–360 (1968). For an application of such a criterion to measure the efficiency of an industry in Latin America, see Baer, *Brazilian Steel Industry*, 146–151.

33. See Díaz-Alejandro, *Essays*, ch. 6; also, "An Interpretation of Argentine Economic Growth Since 1930," Part I, *Journal of Development Studies* (JDS), 3: 25–28 (1966).

34. A recent article by Samuel A. Morley and Gordon W. Smith, "On the Measurement of Import Substitution," AER, 60: 728–735 (1970), challenges the usual measurements of import substitution. These underestimate ISI if imports are replaced without induced rises in imported inputs. The authors develop a formula for appropriate corrections.

35. This situation has been well described by David Felix, "The Dilemma of Import Substitution—Argentina," In: *Development Policy: Theory and Practice*, Gustav F. Papanek, ed., 60–61 (Cambridge, Mass., 1968): "As the consumer-goods phase of ISI is succeeded by a predominantly capital- and intermediate-goods phase, three sets of forces close in on the strategy. The import mix shifts predominantly to one of fuels, industrial materials, essential food-stuffs, and capital goods required by the industrial sector. The capital intensity of import-substituting projects rises, resulting in a rising import content of investment and



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causing the level of investment to be more severely constrained by the capacity to import. The projects tend to require increasingly large markets in order to reach minimum efficient scale, so that the ability of ISI to induce investment is progressively weakened by the thin domestic markets of even the larger Latin American countries." See also Díaz-Alejandro, "On the Import Intensity of Import Substitution," *Kyklos*, 18: 495–511 (1965), who stresses the fact that rapid ISI raises income before investments mature, resulting in an increase in imports. See also Maria Conceição Tavares, "Auge y declinación del proceso de substitución de importaciones en el Brasil," *Boletín Económico de America Latina*, 9: 1–59 (1964).

36. John Sheahan, "Imports, Investment, and Growth—Colombia," In: *Development Policy: Theory and Practice*, 97–99. See also Jaroslav Vanek, *Estimating Foreign Resource Needs for Economic Development* (New York, 1967). For Argentina, see Díaz-Alejandro, *Essays*, ch. 7.

37. Leff, "Export Stagnation and Autarkic Development in Brazil," QJE, 81: 286–301 (1967); Little, Scitovsky, and Scott, *Industry and Trade*, ch. 7.

38. One should, of course, take into account the fact that the industrial growth stimulates both direct and indirect employment. Thus, not all employment growth in the service sector can be looked upon as residual; i.e., a sector into which people go if they cannot find employment in industry. Many government financial and commercial services grow in a fashion complementary to industry. It is obvious, however, that the extremely high rates of growth of employment in services in Latin America reflects a large proportion of residual labor absorption. Interesting analyses and data on employment in Latin America can be found in Raúl Prebisch, *Transformación y desarrollo: la gran tarea de América Latina* (Washington, D.C., 1970); also in ILO, *Hacia el pleno empleo: un programa para Colombia* (Geneva, 1970).

39. Little, Scitovsky, and Scott, *Industry and Trade*, ch. 3; Henry J. Bruton, "The Import Substitution Strategy of Economic Development: A Survey of Findings," 17 (Mimeographed Research Memorandum No. 27, Williams College, Williamstown, Mass., 1969); Baer and Michel Hervé, "Employment and Industrialization in Developing Countries," QJE, 80: 88–107 (1966); Benjamin Cohen and Nathaniel Leff, "Employment and Industrialization: Comment," QJE, 81: 162–164 (1967); Baer and Hervé, "Employment and Industrialization: Reply," QJE, 81: 532–533 (1967).

40. Little, Scitovsky, and Scott, *Industry and Trade*, 41–47; W. Baer and Andrea Maneschi, "Import-Substitution, Stagnation and Structural Change: An Interpretation of the Brazilian Case," JDA, 5: 177–192 (1971); King, *Mexico: Industrialization*, 26–32; Naciones Unidas, *El desarrollo económico y la distribución del ingreso en la Argentina* (New York, 1968); ILO, *Hacia el pleno empleo*, ch. 10.

41. Although capacity utilization data are rare because of capacity measurement difficulties, some evidence of underutilization can be found in the following sources: Baer and Maneschi, "Import Substitution," and "Industrial Development in Latin America," *Economic Bulletin for Latin America*, 14: 2: 14–15 (1969); Little, Scitovsky, and Scott, *Industry and Trade*, 93–99; Baer, *The Development of the Brazilian Steel Industry*, 89.

42. For a discussion of regional imbalances in the Brazilian context, see Baer, *Industrialization*, 163–185.

43. For a thorough survey and analysis of the potential effect of income redistribution in Latin America, see William R. Cline, *The Potential Effect of Income Redistribution on Economic Growth in Six Latin American Countries* (mimeographed; Discussion Paper No. 13, Research Program in Economic Development, Princeton, N.J., 1970).



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44. Nicholas Georgescu-Roegen first raised this question in an article published in Brazil, "Inflação estrutural e o crescimento economico," RBE, 22: 5–14 (1968); since then he has published an expanded version in English: "Structural Inflation-Lock and Balanced Growth," *Economies et Sociétés*, Cahier de L'I.S.E.A., Tome IV: 3 (Geneva, 1970). An interesting model of growth and stagnation based on Georgescu-Roegen's original idea is contained in Francisco Lopes, "Subsidios a formulação de um modelo de desenvolvimento e estagnação no Brasil," RBE, 23: 59–78 (1969).

45. An alternative might be a change in the demand profile of lower income groups. A good example of this was the boom in automobile sales in Brazil in the late Sixties. This boom was mainly due to the rise of "consorcios." This is an ingenious device which was invented to create credit for buying cars. Under a typical scheme, a group of, say, 24 people get together to buy a Volkswagen. Each member of the consorcio agrees to pay every month 1/24th of the price of a VW into a kitty and every month a VW is bought. Payments are readjustable for inflationary rates. Thus, each month one member gets a VW, but everyone continues to pay for 24 months, until everyone has received his VW. The doubt which can be raised about this scheme is whether the opportunity cost to the economy is not too great. People buying cars will forego buying many other goods (often wage goods) and many will forego saving.

46. It could be claimed that the "structural lock" problem is not important since imbalances between the demand and productive profiles are eliminated over time as investment takes place in shortage areas. However, given the huge amounts of excess productive capacity which was referred to earlier, this problem cannot be disregarded on the basis of long-run adjustments.

47. I would like to thank David Felix for pointing this out. Also see his article "The Dilemma of Import Substitution—Argentina," 65–70.

48. Joel Bergsman and Arthur Candal, "Industrialization: Past Success and Future Problems," In: *The Economy of Brazil*, Howard S. Ellis, ed., 47 (Berkeley and Los Angeles, 1969).

49. Given their many special economic and political circumstances, it is doubtful whether the examples of Taiwan, Korea, or Hong Kong can be taken as proofs that the Latin American economies were not in a dilemma.

50. Erroneous price policies in the late Forties when Brazil still dominated the world coffee market had nothing to do with the argument that agriculture was sacrificed. A valid argument might be that Brazil neglected the use of resources to invest in a new type of agriculture which would diversify agricultural exports. Although this would have been a correct policy to follow, it would not have been a substitute for ISI.

51. Baer, *The Development of the Brazilian Steel Industry*, ch. 2.

52. "Industrial Development in Latin America," *Economic Bulletin for Latin America*, 14: 12 (1969). In an interesting study of Peruvian industries, Christopher Clague found that labor intensive industries are less efficient than capital intensive ones. He finds this discouraging since labor intensive industries produce more easily exportable products. "The Determinants of Efficiency in Manufacturing Industries in an Underdeveloped Country," EDCC, 18: 188–205 (1970).

53. I have developed this point in "Sobre os usos e abusos da teoria economica," RBE, 22: 72–83 (1968).

54. For a discussion of such "complementation agreements" in Latin America, see GATT, *International Trade 1968*, 63–74 (Geneva, 1969).



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55. A good critical appraisal of Latin American integration possibilities can be found in Keith Griffin, *Underdevelopment in Spanish America*, ch. VI (Cambridge, Mass., 1970). The best and most extensive empirical work on specialization possibilities within a Latin American common market has been done by a group of Latin American research institutes (collectively known as ECIEL) led by Joseph Grunwald of The Brookings Institution. Results were presented at a Conference on Research in Income and Wealth of the National Bureau of Economic Research by Joseph Grunwald and Jorge Salazar under the title, "Economic Integration, and Price and Value Comparisons in Latin America" and published in *International Comparisons of Prices and Real Income: Studies in Income and Wealth*, D. J. Daley, ed. (N.Y., 1972).

56. In his interesting study, "The Potential Effect of Income Redistribution on Economic Growth in Six Latin American Countries" 95 (mimeographed, Discussion Paper No. 13, Princeton, 1970), William Cline found that "Using the estimated income distributions and consumption function estimates from family budget studies, simulation exercises suggested that for Argentina, Brazil, Mexico and Venezuela income redistributions toward equality of the level found in Britain would cost on the order of 1% annual growth in GNP. . . ."

## BIBLIOGRAPHY


BAER, WERNER

1962 The Puerto Rican Economy and U.S. Economic Fluctuations. Río Piedras.

1965 Industrialization and Economic Development in Brazil. Homewood, Ill.

1969 The Development of the Brazilian Steel Industry. Nashville, Tenn.

BAER, WERNER AND I. KERSTENETZKY

1971 The Brazilian Economy in the Sixties. In: Brazil in the Sixties. Riordan Roett, ed. Nashville, Tenn.

BAER, WERNER AND A. MANESCHI

1971 Import-Substitution, Stagnation and Structural Change: An Interpretation of the Brazilian Case. The Journal of Developing Areas (JDE). Jan.

BARANSON, JACK

1969 Automotive Industries in Developing Countries. Baltimore. (Includes analysis of Argentinian, Brazilian, and Mexican Industries.)

BERGSMAN, JOEL

1970 Brazil: Industrialization and Trade Policies. N.Y.

BRUTON, HENRY J.

1967 Productivity Growth in Latin America. American Economic Review (AER). Dec.

1968 Import Substitution and Productivity Growth. Journal of Development Studies (JDS). April.

1968 Export Growth and Import Substitution. Research Memorandum No. 22. Williams College, Center for Development Economics. Williamstown, Mass.

1969 The Import Substitution Strategy of Economic Development: A Survey of Findings. Research Memorandum No. 27. Williamstown. (This is a survey of the findings of Williams College economists studying ISI in various parts of the world, including Latin America. The inclination of this survey and most Williams College researchers is more towards what I have called the "market critics.")

BRODERSOHN, MARIO S., ed.

1970 Estrategias de industrialización para la Argentina. Buenos Aires. (This volume contains articles both on ISI problems of Argentina and also on the general nature of ISI and its related problems.)

CILINGIROGLU, AYHAN

1969 Manufacture of Heavy Electrical Equipment in Developing Countries. Baltimore. (Includes considerable information on Brazil, Argentina, and Mexico.)




https://doi.org/10.1017/S0023879100041224 Published online by Cambridge University Press

CLAGUE, CHRISTOPHER
1970 The Determinants of Efficiency in Manufacturing Industries in an Underdeveloped Country. Economic Development and Cultural Change (EDCC). Jan. (Efficiency in Peruvian industries.)

CLARK, PAUL G.
1967 Brazilian Import Liberalization. Research Memorandum No. 14. Williamstown, Mass. Sept.
1967 Import Demand Functions for Brazil. Research Memorandum No. 15. Williamstown, Mass.

CLARK, PAUL G. AND RICHARD WEISSKOFF
1967 Import Demands and Import Policies in Brazil. Research Memorandum No. 8. Williamstown, Mass. Feb.

CLINE, WILLIAM R.
1970 The Potential Effect of Income Redistribution on Economic Growth in Six Latin American Countries. Mimeographed Discussion Paper No. 13. Princeton.

DEAN, WARREN
1969 The Industrialization of São Paulo, 1880–1945. Austin, Tex.

DEVRIES, BAREND A.
1967 The Export Experience of Developing Countries. Baltimore. (DeVries' statistical analysis also covers most Latin American countries.)

DIAZ-ALEJANDRO, CARLOS F.
1965 On the Import Intensity of Import Substitution. Kyklos. 18: 495–511.
1966–67 An Interpretation of Argentine Economic Growth Since 1930. JDS. Oct. and Jan.
1970 Essays on the Economic History of the Argentine Republic. New Haven.

DORFMAN, ADOLFO
1967 La industrialización en la América Latina y las políticas de fomento. México.

ELLIS, HOWARD S., ed.
1969 The Economy of Brazil. Berkeley and Los Angeles. (See especially articles by Bergsman and Candal, "Industrialization: Past Success and Future Problems"; and by Samuel A. Morley, "Import Demand and Import Substitution in Brazil.")

FELIX, DAVID
1968 The Dilemma of Import Substitution—Argentina. In: Development Policy: Theory and Practice. Cambridge, Mass.
1969 Economic Development: Take Offs into Unsustained Growth. Social Research: 36: 2.
1970 Monetarists, Structuralists, and Import-Substituting Industrialization: A Critical Appraisal. In: Inflation and Growth in Latin America. Baer and Kerstenetzky, eds. Homewood, Ill. New printing, Cambridge, Mass.

FERRER, ALDO
1963 La economía Argentina. México/Buenos Aires.

FURTADO, CELSO
1963 The Economic Growth of Brazil. Berkeley and Los Angeles.
1966 Subdesenvolvimento e estagnação na America Latina. Rio de Janeiro.
1968 Um projeto para o Brasil. Rio de Janeiro.
(For a summary of Furtado's ideas on growth and stagnation in Latin America which are elaborated in various publications of his, see W. Baer, "Furtado on Development: A Review Essay," JDA, Jan. 1969.)

FURTADO, CELSO AND A. MANESCHI
1968 Um modelo de simulação de desenvolvimento e estagnação na America Latina. RBE. June.

GENERAL AGREEMENT ON TARIFFS AND TRADE (GATT)
International Trade. (Annual volumes which contain excellent information on the performance of less developed countries in world markets.)



https://doi.org/10.1017/S0023879100041224 Published online by Cambridge University Press

GEORGESCU-ROEGEN, NICHOLAS
1970 Structural Inflation-Lock and Balanced Growth. Economies e Sociétés. 4: 3. Geneva.
GRIFFIN, KEITH
1970 Underdevelopment in Spanish America. Cambridge, Mass.
GRUNWALD, JOSEPH
1970 Some Reflections on Latin American Industrialization Policies. Journal of Political Economy (JPE). 78: 4: 826–856.
GRUNWALD, JOSEPH AND JORGE SALAZAR
1972 "Economic Integration, and Price and Value Comparisons in Latin America." In: International Comparisons of Prices and Real Income: Studies in Income and Wealth. D. J. Daly, ed. N.Y.
GRUNWALD, JOSEPH AND PHILIP MUSGROVE
1970 Natural Resources in Latin American Development. Baltimore.
HARBERGER, A. C.
1970 Economic Policy Problems in Latin America: A Review. JPE. July/Aug., Part II.
HIRSCHMAN, ALBERT O.
1958 The Strategy of Economic Development. New Haven.
1968 The Political Economy of Import-Substituting Industrialization. QJE. Feb.
HUDDLE, DONNALD
1969 Postwar Brazilian Industrialization: Growth Patterns, Inflation, and Sources of Stagnation. In: The Shaping of Modern Brazil. Eric N. Baklanoff, ed. Baton Rouge.
HUNT, SHANE J.
1969 Distribution, Growth, and Government Economic Behavior in Peru. (Mimeographed). Princeton.
INTERNATIONAL LABOR ORGANIZATION
1970 Hacia el pleno empleo: Un programa para Colombia preparado por una misión internacional organizada por la Oficina Internacional del Trabajo. Geneva.
INTER-AMERICAN DEVELOPMENT BANK
1970 Socio-Economic Progress in Latin America. Ninth Annual Report, 1969. Washington, D.C.
(This issue contains a general review of Latin American economies in the Sixties.)
JOHNSON, LELAND J.
1967 Problems of Import Substitution: The Chilean Automobile Industry. EDCC. Jan.
KAFKA, ALEXANDRE
1961 The Theoretical Interpretation of Latin American Economic Development. In: Economic Development for Latin America. Howard Ellis and Henry Wallich, eds. N.Y.
KING, TIMOTHY
1970 Mexico: Industrialization and Trade Policies Since 1940. N.Y.
LEFF, NATHANIEL
1968 The Brazilian Capital Goods Industry, 1929–1964. Cambridge, Mass.
1967 Export Stagnation and Autarkic Development in Brazil. QJE. May.
LITTLE, IAN, TIBOR SCITOVSKY AND MAURICE SCOTT
1970 Industry Trade in Some Developing Countries. N.Y.
LOPES, FRANCISCO
1969 Subsidios a formulação de um modelo de desenvolvimento e estagnação no Brasil. RBE. June.
MAMALAKIS, MARKOS
Growth and Structure of the Chilean Economy: 1840–1968.
(Mimeographed; soon to be published by Yale University Press).
MAMALAKIS, MARKOS AND CLARK W. REYNOLDS
1965 Essays on the Chilean Economy. Homewood, Ill.



https://doi.org/10.1017/S0023879100041224 Published online by Cambridge University Press

MACARIO, SANTIAGO
1965 Protectionism and Industrialization in Latin America. Economic Bulletin for Latin America. March.
MORLEY, SAMUEL A. AND GORDON W. SMITH
1970 On the Measurement of Import Substitution. AER. Sept.
MOSK, SANFORD A.
1954 Industrial Revolution in Mexico. Berkeley and Los Angeles.
MUÑOZ, OSCAR
1968 An Essay on the Process of Industrialization in Chile Since 1914. Yale Economic Essays. Fall.
PELAEZ, CARLOS M.
1968 The State, the Great Depression and the Industrialization of Brazil. (Unpublished Ph.D. dissertation, Columbia University). N.Y.
1968 A balança comercial, a grande depressão e a industralização Brasileira. RBE. Mar.
1969 Açerca de politica governamental, da grande depressão e da industrialização no Brasil. RBE. Jul./Set.
1970 O desenvolvimento da industria do aço no Brasil. RBE. Abr./Jun.
PREBISCH, RAUL
1970 Transformación y desarrollo: la gran tarea de América Latina. Banco Interamericano de Desarrollo. Washington, D.C.
REYNOLDS, CLARK W.
1970 The Mexican Economy: Twentieth Century Structure and Growth. New Haven.
ROBOCK, STEFAN H.
1970 Industrialization through Import-Substitution or Export Industries: A False Dichotomy. In: Industrial Organization and Economic Development. J. W. Markham and G. F. Papanek, eds. Boston.
SHEAHAN, JOHN
1968 Imports, Investment, and Growth. In: Development Policy: Theory and Practice. Gustav F. Papanek, ed. Cambridge, Mass.
1969 Criteria for Investment Allocation in Colombia. Center for Development Economics Research Memorandum No. 33. Williamstown. Nov.
SCHYDLOWSKY, DANIEL M.
1967 From Import Substitution to Export Promotion for Semi-Grown-Up Industries: A Policy Proposal. JDS. July.
SCITOVSKY, TIBOR
1969 Prospects for Latin American Industrialization within the Framework of Economic Integration: Bases for Analysis. In: The Process of Industrialization in Latin America. Inter-American Development Bank, Washington, D.C.
STEIN, STANLEY AND BARBARA H. STEIN
1970 The Colonial Heritage of Latin America. N.Y.
STRASSMANN, W. Paul.
1968 Technological Change and Economic Development: The Manufacturing Experience of Mexico and Puerto Rico. Ithaca, N.Y.
TAVARES, MARIA CONÇEICÁO
1964 Auge y declinación del proceso de sustitución de importaciones en el Brasil. Boletín Económico de América Latina. Mar.
TENDLER, JUDITH
1968 Electric Power in Brazil: Entrepreneurship in the Public Sector. Cambridge, Mass.
UNITED NATIONS ECONOMIC COMMISSION FOR LATIN AMERICA (ECLA)
1965 The Process of Industrialization in Latin America. N.Y.
1969 Industrial Development in Latin America. Economic Bulletin for Latin America. 14: 2: 1–77.



https://doi.org/10.1017/S0023879100041224 Published online by Cambridge University Press

UNCTAD
1968 Trade Prospects and Capital Needs of Developing Countries. N.Y.
VANEK, JAROSLAV
1967 Estimating Foreign Resource Needs for Economic Development. N.Y. (Case Study of Colombia.)
VERNON, RAYMOND
1963 The Dilemma of Mexico's Development. Cambridge, Mass.
1964 (editor) Public Policy and Private Enterprise in Mexico. Cambridge, Mass.
VILLELA, ANIBAL V.
1971 Fontes de crescimento da economia Brasileira. (Mimeographed.)



https://doi.org/10.1017/S0023879100041224 Published online by Cambridge University Press