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The Political Economy of Import-Substituting Industrialization in Latin America

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Source: *The Quarterly Journal of Economics*, Vol. 82, No. 1 (Feb., 1968), pp. 1-32

Published by: [Oxford University Press](#)

Stable URL: <http://www.jstor.org/stable/1882243>

Accessed: 30/09/2013 13:59

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THE QUARTERLY JOURNAL OF ECONOMICS

Vol. LXXXII

February 1968

No. 1

THE POLITICAL ECONOMY OF IMPORT-SUBSTITUTING INDUSTRIALIZATION IN LATIN AMERICA *

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Introduction: Disenchantment with industrialization in Latin America, 1.—I. Four impulses of import-substituting industrialization (ISI), 4.—II. Characteristics of the initial phase of ISI: industrialization by tightly separated stages, 6; “late” vs. “late late” industrialization, 8; the sources of entrepreneurship, 9; the exuberant phase of ISI and its political consequences, 11.—III. The alleged exhaustion of ISI, 13; a naive and a semi-naive exhaustion model, 13; criticism of the semi-naive model: the importance of policy, 14.—IV. Economic, political and technological determinants of backward linkage, 17.—V. The inability to export manufactures: “structural” causes and remedies, 24.—Conclusion, 31.

INTRODUCTION: DISENCHANTMENT WITH INDUSTRIALIZATION IN LATIN AMERICA

Not long ago, industrialization ranked high among the policy prescriptions which were expected to lead Latin America and other underdeveloped areas out of their state of economic, social and political backwardness. In the last few years, however, considerable disenchantment with this particular solution of the development problem has set in. The present paper will survey some characteristics of “import-substituting industrialization” (ISI) in an attempt to appraise its evolution and the principal difficulties it has encountered. Some purely economic aspects of the problem will be discussed, but particular attention has been directed to interrelations with social and political life. The ease with which such inter-

* A preliminary version of this paper formed the subject of public lectures given in the summer of 1967 at Rio de Janeiro under the auspices of the Sociedade Brasileira de Instrução and at Bogotá under those of Colombia's National Planning Department and Harvard's Development Advisory Service. I am grateful to Christopher Clague, Gottfried Haberler, Nathan Rosenberg, Henry Rosovsky, Daniel Schydlovsky, Judith Tendler, and Raymond Vernon for detailed comments.

relations could be suggested — mostly in the form of tentative and untested hypotheses — indicates serious neglect by social scientists of a fertile terrain.

To set the stage for our inquiry it is useful to illustrate, through quotes from Latin America's most prominent economists, the change in attitude toward industrialization as a cure of the area's ills. In his well-known "manifesto" of 1949 Raúl Prebisch said:

Formerly, before the great depression, development in the Latin-American countries was stimulated from abroad by the constant increase of exports. There is no reason to suppose, at least at present, that this will again occur to the same extent, except under very exceptional circumstances. These countries no longer have an alternative between vigorous growth along those lines and internal expansion through industrialization. Industrialization has become the most important means of expansion.¹

Thirteen years later, Prebisch wrote another basic paper on Latin America, in a sense his farewell message to his Latin American friends upon assuming his new post as Secretary-General of the United Nations Conference on Trade and Development. Here industrialization is presented in a rather different light:

An industrial structure virtually isolated from the outside world thus grew up in our countries . . . The criterion by which the choice was determined was based not on considerations of economic expediency, but on immediate feasibility, whatever the cost of production . . . tariffs have been carried to such a pitch that they are undoubtedly — on an average — the highest in the world. It is not uncommon to find tariff duties of over 500 per cent.

As is well known, the proliferation of industries of every kind in a closed market has deprived the Latin American countries of the advantages of specialization and economies of scale, and owing to the protection afforded by excessive tariff duties and restrictions, a healthy form of internal competition has failed to develop, to the detriment of efficient production.²

If we take a look at the writings of Celso Furtado, the shift in the climate of opinion stands out even more starkly. In 1960, after a decade or more of rapid industrial advance, Furtado celebrated the resulting "transfer of decision centers" from abroad to Brazil in almost lyrical terms:

By now the Brazilian economy could count on its own dynamic element: industrial investments supported by the internal market. Growth quickly became two-dimensional. Each new impulse forward would mean an increasing structural diversification, higher productivity levels, a larger mass of resources

1. *The Economic Development of Latin America and Its Principal Problems* (New York: United Nations, 1950), p. 6.

2. *Towards a Dynamic Development Policy for Latin America* (New York: United Nations, 1963) p. 71.

for investment, a quicker expansion of the internal market, and the possibility of such impulses being permanently surpassed.³

Only six years later, after Brazil had suffered a series of political and economic setbacks, a disillusioned Furtado wrote:

In Latin America . . . there is a general consciousness of living through a period of decline. . . . The phase of 'easy' development, through increasing exports of primary products *or through import substitution* has everywhere been exhausted.⁴

Considering these two pairs of quotes one could easily conclude that we have here an instance of the acceleration of history. The phase of export-propelled growth (*crecimiento hacia afuera*) in Latin America lasted roughly from the middle of the nineteenth century until the Great Depression; and it took another twenty years, from 1929 to the Prebisch manifesto of 1949, before the end-of-export-propelled-growth became official Latin American doctrine. Then came the next phase of Latin American growth, *crecimiento hacia adentro* or growth via the domestic market. It gathered strength during the Depression and World War II, flourished briefly in both theory and practice during the fifties and was pronounced either dead or a dud in the sixties. It looks, therefore, as though the acceleration of technical progress in the developed countries were matched in the underdeveloped ones by an increasingly rapid accumulation of failures in growth experiences!

As will be seen, there may be considerable exaggeration in the announced failure of import-substituting industrialization just as, in spite of the supposed demise of export-propelled growth, Venezuela, Ecuador, Peru, and Central America achieved notable economic gains in the two postwar decades through rapidly growing exports of petroleum, bananas, fishmeal, and cotton, respectively. While *fracasomania*, or the insistence on having experienced yet another failure, certainly has its share in the severity of the recent judgments on industrialization, the widespread criticism of ISI — in Pakistan and India very similar problems are being discussed — indicates that there is real substance to the concern that is being expressed. But the rapidity of the reversal in the climate of opinion

3. Celso Furtado, "The Brazilian Economy in the Middle of the Twentieth Century," Industrial Conference on Science in the Advancement of New States, Israel, 1960 (mimeo), p. 5.

4. "U.S. Hegemony and the Future of Latin America," *The World Today*, Vol. 22 (Sept. 1966), p. 375. My italics. — Detailed critiques of the ISI process in Latin America can be found in two influential articles: "The Growth and Decline of Import Substitution in Brazil," and Santiago Macario, "Protectionism and Industrialization in Latin America," both in *Economic Bulletin for Latin America*, IX (Mar. 1964), 1-61 and 62-102.

makes one rather suspect that ISI had, *from its very onset*, both positive and negative aspects, with the latter simply coming into view a few years after the former. Our inquiry will therefore start out with a brief survey of the principal characteristics which set off ISI from other types of industrialization.

I. FOUR IMPULSES OF IMPORT-SUBSTITUTING INDUSTRIALIZATION (ISI)

Wars and depressions have historically no doubt been most important in bringing industries to countries of the "periphery" which up to then had firmly remained in the nonindustrial category. The crucial role of the two World Wars and of the Great Depression in undermining acceptance of traditional ideas about the international division of labor between advanced and backward countries is well known.⁵ But industrialization has not only been the response to sudden deprivation of imports; it has taken place in many erstwhile nonindustrial countries as a result of the gradual expansion of an economy that grows along the export-propelled path. As incomes and markets expand in such a country and some thresholds at which domestic production becomes profitable are crossed, industries come into being without the need of external shocks or governmental intervention — a process I have described as "import-swallowing"⁶ and which has been perhaps more aptly termed industrialization through "final demand linkage," as distinct from the continuation of the process via backward and forward linkage effects.⁷ Gradual import substitution in response to the growth of domestic markets accounts for the widespread establishment of industries which have substantial locational advantages because of the weightiness of the product (cement, beer) and of

5. Apparently even earlier crises had positive effects on industrial growth in Latin America. The following quote is instructive: "There is no ill wind that does not blow some good . . . the crisis the country is going through is tremendous — and yet this is a perfect wind for national industry. Many of our industries have had a more or less vigorous protection through customs duties. But all of this would not have been enough had it not been for the crisis of 1875 which gave the impulse to industry and for that of 1890 which strengthened and diffused it." Quoted from *El Nacional* in Adolfo Dorfman, *Desarrollo industrial en la Argentina* (Rosario, 1941), p. 11. My translation.

6. *The Strategy of Economic Development* (New Haven: Yale University Press, 1958), Chap. 7.

7. See Melville H. Watkins, "A Staple Theory of Economic Growth," *Canadian Journal of Economics and Political Science*, Vol. 29 (May 1963), pp. 141–58, and Richard E. Caves, "Vent-for-Surplus Models of Trade and Growth" in *Trade, Growth and the Balance of Payments*, Essays in honor of Gottfried Haberler (Chicago: Rand-McNally, 1965), pp. 95–115.

those whose market is large even at low per capita incomes such as textiles.

Over the past two decades import-substituting industrialization has, of course, no longer been exclusively a matter of natural market forces reacting to either gradual growth of income or to cataclysmic events, such as wars and depressions. It has been undertaken in many countries as a matter of deliberate development policy, carried out no longer just by means of protective duties, but through a wide array of credit and fiscal policy devices, through pressures on foreign importing firms to set up manufacturing operations as well as through direct action: the establishment of state-owned industries or, increasingly, of development corporations or banks which are then entrusted with the promotion of specific ventures.

It is useful to keep in mind these distinct origins of ISI — wars, balance-of-payments difficulties, growth of the domestic market (as a result of export growth) and official development policy — in focusing on the distinctive characteristics of the process.

Clearly, there is not just *one* ISI process. An industrialization that takes place in the midst and as a result of export growth has a wholly different *Gestalt* from one that feeds on foreign exchange deprivation. For example, in the latter situation it seems much more likely that inflationary developments will accompany the industrialization process than in the former. Or, to proceed to one of the alleged — and often criticized — characteristics of the industrialization process itself, namely its tendency to concentrate on nonessential, luxury-type goods. This tendency to give importance to what is unimportant will be present only when the primary impulse to industrialization arises out of unexpected balance-of-payments difficulties which are fought routinely by the imposition of quantitative import controls. The controls will aim at permitting continued supply of the more essential goods traditionally imported at the cost of shutting out nonessentials and will thus cause domestic production of the latter to become especially profitable.

It is easy, however, to make too much of this situation. Of the four motive forces behind ISI — balance-of-payments difficulties, wars, gradual growth of income, and deliberate development policy — only the first leads to a bias in favor of nonessential industries. The last, deliberate development policy, is likely to produce exactly the opposite bias; and the remaining two causes are neutral with respect to the luxury character of the industry. Wars cause interruption of, or hazards for, *all* international commodity

flows, essential or nonessential, and therefore provide a general unbiased stimulus to domestic production of previously imported goods. The same is true for the stimulus emanating from the gradual growth of markets. It seems likely, therefore, that the role of non-essential goods within the total ISI process has been exaggerated by the "new" critics who, in stressing this role, sound almost like the old-line Latin American laissez-faire advocates who were forever inveighing against the introduction of "exotic" industries into their countries.

II. CHARACTERISTICS OF THE INITIAL PHASE OF ISI

Industrialization by tightly separated stages

No matter what its original impulse, ISI starts predominantly with the manufacture of finished consumer goods that were previously imported and then moves on, more or less rapidly and successfully, to the "higher stages" of manufacture, that is, to intermediate goods and machinery, through backward linkage effects. The process can and does start here and there with capital or even intermediate goods insofar as such goods are imported prior to any industrialization because they are needed in connection with agricultural or transportation activities. Machetes, coffee hulling machines, trucks and fertilizers are examples. In the textile industry, the crushing superiority of machine spinning over hand spinning, combined with a lesser advantage of machinery in weaving, has made sometimes for the installation of spinning mills ahead of weaving mills, especially in countries where a strong handweaving tradition had not been previously destroyed by textile imports from the industrial leaders.

But the bulk of new industries are in the consumer goods sector and as they are undertaken in accordance with known processes, on the basis of imported inputs and machines, industrialization via import substitution becomes a *highly sequential*, or *tightly staged*, affair. Herein lies perhaps its principal difference from industrialization in the advanced countries. This aspect is so familiar and seemingly inevitable that it has not received quite the attention it deserves. It is the basic reason for which the ISI process is far smoother, less disruptive, but also far less learning-intensive than had been the case for industrialization in Europe, North America, and Japan.

This is not the place for renewing the discussion over the advantages or drawbacks of an early or late start in industrialization.

Suffice it to point out, however, that those who have stressed the advantages of a late start have often had in mind the ability of newcomers to jump with both feet into a newly emerging dynamic industrial sector (as Germany did with chemicals) instead of remaining bogged down in sectors that had long passed their prime (as England in textiles and railways construction). But the "late late-comers" with whom we are concerned here are not apt to jump in this fashion. Industrialization is here at first wholly a matter of imitation and importation of tried and tested processes. Consider by way of contrast the following description of the establishment of new industries in advanced countries:

Young industries are often strangers to the established economic system. They require new kinds or qualities of materials and hence make their own; they must overcome technical problems in the use of their products and cannot wait for potential users to overcome them; they must persuade customers to abandon other commodities and find specialized merchants to undertake the task. These young industries must design their specialized equipment and often manufacture it. . . .⁸

Not much of this travail occurs when a new industry is introduced into the "late late" starting countries. It is in this connection that one must be on guard against studies purporting to show that the history of industrialization is substantially the same in all countries, working its way from light consumer goods industries, to heavy and capital goods industries, and eventually to consumer durables. The apparently similar pattern of the earlier and "late late" industrializers in this respect conceal an essential qualitative difference. Even when the earlier industrializers were predominantly in the light consumer goods stage (from the point of view of labor force or value added), they were already producing *their own* capital goods, if only by artisan methods. As Marx wrote: "There were mules and steam-engines before there were any labourers whose exclusive occupation it was to make mules and steam-engines; just as men wore clothes before there were tailors."⁹ But the "late late" industrializers will *import*, rather than make, their clothes until such time as they are able to set up a tailor in business all by himself. This situation forecloses, of course, for a considerable time any fundamental adaptation of technology to the characteristics of the importing countries, such as the relative abundance of labor

8. George Stigler, "The Division of Labor is Limited by the Extent of the Market," *Journal of Political Economy*, LIX (June 1951), 190.

9. *Kapital*, I, (Wien-Berlin, 1932), 399. This passage and the previous one by Stigler were brought to my attention by Nathan Rosenberg's article "Capital Goods, Technology, and Economic Growth," *Oxford Economic Papers*, Vol. 15 (Nov. 1963), pp. 223-24.

in relation to capital. Whether and to what extent such an adaptation is desirable is an idle question under these circumstances; given the sequential pattern of industrialization, there is remarkably little choice. ISI thus brings in complex technology, but without the sustained technological experimentation and concomitant training in innovation which are characteristic of the pioneer industrial countries.

"Late" vs. "late late" industrialization

The "late late" industrialization sketched so far may be contrasted not only with that of the presently advanced industrial countries in general, but particularly with that of the so-called latecomers among them. The "late" industrialization of countries like Germany, Italy and Russia has been depicted by Gerschenkron through the following propositions:

1. The more backward a country's economy, the more likely was its industrialization to start discontinuously as a sudden great spurt proceeding at a relatively high rate of growth of manufacturing output.
2. The more backward a country's economy, the more pronounced was the stress in its industrialization on bigness of both plant and enterprise.
3. The more backward a country's economy, the greater was the stress upon producers' goods as against consumers' goods.
4. The more backward a country's economy, the heavier was the pressure upon the levels of consumption of the population.
5. The more backward a country's economy, the greater was the part played by special institutional factors designed to increase the supply of capital to the nascent industries and, in addition, to provide them with less decentralized and better informed entrepreneurial guidance; the more backward the country, the more pronounced was the coerciveness and comprehensiveness of those factors.
6. The more backward a country, the less likely was its agriculture to play any active role by offering to the growing industries the advantages of an expanding industrial market based in turn on the rising productivity of agricultural labor.¹

Of these six characteristics only the last one applies unconditionally to the late late industrializers. Special institutions designed to supply capital and entrepreneurial guidance (point 5), became important in most of Latin America after the ISI process had already been underway as a result of private, decentralized initiative for a considerable time. As to the remaining four points, almost the opposite could be said to hold for our late latecomers. Their industrialization started with relatively small plants adminis-

1. Alexander Gerschenkron, *Economic Backwardness in Historical Perspective* (Cambridge, Mass.: Harvard University Press, 1962), pp. 343-44.

tering "last touches" to a host of imported inputs, concentrated on consumer rather than producer goods, and often was specifically designed to improve the levels of consumption of populations who were suddenly cut off, as a result of war or balance-of-payments crises, from imported consumer goods to which they had become accustomed. Even though the rates at which new plants were built and at which their output expanded were often respectable, the process thus lacked some of the essential characteristics of Gerschenkron's "great spurt."

As a result, late late industrialization shows little of the inspiring, if convulsive *élan* that was characteristic of the late industrializers such as Germany, Russia and Japan. This is perhaps the basic reason for the feelings of disappointment experienced by Latin American observers who had looked to industrialization for a thorough transformation and modernization of their societies.

Naturally, the difference between the two types of industrialization must not be overdrawn. At least one experience in Latin America, that of Brazil during the fifties, came fairly close to the picture drawn by Gerschenkron: sustained and rapid progress of steel, chemical and capital goods industries during this decade was here combined with a "special institutional factor designed to increase supply of capital," namely inflation, and even with the flowering of a "developmentalist" (*desenvolvimentista*) ideology.² But what looked like the hopeful beginning of a "Brazilian economic miracle" was thrown into disarray by the political crises and related economic and social setbacks of the sixties. The gloom that pervades the Latin American mood at present stems precisely from the convergence of frustrations over the unexciting character of late late industrialization in *most* Latin American countries with the despair felt over the stumblings of the *one* country whose advance had assumed the more inspiring characteristics of the "great spurt."

The sources of entrepreneurship

A number of important characteristics of late late industrialization remain to be surveyed. What has been said so far permits, first of all, some discussion of the sources of entrepreneurship. As in-

2. While not included in the six points cited above, support by a vigorous movement of ideas has been stressed elsewhere by Gerschenkron as a characteristic of late industrialization. See, for example, *op. cit.*, pp. 22-26. For a survey of developmentalist-nationalist ideas in Brazil during the fifties, see Frank Bonilla, "A National Ideology for Development: Brazil" in K. H. Silvert (ed.), *Expectant Peoples: Nationalism and Development* (New York: Random, 1963) pp. 232-64.

dustry is started primarily to substitute imports, those engaged in the foreign trade sector are likely to play a substantial role in the process. This is the reason for the industrial prominence of (a) the former importers of Lebanese, Jewish, Italian, German, etc. origin, and (b) of the large foreign firms intent on maintaining their market and therefore turning from exporters into manufacturers. Once again, however, it is useful to distinguish between an industrialization which is brought underway under conditions of expanding income from exports and one that is ignited by deprivation of previously available imports (due to war or balance-of-payments troubles). Only in the latter situation are local importers and foreign exporting firms likely to be the main promoters of industrial enterprise. When foreign exchange income is expanding, one may rather expect industrial opportunities to be exploited by indigenous entrepreneurship. Under such conditions, the importing interests are apt to be well satisfied with their lot and activity; industrial development will run clearly counter to their short-run interests, especially when it requires the imposition of even a moderate level of protection. Some evidence in support of our distinction may be cited: in both Brazil and Colombia, coffee booms in the late nineteenth and early twentieth centuries, respectively, gave rise to periods of industrial expansion led by domestic entrepreneurs who were in no way tied to the importing interests.³ The latter, on the other hand, were prominent in these and other Latin American countries during the high pressure drives toward import substitution which marked the World Wars and the Great Depression.

The importance of foreigners, of minorities or generally speaking, of non-elite-status groups in the total industrialization process has on occasion been held responsible for the fact that industrial interests do not wield in Latin America the political influence and social prestige which have been theirs in the older industrial countries. Insofar as the phenomenon is real, it can also be explained by the *kind* of industries most characteristic of the first phases of import-substituting industrialization: opinions of the owners of soft-drink bottling plants or of cosmetic or pharmaceutical industries are unlikely to command as much attention as those of steel and machinery manufacturers. In addition, the industrialists of the leading industrial countries always gained considerable influence by virtue of being exporters; as such they achieved prestige abroad,

3. Warren Dean, "The Planter as Entrepreneur: The Case of São Paulo," *The Hispanic American Historical Review*, XLVI (May 1966), 138-52; Luis Ospina Vásquez, *Industria y protección en Colombia (1810-1930)*, (Medellín: E. S. F., 1955), Chap. 8.

acquired contacts and gathered information — all accomplishments that were highly prized by their governments. This source of influence is quite unavailable to the import-substituting industrialists who are usually aiming only at supplying the domestic market.⁴

The exuberant phase of ISI and its political consequences

A final characteristic of the early phases of import — substituting industrialization is the growth pattern of the newly established industries. It has been suggested that

output curves in newly established import-substituting industries have tended to be kinked, rising rapidly when exports are being replaced, but flattening out when further growth of demand has been grounded in the growth of domestic income. Profits have also followed this kinked pattern. Thus industries have moved rapidly from high profit and growth to precocious maturity, at which point they fall back to monopolistic quiescence with lower profit rates, a reduced level of investment, and aging plant and equipment.⁵

The extent to which the kinked pattern of output growth is really a fact rather than an inference from the nature of import-substitution remains to be established. After all, newly established industries have to overcome initial production and organization problems, they encounter some sales resistance due to preference for the imported product so that the early portion of their sales data may still approximate the logistic curve which has given a good fit for the time shape of the expansion of many industries in the advanced countries.⁶ Nevertheless, it is probably legitimate to speak of a particularly “easy” phase of import substitution when the manufacturing process is entirely based on imported materials and machinery while importation of the article is firmly and effectively shut out by controls. Under such conditions, the early experience of the new manufacturers is likely to be most gratifying.

4. The proposition that the comparative lack of political power of the industrialists can be explained by the lack of industrial exports becomes perhaps more convincing when one states its positive counterpart: namely that the continuing political influence of the land-owning interests throughout the period of industrialization in Latin America is explained by the continuing almost total dependence of the capacity to import on exports of primary products. This point is made for Brazil in Francisco C. Weffort, “Estado y masas en el Brasil,” *Revista Latinoamericana de Sociología*, I (Mar. 1965), 53–71.

5. David Felix, “Monetarists. Structuralists and Import-Substituting Industrialization:” in W. Baer and I. Kerstenetzky (eds.), *Inflation and Growth in Latin America* (Homewood, Illinois: Irwin, 1964), p. 384.

6. Simon S. Kuznets, *Secular Movements in Production and Prices* (Boston: Houghton Mifflin, 1930). Arthur F. Burns, *Production Trends in the United States since 1870* (New York: National Bureau of Economic Research, 1934).

It is this phase of import substitution that gives rise to the often noted exuberance and boom atmosphere during which demand is easily overestimated. In any event, low duties or preferential exchange rates for machinery imports make for lavish orders. As a result, the new industry is likely to find itself saddled with excess capacity as soon as it reaches the kink.⁷

It is tempting to speculate about the psychological-political consequences of this pattern of industrialization. Progressive Latin Americans had long hoped that industry would introduce new, much needed disciplines into the behavior of their governments. The very nature of industrial operations — their precision, the need for exact timing, punctuality, reliability, predictability and all-around rationality — was expected to infuse these same qualities into policy-making and perhaps even into the political process itself. This sort of inference was based on the nature — or supposed nature — of industrial operations at the plant level. It disregarded, however, the larger financial and economic aspects of the process which had, of course, a much more direct and determining impact on politics. Thus the ease with which new industries were installed in spite of dire warnings and often in the midst of war and depression, the rapid growth they experienced and the handsome profits they realized during the first phases made import-substituting industry appear as a new incarnation of some primary product that would suddenly erupt with an old-fashioned world market boom. Little wonder, then, that the hoped for achievement of rationality in economic policymaking and in the political process in general failed to occur. On the contrary, the “exuberant” phase of import-substitution was accompanied by flamboyant public policies which badly overestimated the tolerance of the economy for a variety of ventures, be they income redistribution by fiat, the building of a new capital, or other extravaganzas. Here we can do no more than touch upon these matters; but it may be conjectured that in their very different ways, Perón, Kubitschek, Rojas Pinilla and Pérez Jiménez could all be considered victims of the delusions of economic invulnerability fostered by the surprising early successes and rapid penetration of industry into a supposedly hostile environment.

7. Even if expansion plans of competing firms are known all around and there is no excessive optimism, demand tends to be overestimated for two special reasons: with protection the price of the domestically produced product is going to be higher than that of the imported one; and market studies based on import statistics often overestimate the domestic market for the new domestic industry also because the statistics usually include a fair volume of specialty products which the domestic industry is unable to supply.

III. THE ALLEGED EXHAUSTION OF IMPORT SUBSTITUTION

Then, suddenly, the honeymoon was over and the recriminations began. Import-substituting industrialization was officially added, as we have seen, to the long list of certified *fracasos* in Latin American policymaking. We shall now attempt to sort out and evaluate some of the elements in this reversal of opinion.

Three principal accusations have been leveled against the industrialization process as it has appeared in Latin America:

(1) Import-substituting industrialization is apt to get "stuck" after its first successes, due to the "exhaustion of easy import substitution opportunities"; it leaves the economy with a few relatively high-cost industrial establishments and with a far more vulnerable balance of payments since imports consist now of semifinished materials, spare parts and machinery indispensably required for maintaining and increasing production and employment.

(2) Import-substituting industry is affected by seemingly congenital inability to move into export markets.

(3) The new industries are making an inadequate contribution to the solution of the unemployment problem.

In the following we shall concentrate on the first two critiques; the third cannot be adequately discussed within the limits of the present essay.

A naive and a seminaive exhaustion model

The argument on ISI getting stuck is put forward in several forms. Most frequently and crudely, the assertion is made that the process faces "exhaustion" after a certain period during which the "easy" import substitution opportunities are taken up. Exhaustion evokes the image of a natural resource available in strictly limited quantities which is being depleted; and we must ask now to what extent the image is sensible. One model which could underly the exhaustion concept is an exceedingly simple one: at any one point of time, a country imports commodities $A, B, C \dots$; the annual import volumes of these commodities are M_A, M_B, M_C, \dots . Next, one assumes the existence of economies of scale such that the minimum economic sizes of plants which are to produce these various goods can be unequivocally defined. If the annual capacities of such plants are designated by P_A, P_B, P_C, \dots then import substitution opportunities are limited to those products (say, A, C, E, \dots) for which imports (the M 's) exceed the minimum economic sizes (the P 's).

This would be a truly naive model rationalizing the exhaustion concept, and it is perhaps too much of a caricature of what the critics of import substitution have in mind. The more sophisticated among them, at least, do realize that the first steps of ISI open up new opportunities for the establishment of domestic manufactures through both income and backward linkage effects. In the first place, the domestic production of A , C , and E creates new incomes which may enlarge the market for a number of additional final demand goods to the point where their domestic production becomes, in turn, feasible. Secondly, domestic production of A , C , and E , which is *ex hypothesi* set up on the basis of imported inputs, opens up new opportunities for the establishment of domestic manufacturing facilities turning out these inputs.

The income effect is likely to result in a convergent series of new investment opportunities. Thus it postpones exhaustion in relation to the naive model, but does not overcome it. When backward linkage effects are taken into account, however, the exhaustion concept tends to evaporate unless it is bolstered by some additional assumptions.

Again a rather naive, let us call it "seminative," exhaustion model could be built up as follows. Industry A requires imported inputs $a_1, a_2, a_3, \dots a_i \dots$; industry C inputs $c_1, c_2, c_3, \dots c_i \dots$ and so on. It seems plausible that imports of any individual input, such as $M_{a_1}, M_{a_2}, M_{a_3}, \dots M_{a_i} \dots$ should be smaller than M_A had been before domestic production of A started. On the other hand, it could be surmised (and frequently is unquestioningly assumed) that minimum economic plant size *increases* as one ascends to "higher" stages of production. If this is so, then we have $P_{a_i} > P_A$ while $M_{a_i} < M_A$. Under these circumstances the chances that imports will exceed the minimum economic sizes for any large number of imported inputs for A , C and E decrease rapidly as one ascends via backward linkage toward the higher stages of production.

Criticism of the seminaive model: the importance of policy

I believe that something like this seminaive model is indeed in the minds of those who speak of exhaustion. For this reason it is useful to spell it out, for as soon as that is done, it is easy to perceive where such an exhaustion model goes wrong and what are, therefore, the requirements of an industrialization process that would "beat" exhaustion.⁸

8. One way of staving off the exhaustion predicted by the naive or semi-

Two modifications of the model serve to make it look both more realistic and less exhaustion-prone. In the first place, some of the inputs needed for the initial import-substitution industries are likely to be identically the same (steel, paper, glass are needed as intermediate inputs in a wide variety of final demand products). As a result of this *product convergence* of industrial processes the a_i 's are not always distinct from the c_i 's and e_i 's, so that imports of a number of intermediate goods may well be larger than the previous imports of final demand goods.

Secondly, it is of course not necessarily true that minimum economic plant size increases regularly as one ascends toward the higher stages of production. I am not aware of any systematic study relating to this point. But it is well known, for example, that automobile assembly plants deal with a number of suppliers and subcontractors for many needed components, just as a single steel plant will draw for its supply of coal on several mines. Large capacity plants do characterize the technology of a few important intermediate and basic products; but at every stage — particularly in the machinery and equipment industries which, in a sense, represent the "highest" stage of production — small and medium-sized establishments are also to be found.⁹

If we put these two considerations together, one particularly favorable possibility appears: minimum economic size could providentially be, and in fact often is, large in those industries for whose products (steel, glass, paper) the convergence phenomenon is important. But even apart from such a happy coincidence, the preceding considerations make the exhaustion concept lose the physical and predictable definiteness it had assumed with the previous models. It appears instead that the difficulties that may well dog the back-

naive model would be to enlarge total market size, either for *all* products through the amalgamation of several national markets, or for *some* products particularly important for industrial progress, through appropriate income redistribution within a given national market. Accordingly the formation of common markets and a redistribution of income which would result in larger domestic markets for mass-produced articles have held an important place in the discussions that arose after the "exuberant" phase of ISI was over. There can be no doubt that the creation of a larger market through either or both of these moves would contribute much to dynamic industrial growth. But we wish to argue here that they are not the only available instruments or, in other words, that market size is not as rigid and definite a barrier as the exhaustion thesis claims.

9. For striking evidence on the smallness of the typical machine tool firm in the United States and on low concentration ratios in the industry, see Murray Brown and Nathan Rosenberg, "Prologue to a Study of Patent and Other Factors in the Machine Tool Industry," *The Patent, Trademark and Copyright Journal of Research and Education*, IV (Spring 1960), 42-46. One reason for this situation is that capital/labor ratios are typically low in the machinery industry.

ward linkage process are to a considerable extent a matter of *economic environments and policies*, instead of being determined exclusively by objective quantities such as market and minimum economic plant sizes.

We have a few more words to say on the latter topics before we turn to the economic and sociopolitical reasons for which the backward linkage process may or may not get stuck. It must be recognized that one implication of the above considerations is to stress even more the importance of market size. In the seminaïve exhaustion model, market size sets definite limits to the number of industries which a given country can set up. With increasing market size, an additional number of industries, *all* of larger size than could be accommodated previously, become possible. But if one gives up the idea that minimum economic size and stage of production are closely correlated, the advantages of market size can become larger rather than smaller, for a larger market permits the installation not only of an industry requiring that market, but, *in its wake*, of a host of other plants supplying that industry; the required market size of these plants may be much smaller, but they could not be established without the prior establishment of the industry requiring the larger market and which might therefore be called the "bottleneck industry."

These considerations make us understand better the tremendous importance of market size (so well illustrated by the exceptional achievements in Latin America of Mexico and Brazil) if the backward linkage process is to be vigorous. But they also lead to some interesting policy conclusions: with the seminaïve model, the industrialization process is bound to stop at a given point. It can be likened to the ascent of a mountain which gets steeper all the time; the country is the mountain climber and the larger it (or rather its market) is, the higher up the mountain it gets. If this were really so, there would not be much point in pushing it up a bit higher through special incentives or promotion of public enterprise, and any infant industry protection should be uniform. But if we abandon the seminaïve model, the mountain alters its shape; at one point its slope does become forbiddingly steep, but then it flattens to turn up again only much later. Under those conditions it becomes exceedingly important to climb the forbidding portion (the bottleneck industry) of the mountain as then the traveling can be continued with ease for some time. In other words, the existence of the bottleneck industries is a powerful argument for special protection, or direct promotion, and even better, for efforts to export the

portion of the industry's output that cannot be accommodated by the domestic market. In any event, public policy is very much back in the saddle with this view of the industrialization process.

A further remark along similar lines. The phenomenon of product convergence can also be utilized to help a country negotiate the steeper slopes of its bottleneck industries. When an intermediate product industry faces inadequate domestic demand and cannot therefore be established on an economic scale, it is possible to canvas possibilities for setting up industries which might generate additional demands for the bottleneck industry's output. While this may be difficult in practice, the argument leads to a counsel of caution in policies directed against so-called "nonessential" industries: the demands for intermediate products emanating from these industries can be very precious in permitting *essential* intermediate product industries to be established.

IV. ECONOMIC, POLITICAL AND TECHNOLOGICAL DETERMINANTS OF BACKWARD LINKAGE

While the preceding considerations ended up by stressing the importance of policy, they were still focused on the *mechanism* of industrialization through backward linkages. We must now address ourselves directly to the political economy of the process.

The importance of market size and of an adequate supply of foreign exchange in setting some limits to the process is undoubted; nevertheless, the industrialization processes of countries which are not too dissimilar with respect to these constraints still displays considerable variation so that curiosity is aroused about the role of other factors, such as the behavior of private industrialists and of public authorities.

As is well known by now, the setting up of an industry based on imported inputs has two contradictory effects: it becomes possible, and in some to be defined ways attractive, to set up industries producing inputs for the initial industry; but at the same time, the very establishment of that industry sets up resistances against backward linkage investments. Several reasons for such resistances had already been noted in my *Strategy of Economic Development*:

The industrialist who has worked hitherto with imported materials will often be hostile to the establishment of domestic industries producing these materials. First, he fears, often with good reason, that the domestic product will not be of as good and uniform quality as the imported one. Secondly, he feels that he might become dependent on a single domestic supplier when he could previously shop around the world. Thirdly, he is concerned about domestic

competition becoming more active once the basic ingredients are produced within the country. Finally, his location may be wrong once the source of supply of the materials he uses is thoroughly altered. For all these reasons, the interests of the converting, finishing, and mixing industries are often opposed to the establishment of domestic sources of supply for the products that they convert, finish, or mix.¹

Another powerful factor making for resistance has since received much attention: high tariff protection for the initial industry combined with low or zero tariffs or preferential exchange rate treatment for the industry's inputs.² The greater the difference between the level of protection accorded to the import-substituting industry and that applying to its imported inputs, the more will the profit margin of the industry depend on *preventing* domestic production of the inputs. For it is a fair assumption that the backward linkage industries would, once established, be eligible for a level of protection similar to that benefiting the initial import-substituting industry, and it is at least doubtful whether the initial industry can obtain a compensatory tariff increase for its own output or, in general, whether the resulting increase in costs can be passed on to the consumers without loss in sales volume.

For those various reasons, the newly established industries may not act at all as the entering wedge of a broad industrialization drive. The high customs duties on their outputs, combined with low (or negative) duties on their inputs, could almost be seen as a plot on the part of the existing powerholders to corrupt or buy off the new industrialists, to reduce them to a sinecured, inefficient, and unenterprising group that can in no way threaten the existing social structure. Indeed, like the workers' aristocracy in Lenin's theory of imperialism, these pampered industrialists might go over to the enemy — that is, make common cause with agrarian and trading interests which had long been opposed to the introduction of "exotic" industries.

The possibility that the industrialists who first appear in non-

1. *Op. cit.*, p. 118. I am quoting myself here because the critics of ISI have sometimes taken me to task for having overrated the power and automaticity of the backward linkage process.

2. See, for example, Santiago Macario, *op. cit.*, and R. Soligo and J. J. Stern, "Tariff Protection, Import Substitution and Investment Efficiency" in *Pakistan Development Review*, V (Summer 1965), 249-270. A general critique of import substitution on the grounds that the concentration on, and strong protection of, consumers goods it usually implies make for misallocation of resources, for obstacles to further industrial growth, and for a bias in favor of consumption is in John H. Power, "Import Substitution as an Industrialization Strategy" (mimeo.), Jan. 1966.

industrial countries may not be all that much in favor of dynamic industrial development leads to an interesting sociopolitical puzzle. Sociologists and political scientists have frequently deplored the weakness of the middle class and particularly of the industrialists in Latin America, its lack of self-assertion and its failure to influence public affairs. Earlier we have tried to account for this phenomenon by some characteristics of late late industrialization. But at this point, one begins to wonder whether it would really be a good thing if the new industrialists were much more self-assertive and powerful than they are — perhaps they would then really be able to choke off further industrialization, something which generally they have not been able to do! Considering what we have called the tightly staged character of late late industrialization it may in fact be preferable for the governments of the late late industrializing countries to be run by *tecnicos*, by groups of planner-technicians, rather than by the new industrialists themselves. It has been in fact due to the regulations issued by the *tecnicos* of the Kubitschek administration that backward linkage was *enforced* rapidly in the Brazilian automotive industry in the late fifties. In Mexico, on the other hand, assembly plants had existed for decades without any progress being made toward the local manufacture of motors and parts until measures similar to those in Brazil were adopted in the sixties. Thus the resistance of the initial industrialists to backward linkage combine with other already noted characteristics of late late industrialization to enhance the potential contribution of public policy to the process.³

But we dare not rely on such policies emerging simply because they are needed and because we issue a call for them. Could the resistance to backward linkage be overcome otherwise than by state action? While the resistances of the new industrialists are perfectly rational, one cannot but feel that they are based on a myopic, excessively short-run view of the development process. In this manner, we can supply a concrete justification for the view of a Brazilian sociologist according to which the traditional Western, Puritan-ethnic-imbued, rational, profit-maximizing businessman is not really the type that is most needed in the situation of Latin America; what is required, he feels, are entrepreneurs who can identify themselves with the general developmental aspirations of their society, be it

3. That a policy of forcing backward linkage investments has problems and pitfalls of its own is shown in Leland L. Johnson, "Problems of Import Substitution: The Chilean Automobile Industry," *Economic Development and Cultural Change*, XV (Jan. 1967), 202-16.

even at the expense of some rationality in their everyday business operations.⁴

But, once again, one cannot rest content with issuing a call for the *desenvolvimentista* entrepreneur; it would be more useful to be able to explain his appearance or nonappearance by a series of economic and social factors. This will be our next task. While it is true that backward linkage meets with certain resistances and obstacles, we have yet to inquire about the existence of other forces working in the opposite direction, that is, in the direction of making backward linkage work. This appraisal of the comparative strengths of forces and counterforces is probably the key to understanding why industrialization has been more vigorous and continuous in some developing countries than in others — long before they ran up against any barriers of market size.

As is the case for the start of late late industrialization, so will the continuation of the process through backward linkage be strongly influenced by the industrializing country's balance of payments. The opposition of the initial industrialists to backward linkage investments is likely to be considerably reduced if they occasionally experience curtailments, due to foreign exchange shortages, in the flow of imported inputs; on the other hand, the backward linkage investments require availability of foreign exchange for the importation of machinery. Consequently it is likely that some alternation of foreign exchange stringency and abundance would be optimal from the point of view of generating both the motivation and the resources required for the process. I have previously made this point⁵ and considerable attention has been paid to the foreign exchange constraint.⁶ Hence, it will be more useful to focus here on other forces affecting the process. There surely exist many situations in which some backward linkage investments are neither impossible in the light of foreign exchange availabilities, nor wholly compelled because of previous searing experience with foreign exchange shortages. We are interested here in the conditions that make for vigorous continuation of industrialization in these situations.

In line with our previous arguments, we posit a certain level of resistance of the new industrialists to the manufacturing of currently imported inputs. The resistance, while rational on the part

4. Fernando H. Cardoso, "The Industrial Elite" in S. M. Lipset and A. Solari (eds.), *Elites in Latin America* (New York: Oxford University Press, 1967), pp. 96–99.

5. *Strategy, op. cit.*, pp. 173–76.

6. See, for example, Carlos F. Diaz-Alejandro, "On the Import Intensity of Import Substitution," *Kyklos*, XVIII (1965), 495–511.

of the initial industrialists, is undesirable from the point of view of the economy in the sense that profitable production of some inputs is assumed to be possible provided some average or normal level of protection is extended to them. In other words, there is room for, but resistance against, further industrialization along reasonably efficient lines of comparative advantage. We now inquire what conditions other than balance-of-payments developments could make this resistance weaken or disappear.

The principal point to be made here is very simple: the resistance is almost wholly premised on the supposition that manufacturing in the higher stages of production is going to be undertaken by entrepreneurs *other* than the already established initial industrialists (or other than members of his immediate family). For if he himself undertakes it, most of the listed objections to the expansion of manufacturing via backward linkage fall to the ground. Thus, the fear of unreliability and poor quality of the domestic article should abate and the fear of domination by a monopoly supplier will disappear entirely. True, domestically produced inputs may have to be purchased at a higher price than was paid for the previously imported product which was perhaps obtained duty free or bought at some preferential exchange rate. But even if the increase in input costs that comes with domestic manufacture cannot be passed on, vertical integration would take the sting out of it; for the decrease of profits in one operation of an integrated industrial concern does not seriously matter if that decrease is compensated by the emergence of profits in another, newly established operation. To realize such profits the industrialist who contemplates the manufacture of hitherto imported inputs will usually have to obtain for those inputs some "normal" level of protection. It must be assumed, therefore, that he does not consider existing customs duties and exchange rate preferences as unchanging parameters immune to his will and influence; the opposite assumption is sometimes made in the literature on import substitution (with pessimistic consequences for the prospects of ISI), but it is manifestly unrealistic for most investment decisions.

If the disposition of the initial industrialists *themselves* to move farther back into the industrial structure is an important element in overcoming obstacles to the backward linkage process, a brief inquiry into the factors making for a disposition of this sort is in order.

The economist can contribute a *general* reason for which backward linkage investments are likely to be carried on by the new industrialists themselves: the mere fact that they have been earn-

ing profits and are therefore presumably looking for new investment opportunities. Once the new industries have reached the point at which imports have been wholly substituted so that horizontal expansion is no longer profitable, vertical expansion into the "higher stages" of production may well offer the best available and, in any event, the most obvious outlet for investment funds that have accumulated as a result of the profitable operation of the existing industries. The availability of profits from the first phase of import substitution thus provides a generalized incentive for the successful import-substituting industrialist to plunge once again, naturally after appropriate modification of the tariff and exchange rate policies affecting the products whose manufacture is to be undertaken. The likelihood that the new industrialist will look in this particular direction, is increased by two interrelated factors: one, by the special difficulty of moving into export markets, to be commented on in the next section; and secondly by what we have called the sequential or "tightly staged" character of late industrialization. The industrialist manufacturing a final demand good during earlier cycles of industrialization was likely to call into life domestic producers of inputs and of the required machinery; therefore, once he was no longer able to expand his domestic sales volume, he found the higher stages already *occupied* by others and was therefore impelled to look elsewhere, including to exports, for further expansion. The situation is very different when production is undertaken wholly on the basis of imported inputs.

The availability of profits and resulting search for new profitable investment opportunities act, as has been said, as a general counterweight to the hostility toward backward linkage investments on the part of new industrialists. Whether or not this counterweight will outweigh the hostility is difficult to say. Under the worst of circumstances the combination of the two forces may result in a dog-in-the-manger situation: the new industrialists are able to prevent others from entering the backward linkage arena, but are not sufficiently motivated to enter it themselves.

To carry the analysis a bit further and to account for the different degrees of strength which the backward linkage dynamic has displayed in different countries, it is tempting to make a brief foray into the realm of sociology. The eagerness of an industrialist to move into related fields of activity instead of being satisfied with his existing operation based on imported inputs, may, for example, be reinforced if he has the feeling that his sons are locked into his own class and career. If an industrialist's sons are able and eager

to enter the professions or the government, there is no need for father to think about finding new industries for the sons to expand into and to manage (preferably one for each son so they won't fight). But if industrialists look down on government and the professions, or if the latter look down upon the former, or, as happens frequently, if dislike and disdain are mutual, or simply, if the social distance between the industrialists and other groups is considerable, then the advantage of providing jobs for the family may fully compensate for the inconveniences, headaches, and even for minor monetary sacrifices that may be entailed by backward linkage investments. It appears once again, although from a rather different angle, that it is perhaps not a bad thing for the initial entrepreneurs to belong to a group of immigrants or of some other outsiders, with no immediate prospects of joining the established upper class or of moving into politics or the professions.

Social distance is bred by geographical distance. For this reason, one might expect that an industrialization process which, at least in its beginnings, is strongly identified with one or several centers other than the national capital stands a better chance to spill over vigorously from one industry to another than one which has its base in the capital city itself. The importance of having a somewhat isolated, inbred and self-consciously proud industrial center during the early stages of industrialization is demonstrated by the roles played by São Paulo, Monterrey, and Medellín. No similar pioneering center outside the capital city arose in Chile and Argentina, and it is perhaps not a coincidence that these two countries have provided the critics of the ISI process with far better examples of its alleged irrationality and propensity to exhaustion than Brazil, Mexico, and Colombia.

A final subject of speculation is the differential impact of technology on the comparative strength of the linkage process in different industries. When a backward linkage effect points to an industry which is technologically quite distinct from the one requiring the input, the input-utilizing industrialist is less likely to be attracted to the input-producing industry than if the latter is closely related to processes and techniques with which the industrialist is already familiar. For example, the backward (and forward) linkage dynamic may show more spontaneous vigor in the "inbred" metalworking and chemical industries than in, say, the textile industry whose inputs come in large part from technological strangers such as, precisely, the chemical industry. Thus the backward linkage dynamic may be held back at some point simply by

"technological strangeness." This point is of particular importance for the machinery industry since machinery is usually a technological stranger to the industry in which it is utilized. An inquiry into the technological determinants of the differential propensity of different industries toward linkage investments could be of considerable value. To identify and then to remove this sort of bottleneck should be a principal task of public agencies concerned with industrial development.

The purpose of the preceding observations was to convince the reader that there is far more to the vigor or weakness which late late industrialization displays in various countries than minimum economic size of plants, market size and even foreign exchange availabilities. We have left the naive and seminaive exhaustion models far behind and have instead generated a highly complex "field" of forces and counterforces. If the reader feels a bit confused, we have achieved our purpose: for essentially we wished to show that the process is not nearly so straightforward and constrained as it has recently been made to look, and that it depends far more on public and private acts of volition than has sometimes been granted as well as on numerous economic, sociological and technological factors which remain to be investigated.

V. THE INABILITY TO EXPORT MANUFACTURES: "STRUCTURAL" CAUSES AND REMEDIES

It is hardly necessary to stress how desirable it would be for our late late industrializing countries to become exporters of the outputs of their new industries:

(a) Through exports they would overcome whatever obstacles of market size limit their growth or prevent their establishment.

(b) Through exports they would loosen the balance-of-payments constraint which may otherwise prevent capacity operation of existing industries as well as establishment of new industries.

(c) Finally, by competing in world markets, industries would be forced to attain and maintain high standards of efficiency and product quality and would thereby acquire defenses against oligopolistic collusion and decay to which they often succumb in highly protected, small local markets.

Unfortunately, the intensity with which one would wish for exports of manufacturers from the late late industrializers is

matched by the solidity of the arguments which appear to foreclose any real prospects of success in this direction.

Once again, the arguments are familiar: The new industries have been set up exclusively to substitute imports, without any export horizon on the part of either the industrialists themselves or the government; the foreign branch plants and subsidiaries, which have taken an important part in the process, often are under specific instructions not to compete abroad with the products of the parent company; even more decisive than these obstacles deriving from attitudes and institutions, is the fact that the new industries, set up behind tariff walls, usually suffer from high production costs in countries that are, moreover, permanently subject to strong inflationary pressures — hence there is no real possibility of these industries competing successfully in international markets even if they were disposed to do so.

These are weighty arguments and they seem to meet the test of a satisfactory explanation in that they put one's mind to rest. But do they?

After all, there are many industries which started out producing for the home market and eventually spilled over into foreign markets. Prior, successful acceptance of a manufactured commodity in the home market has even been considered to be a prerequisite for successful exporting.⁷

Secondly, foreign firms have been known to be quite adaptable in their manufacturing and export policies. Just as they have been coaxed by national policies to produce or procure domestically a larger proportion of their inputs, so they could be induced to engage on export drives.

Finally, even the most impressive explanation of the inability to export — the cost disadvantage of new industries set up under tariff protection — loses some of its persuasiveness when one remembers that protection of industries in Germany and the United States has not prevented considerable success of those protected industries in world markets. Industrialization of the nineteenth century latecomers was in fact frequently accompanied by both tariff protection and a vigorous export drive which threatened the previous dominant position of the old established industrial countries in a number of important markets. Again, the behavior of the late late industrializers could not be more different and it now begins to appear that we may be in need of some further, perhaps more funda-

7. S.B. Linder., *An Essay on Trade and Transformation* (New York: Wiley, 1961), pp. 87 ff.

mental explanations of the inability to export that afflicts them. While such a "structuralist" strategy of problem-solving may show the problem to be even more deeply rooted than had been thought, it can also uncover new, hitherto unsuspected ways of attacking it.⁸

One additional explanation of the difficulty of exporting has already been given in the preceding section. It was asserted that in view of the sequential character of industrialization, late late industrialists looking for new profitable business opportunities will frequently have the option between investing in backward linkage industries and expanding into export markets, whereas late industrialists had primarily the latter course open to them since the backward linkage industries were already in existence. Little wonder, then, that the late late industrialists decide to stay cozily at home much longer than the late industrialists who were under a far greater compulsion to make the plunge into foreign markets if they were going to expand. It would therefore be unrealistic to expect an industry to become an exporter before it has truly taken root in the country through a variety of the more obvious backward linkage investments. And the expeditious undertaking of these investments is therefore desirable not only per se, but also as a necessary way-station to the opening of the export phase.

Another structural reason for the inability to export derives from the circumstances under which resources have been channeled into the industrial sector in many Latin-American countries. Industrial investments became attractive not only because of customs protection, but additionally because of the combination of internal inflation, overvaluation of the currency, and exchange controls. In effect, maintaining an overvalued exchange rate meant that the exporters of traditional primary products would receive a smaller real income than with an equilibrium or undervalued exchange rate. At the same time, the overvalued exchange rate permitted the acquisition at favorable prices (in domestic currency) of those imports that were let in by the control authorities. And since machinery and essential industrial materials enjoyed preferential status, the overvalued exchange rate acted in effect as a mechanism to transfer income from the traditional export sector to the new industries.⁹

8. A general plea for "structuralist" analysis of Latin America economic problems along with a good bibliography is to be found in Osvaldo Sunkel, "El trasfondo estructural de los problemas del desarrollo latinoamericano," *Trimestre Económico*, XXXIV (Jan.-Mar. 1967), 11-58. For an interpretation of structuralism as a strategy for problem-solving, see my *Journeys Toward Progress* (New York: Twentieth Century Fund, 1963) pp. 210-16 and 231-35.

9. Alexandre Kafka, "The Theoretical Interpretation of Latin American

At the same time, however, the overvalued exchange rate acted as a bar to exports from these industries. This probably was not a serious drawback and certainly was not felt as such during the earlier stages of import-substituting industrialization when exports on the part of the nascent industries were not a real prospect. But as a vigorous industrial establishment grew up in various countries one may well ask the question why a different institutional arrangement was not chosen. For example, why not tax the export sector, subsidize the new industries and do away with the overvalued exchange rate so that industrial exports are encouraged? To ask this question is to answer it: in most Latin American countries such a course would have been politically impossible. The power of the groups tied to the primary export sector would hardly have permitted so direct an assault, as is attested by the strong, permanent and occasionally successful pressures that were exerted against the indirect squeeze of the sector which Latin American monetary authorities had more or less inadvertently stumbled on. The great advantage of the inflation-cum-overvaluation arrangement was in fact not only that it resulted in an indirect rather than direct squeeze of politically and socially powerful groups, but that this mechanism was an *unintended* and, for a long time, an *unnoticed* by-product of a course of action which had the perfectly respectable objective of "defending the national currency against depreciation."¹

Viewed in this way, the inability to export manufactures appears as the price which had to be paid for building up an industrial sector under adverse sociopolitical conditions. Should we then perhaps be simply gratified that industrialization was contrived at all, and be happy to pay the price? Not necessarily. As industrialization proceeded, the desirability of the overvaluation device became increasingly questionable *from the point of view of industry itself*. For overvaluation not only impeded exports, but interfered, in ways already analyzed, with the vigorous exploitation of the backward linkage dynamic. Moreover, in several countries, industries became sufficiently vigorous and integrated so that the help stemming from the procurement of a few imported inputs at bargain prices (via

Economic Development," in H. S. Ellis (ed.), *Economic Development in Latin America* (New York: St. Martin's Press, 1961), p. 21, and Celso Furtado, "Industrialization and Inflation," *International Economic Papers*, XII (1967), 101-19.

1. The policy originated, ironically enough, in an attempt to *defend* the export interests, e.g., in the case of Brazil, to maintain the cruzeiro price of coffee in the face of falling world market prices during the Great Depression. This policy led to an increase in the money supply, and thereby caused domestic inflationary pressures which would eventually result in the inflation-cum-overvaluation arrangement. Cf. Furtado, *ibid.*, p. 103.

the overvalued exchange rate) was bound to be more than offset, for an increasing number of firms, by the loss of potential profits that could have been realized through exports at a nonovervalued rate of exchange. It could thus be suggested that, at a certain point, overvaluation of the currency turned from a stimulus to industrial progress into a drag on it.

It appears that the much advertised noncompetitiveness of Latin American industry may be rooted more in the failure to modify institutions than in any inability to bring down real costs. The question then arises why the industrial interests have not vigorously pressed for institutional arrangements—export subsidies, preferential exchange rates, or more radically, an exchange rate that is undervalued rather than overvalued—that would make exporting profitable. Are there some grounds on which industrialists could be basically *reluctant* to commit substantial resources to an export drive?

This question leads to a third structural reason for— or speculation about—the difficulties of exporting. It has to do, once again, with the distribution of power in Latin American societies. To stage an export drive, an industrialist must frequently make special investments in research, design and packaging; he must assemble a specialized sales force, delegate considerable authority, launch an entirely different advertising campaign; in short, he incurs special risks and new overhead costs which will be recoverable only over a comparatively long period of successful exporting. Therefore, an industrialist will consider exporting only when he can be sure either that the basic institutions and policies which vitally affect his foreign operations are highly stable or, as a minimum, that his interests will be given the most serious attention when these institutions and policies are altered.

In effect, we have just spelled out a “prerequisite” for a determined and successful export drive for manufactures: to undertake such a drive with all its risks and special costs, the industrialist class must feel reasonably sure that it can control certain crucial fiscal and monetary policies of its government. Differently put: only a cohesive, vocal, and highly influential national bourgeoisie is likely to carry industrialization beyond relatively safe import-substitution to the risky export-oriented stage. It will be noted that this assertion—the industrialists do not export because they are not influential—completes the second half of a vicious circle whose first half, given on pages 10–11, asserted that the ISI industrialists are lacking in influence because they are not “conquer-

ing foreign markets." Obviously we should not take inordinate pride in having fashioned a new vicious circle or in having identified a new prerequisite to the economic progress of the developing countries. Rather, we shall consider in a moment ways of breaking out of the circle and of doing without the prerequisite or of finding, à la Gerschenkron, a substitute for it. But we must nevertheless pause at this point in our reasoning and take notice that conditions for a strong export drive by the private sector are highly unfavorable in Latin America: in no country of that continent do the industrialists feel securely in control of vital economic policies affecting them. Policymakers positively cultivate unpredictability and distance from interest groups; at the same time, they are highly manipulative. Changes in fiscal, monetary, and foreign exchange policies are therefore frequent while communication about these changes with the affected interest groups is infrequent. These are the sociopolitical traits that account, perhaps more fundamentally than the cost-price structure of the new industries, for their poor export performance.

Having uncovered ever more cogent reasons for the inability to export, have we encountered by the same token a "fundamental" remedy? One way of staking such a claim would be to expect that, as a result of our analysis, Latin America will change the nature of its politics and that its powerholders will henceforth become less manipulative and more communicative. Unfortunately analysis is not likely to act as so powerful a solvent. But is it really necessary to wait until a trusting and intimate relationship between the industrialists and the policymakers emerges or is it conceivable that countries which find it difficult to establish such a relationship could travel an alternative road?

A radical reaction to the problem would be for the state itself to take over the foreign merchandising function. The spectacle of the state rendering difficult or impossible the performance of an important function by the private sector and then taking over that function because the private sector is ostensibly falling down on the job, is by no means uncommon. If this course of action has not been taken so far for the export of manufactures, one reason is that the importance of this function is only beginning to be appreciated. Also, state enterprise is hardly likely to be at its best in selling a wide variety of manufactures in foreign markets; for, by its nature, this task requires levels of initiative, flexibility, risk-taking and decentralized decisionmaking which it has been difficult for state enterprise to attain.

A less radical and more promising solution would be for the state simply to take an active role in promoting exports by private enterprise. As already mentioned in connection with exports from foreign-owned branch plants and subsidiaries, the state could very well tie the granting of tax and other incentives to the attainment of export targets in a manner analogous to that with which backward linkage has been enforced in the Brazilian automobile industry. From the point of view of the industrialists, such a policy would have the advantage that one sector of the bureaucracy would become committed to the export drive and could then be relied on to do battle with those sectors whose policies interfere with the success of the drive.

Quite a different solution consists in leaving alone, at first, the obstacles to exporting that derive from the actions of one's own government and in concentrating instead on those that are caused by other governments. This is in fact what is being attempted at present through the United Nations Conference on Trade and Development and its campaign for preferences for the manufactures of developing countries in the markets of developed countries. Perhaps this request can be viewed more sympathetically than it has been if it is considered as a *compensation* to the exporters of the newly industrializing countries for some of the extra burdens they must bear because of the policies and frequent policy changes of their own governments. In this reasoning, one may also discern a hope that such preferences would be temporary: once exports in volume would have been achieved, the first half of the vicious circle we have identified — industrialists are not influential because they do not export, and they do not export because they are not influential — would have been shattered. There would then be hope that government policies would become more finely attuned to the needs of the exporting industrialists who might therefore dispense in due course with the special privileges obtained from *other* governments.

The need for common markets among developing countries can also be better appreciated from this perspective. The common markets would not only provide preferential treatment for the industrialists of the participating countries; for these mutual arrangements to be durable, monetary and foreign exchange policies would have to become more uniform and stable than they have been; and such a development would be even more important than the customs preferences themselves in promoting exports from the common market countries, *not only to each other, but also to third countries.*

It is, however, precisely the prospect of less freedom of movement in monetary and foreign exchange policies which makes national governments so skittish about entering effective common market commitments.

Finally our problem could be alleviated by developments in the structure of international trade in manufactures. According to some observers, countries of recent industrialization should be acquiring a comparative advantage in certain types of highly *standardized* industrial products.² To sell such goods abroad may not be possible, in a number of lines, without special international market and firm connections, but it does not require either expensive advertisement campaigns or any special adaptation to foreign tastes and conditions. As a result, the overhead cost of exporting would be cut and the risks deriving from the instability or unpredictability of official economic policies would be correspondingly reduced.

CONCLUSION

In the preceding pages an attempt has been made to describe the varieties and characteristic features of import-substituting industrialization, and to derive from them sociopolitical consequences which in turn affect the process. Among the characteristics of ISI the possibility of proceeding sequentially, in tightly separated stages, because of the availability of imported inputs and machinery, plays, as was shown, a particularly commanding and complex role, direct and indirect, positive and negative.

Thus, the sequential or staged character of the process is responsible not only for the ease with which it can be brought under-way, but also for the lack of training in technological innovation and for the resistances to both backward linkage investments and to exporting that are being encountered. The most important consequence of sequentiality, however, is the fact that it has become possible for industrialization to penetrate into Latin America and elsewhere among the late latecomers without requiring the fundamental social and political changes which it wrought among the pioneer industrial countries and also among the earlier group of latecomers. The repercussions of this situation on the industrialization process itself are ambivalent: on the one hand, the lack of political power of the new industrialists means, as we have just seen, that exporting meets with political and institutional, rather than purely economic, obstacles; on the other hand, this very lack of power neutralizes in

2. Raymond Vernon, "International Investment and International Trade in the Product Cycle," this *Journal*, LXXX (May 1966), 202-07.

various ways some of the possible adverse effects of sequentiality, for example, the resistance of the new industrialists to backward linkage.

In addition, the fact that import-substituting industrialization can be accommodated relatively easily in the existing social and political environment is probably responsible for the widespread disappointment with the process. Industrialization was expected to change the social order and all it did was to supply manufactures! Hence one is only too ready to read evidence of total failure into any trouble it encounters.

This paper has by no means denied the various difficulties which the ISI process is apt to experience; in fact, they have on occasion been shown to be more deepseated than had been thought. At the same time, our exploration of the characteristics of the process has made it possible to discern avenues toward continued industrial growth that remain open to the late latecomers.

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