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Volume Author/Editor: Hal B. Lary

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Chapter Author: Hal B. Lary

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1

THE PROBLEM AND A SUMMARY OF FINDINGS

Introduction

Some Initial Assumptions

It seems to be generally agreed that newly developing countries will need to achieve a rapid and sustained rise in export earnings to cover their growing imports of capital goods and other essentials and to service their foreign borrowings. Failure to attain such an increase, or to receive ever larger foreign aid, would impose a foreign exchange constraint on their growth, even though the major transformation required is in their internal economic and social structures and in their capacity to save and invest.

Looked at from this point of view, the figures in Table 1 are not reassuring with respect to the export performance of the less developed countries.[1] Over the period 1950 to 1965 these countries, exclusive of the major oil producers among them, increased the current dollar value of their exports to the developed countries by 4.2 per cent annually on the average.[2] Their exports to each other, again omitting the major oil producers, were only slightly larger in 1965 than in 1950. Over the same period the dollar value of trade among the developed countries rose at an average annual rate of about 9.4 per cent, or perhaps a percentage point less if figured at constant prices. Total exports of

[1] Throughout this study the composition of the less developed countries corresponds to that of "Economic Class II" in the foreign trade statistics of the United Nations: all of the Western Hemisphere except the United States and Canada; all of Africa except the Union of South Africa; the Middle East except Turkey; the rest of Asia and the Far East except Japan, Mainland China, and North Korea; and Oceania except Australia and New Zealand.

[2] Figured at constant prices, the increase over the period as a whole would average about the same, since export prices of the less developed countries rose rapidly during the Korean War in the early 1950's and declined thereafter to about the 1950 level.

TABLE 1

Exports of Developed and Less Developed Countries, 1950 and 1965

	Value ($ billion, current prices)		Compound Annual Rate of Growth, 1950–65 (per cent)
	1950	1965	
World exports, total	53.5	156.3	7.4
Exports of developed countries, total	35.9	122.5	8.5
To each other	25.0	95.5	9.4
To less developed countries	10.9	27.0	6.2
Exports of less developed countries, total	17.6	33.8	4.5
To developed countries	12.4	26.2	5.2
To each other	5.2	7.6	2.5
Exports of less developed countries, excluding major petroleum producers,[a] total	14.1	23.7	3.6
To developed countries	10.0	18.5	4.2
To each other	4.1	5.2	1.7

Source: Various statistical publications of the United Nations.

Note: All figures exclude exports to and exports of Eastern Europe, the USSR, and Mainland China. Figures may not add to totals shown because of rounding.

[a]Countries excluded are Algeria, Iran, Kuwait, Libya, Netherlands Antilles, Saudi Arabia, Trinidad and Tobago, and Venezuela.

developed countries to the destinations covered by Table 1 were about two and a half times those of the non-oil-producing less developed countries in 1950 and were five times as great in 1965.

The need for a faster increase in exports of the less developed countries will not be elaborated here, since it has been studied at length by the United Nations and others. One may question alternative projections of the likely "foreign exchange gap," or the validity of the gap approach.[3] But there seems to be little room for doubt that, unless economic aid to the less developed countries is increased far above present levels, their exports will need to rise faster than heretofore as one of the conditions for their economic development.

The contrasting performance of exports of developed and less developed countries reflects, in addition to factors on the supply side, the faster growth of world demand for manufactures than for most of the primary products which make up the bulk of the exports of the less developed countries. Reasons for the relative lag in trade in primary products include economies in their use, the continuing development of synthetic substitutes, and the growing complexity and sophistication of final products, all of which tend to reduce the input of raw materials per unit of output.[4]

Some less developed countries exceptionally well endowed with natural resources may be able to meet their growing foreign exchange needs through sales of primary products in crude or processed form. The oil-exporting countries form a small and privileged group in this regard. Broadly viewed, however, there is little reason to suppose that the influences tending to retard the growth of trade in primary products have run their course. If this is a correct judgment, a solution commensurate with the growth needs of the less developed countries will presumably entail a rapid increase in their exports of manufactures to the affluent markets of the advanced countries.

Focus of the Study: Labor-Intensive Manufactures

This study seeks to identify the kinds of manufactures best suited to the growth of exports and to examine the pattern and prospects of

[3] A summary review of the estimates and their rationale is given by Sydney Weintraub in *The Foreign-Exchange Gap of the Developing Countries,* Essays in International Finance No. 48, Princeton, 1965. I. M. D. Little and J. M. Clifford raise serious questions about the usefulness of the gap approach in *International Aid,* London, 1965 (see especially Chapter VI). Isaiah Frank observes that exports of the less developed countries increased faster in the first half of the 1960's than in the preceding five years, thanks to accelerated economic growth in the developed countries, but notes that the ability of the less developed countries to import did not increase correspondingly because of greatly increased payments for debt service, shipping, and other invisibles ("New Perspectives on Trade and Development," *Foreign Affairs,* April 1967, pp. 520–540).

[4] A detailed analysis of the trade outlook for less developed countries is given by Alfred Maizels in *Industrial Growth and World Trade,* Cambridge, Eng., 1963. He concludes (page 409) that both the shift in the pattern of demand and technological developments in the industrial countries are likely to continue to react adversely on the exports of the primary producing countries, and that no alleviation is likely to come from changes in the terms of trade.

trade in these items. By definition, the less developed countries have little accumulated capital or technical skill. Any comparative advantage which they may hold or attain in manufacturing for export, apart from strongly resource-based industries, is therefore likely to be in industries which are intensive in the use of relatively unskilled labor and sparing in the use of both physical and human capital. It will be seen in this study that industries rank much the same on this basis from country to country, even from the richest to the poorest—a circumstance which helps to identify those in which low-wage countries may best compete.

Such a course encounters obvious problems and resistances on the side of the developed countries. But it also offers them the possibility of shifting scarce manpower from traditional lines of production to other industries where labor can be more productively combined with their capital resources.

Such a course may also be unwelcome to some of the less developed countries, implying concentration on relatively simple types of manufacturing and perhaps excessive exposure to the risks of international trade. These disadvantages are scarcely greater, however, than those entailed in their present heavy reliance on exports of primary products. And, if the analysis given here points in the right direction, a willingness to focus initially on labor-intensive lines of manufacturing may be a necessary condition for evolving toward the production of goods with, as Fei and Ranis say, "an increasing skill and ingenuity component over time." [5]

It may be further objected that, apart from qualifications such as that just given, the approach taken here makes no specific allowance for the possibility that comparative advantage may shift as development proceeds, thanks to internal and external economies of scale and other dynamic influences associated with growth. How much weight should be attached to this possibility in the present context is difficult to say, particularly since so little is available by way of empirical evidence or even illustrative case histories bearing on the dynamics-of-growth argument.[6]

[5] John C. H. Fei and Gustav Ranis, *Development of the Labor Surplus Economy*, Homewood, Ill., 1964, p. 303.

[6] Viewed with regard to the possibilities of increasing exports, it is not clear a priori that the argument could justify a strategy of emphasizing capital-intensive industries in the early stages of industrial development, since the more developed countries not only have access to capital on more favorable terms but also the great advantage of economies of scale already realized. Initially, therefore, and until their capital resources and market size are increased, the gains from trade by the less developed countries in importing capital-intensive manufactures are likely to be particularly large in relation to the volume of trade. See Paul A.

One factual observation deriving from the data examined in Chapter 4 of this study is that, if the argument is deemed to be relevant to, or consistent with, the need to increase export earnings of the less developed countries, there is little indication that any of these countries have so far become competitive in the more capital-intensive lines of manufacturing (except, of course, those based on the exploitation of natural resources). Usually, however, dynamic considerations have not been related to problems of export promotion but have been invoked rather to favor a strategy of import substitution and may be subject to the same need of cautious reappraisal as that seen below.[7]

Still another possible objection to the present approach is that, even within a comparative cost framework, the emphasis may be too much on labor intensity to the neglect of other conditions affecting the ability of less developed countries to sell manufactures in the markets of the more advanced countries. Some industries are more strongly market-oriented than others, and ease of communications between producer and customer may bear importantly on their location.[8] Among consumer goods, market orientation seems likely to be more important in furniture than in plywood or wood containers, for instance, and in high-style fashions than in textile flat goods or work clothes. The production of some producer goods, such as fabricated metals and instruments, tends to be located near the industries which use these goods as inputs into their own production. Even in such cases, the increasing speed of international communications and growing experience in procuring abroad may open up new possibilities of siting production where costs are lowest. This is illustrated by the evolution of the garment industry in Hong Kong toward high-fashion goods and also by the encouragement given by American companies to the production of electronic and other components in low-wage countries.

Samuelson, *Stability and Growth in the American Economy,* Stockholm, 1963, p. 48, and also Gottfried Haberler, "Integration and Growth of the World Economy in Historical Perspective," *American Economic Review,* March 1964, pp. 1–22.

[7] At the end of his article on "Comparative Advantage and Development Policy" (*American Economic Review,* March 1961, pp. 18–48), Hollis B. Chenery concludes that "To most economists, a survey of the procedures actually followed in designing development policy would probably suggest that balance is overemphasized and that the potential gains from trade are often neglected."

[8] For a discussion of this and other influences on industrial location, see Raymond Vernon, *Metropolis 1985,* Cambridge, 1960, pp. 38–85, and also a paper, "Problems and Prospects in the Export of Manufactured Goods from the Less-Developed Countries," contributed by Vernon to the meeting of UNCTAD in 1964 (*Proceedings of the United Nations Conference on Trade and Development,* Vol. IV, *Trade in Manufactures, 1964,* pp. 200–210).

The "Overspill" View of Exports

The usual approach to the problem of increasing exports of manufactures by the less developed countries has been along the lines of what Winston Churchill once called the "overspill" view of exports in Britain. That is, concentrate first on developing the home market, and this will create the conditions needed for an efficient and rising export trade. Theoretical support for this view has been elaborated by the Swedish economist Staffan B. Linder, who takes strong issue with the factor-proportions explanation of trade, except in primary products. For the rest, he advances as a "basic proposition" that the "range of exportable products is determined by internal demand." That is to say, "it is a necessary, but not a sufficient, condition that a product be consumed (or invested) in the home country for this product to be a potential export product." [9]

W. W. Rostow has put the point in the following way, with more specific reference to the problems of the less developed countries: "What I am asserting, then, is that the expansion of the domestic market which is required to produce a modernization of rural life and an ample market for domestic industry is also the proper base for the development of diversified exports." [10]

A similar conception seems to infuse programs of financial assistance to the less developed countries. The International Bank's loans and feasibility studies have mainly focused on the "infrastructure" and the home markets of the less developed countries and have rarely served more directly to develop their exports of manufactures. Our AID programs have also been chiefly concerned with strengthening the internal conditions for development, though some of the studies of investment opportunities which it has helped to finance point toward export possibilities. The Export-Import Bank has well merited the first half of its name by granting credits to finance sales of capital equipment and other goods to the less developed countries. But little of its financing has been aimed at stimulating imports from them.

The power and transportation facilities, machinery, and technology made available through these loans and grants do, of course, help to build up the economies of the less developed countries and may ultimately serve to diversify and strengthen their exports. Moreover, these

[9] *An Essay on Trade and Transformation,* Uppsala, 1961, p. 87.

[10] W. W. Rostow, "Economic Development in Asia," *Department of State Bulletin,* May 31, 1965, p. 850.

public agencies no doubt consider, with some reason, that investment opportunities offering attractive export prospects are particularly suited to private initiative and financing and do not require public development aid.

In a perceptive commentary on these and related policies, Harry Johnson may go too far in saying that "the notion became firmly established—especially in the United States—that development is an autarchic process." [11] Nevertheless, it does seem fair to observe that the advanced countries have accepted restrictive import policies by the less developed countries as a necessary accompaniment of industrial development, and have so far made little adjustment in their own policies to facilitate the growth of imports of manufactures from the less developed countries.

Under these conditions, it is remarkable that this trade, at least in some products, has grown as fast as it has in recent years. The growth has, however, been very unevenly distributed by exporting as well as by importing countries—a fact that underlies the trade demands put forward with increasing vigor by the less developed countries during and since the United Nations Conference on Trade and Development (UNCTAD) in 1964. The need to find better ways of expanding their exports is evident. The means proposed to this end—on either side—are more debatable, sometimes seeming primarily designed to shift responsibility for action to other countries while avoiding commitments that might entail awkward adjustments on one's own part.

Limitations of Market Size in the Less Developed Countries

Proliferation of Small Countries

However persuasive the argument may seem, it rather begs the question to say, with Rostow, that "The most effective base for the export of manufactures is a large domestic market." According to one estimate,[12] only five of the less developed countries have national incomes (converted to dollars at prevailing rates of exchange) larger than Con-

[11] Harry G. Johnson, "United States Policy and the Problems of Developing Countries," *Journal of Business*, October 1965, p. 339.

[12] Donald B. Keesing, "Outward-Looking Policies and Economic Development," *Economic Journal*, June, 1967. Keesing actually refers to six countries, including Spain, but Spain (along with the rest of Southern Europe) is not counted among the less developed (or developing) countries in United Nations practice, which is followed here.

necticut. These are India, Pakistan, Brazil, Mexico, and Argentina, to which perhaps Indonesia (with poor statistics but a population of 100 million) should be added. Though the beginnings of industry go back rather far in some of these countries, none of them has yet done sufficiently well in exporting manufactures to vindicate the "overspill" view.[13]

The six countries just mentioned account for more than half of the total population of the less developed countries, but that still leaves a host of people and problems outside as well as inside. Close to 100 of the less developed countries have a population smaller than 15 million, and in two-thirds of them it is less than 5 million.[14] On the whole very poor, they are smaller still in size of market compared with most developed countries. More such countries are being born as Malta, Gambia, the Mauritius Islands, and the few other remaining European possessions move toward and achieve independence. This proliferation of small and minuscule nations is largely a product of the swift unraveling of colonialism after World War II, though in Central America it goes far back into the last century.

The dilemma facing these small countries is evident upon comparing two quotations from Charles Kindleberger.[15] On the one hand, he expresses a view like Linder's that "A further important modification of the law of comparative advantage based on abundant labor is that exports can be developed only in those products for which there is a significant home market." On the other hand, he says elsewhere: "The smaller the economy in geographic area, the more skewed [i.e., specialized in resources and production] it is likely to be and the more it must trade outside its borders." Together, the two statements imply that (apart from products of such natural resources as they may have) small and poor countries will be able to develop only an extremely narrow range of goods for export. These would be a few mass-consumption products for which even the smaller less developed countries may provide "significant home markets" in relation to the levels of output needed for efficient production.

[13] Mexico might be considered an exception, yet during recent years the Mexican government has found it desirable to take a number of measures to limit sharply the protection of domestic industry and to try to make it more competitive internationally. See *International Commerce,* U.S. Department of Commerce, June 6, 1966, pp. 14–17.

[14] *Proceedings of the United Nations Conference on Trade and Development,* Vol. II, *Policy Statements,* 1964, p. 15.

[15] Charles P. Kindleberger, *Foreign Trade and the National Economy,* New Haven, 1962, pp. 32 and 58.

Uncertain Prospects for Regional Integration

In principle, one way of meeting this dilemma is by integration of these splinter economies into larger and more viable regional groupings following, at a great distance, the example of the European Common Market. There are excellent reasons favoring this course and commending it to outside support—even apart from any hope which harried officials in developed countries may hold of being thereby relieved in some measure of the problem of increasing imports from the less developed countries.

So far, efforts to combine into larger regional entities have brought little specific result. In some areas, the trend is rather the other way, as indicated by the strains and disruptions experienced in the West Indies, Malaysia, East Africa, and Nigeria. Little progress is evident in the Maghreb, which was supposed to embrace the Arab states of North Africa. The most promising of these regional endeavors, the Central American Common Market, illustrates the limitations more than the potentialities of such arrangements. It brings together a fairly homogeneous group of countries, compared with most others, and even so adds up to only 12 million people with a combined purchasing power less than that of any one of a number of European and American cities. Now a far larger, more difficult, and more distant objective has been set with the commitment by the heads of the Latin American states in April 1967 at Punta del Este, "Beginning in 1970, to establish progressively the Latin American Common Market, which should be substantially in operation within a period of no more than fifteen years." [16] The length of the period set for achievement of the objective attests to the difficulties to be overcome.

In some regions political and social frictions may well be the major obstacle to regional integration. The economic difficulties include disparities in the levels of development attained by different countries of the same region, since laggard countries tend to fear competition by their more advanced neighbors. Even more awkward problems may be presented by disparities among countries in the levels and structures of production costs and prices. Barriers of the latter nature are, in turn, largely the result of the exaggerated pursuit of "import substitution" as a means of promoting industrial development.

[16] From the "Declaration of the Presidents of America," *Department of State Bulletin,* May 8, 1967, pp. 712–721.

Costs of Excessive Import Substitution

A developing country has some room for choice in orienting its new industries toward replacing imports rather than expanding exports. Initially, the emphasis is likely to be on the former course, since imports attest to a market already in being at home and susceptible of being reserved against foreign competition.[17] Most and perhaps all developed countries have followed this course in the early stages of their growth and, indeed, still cling to protection even though with little basis any more for invoking the "infant industry" argument. Within limits, this course is consistent with the "overspill" view of exports, since, if the industries chosen for protection are well suited to a country's potentials, substitution for imports in its home market may set the stage for competition in export markets later on.

These limits, however, can be quickly exceeded. A less developed country's imports typically embrace a far greater variety of goods than its exports. The difference is all the more striking if one considers not merely final goods but also the materials, parts, and capital equipment entering into their production. Import substitution may therefore soon spread a country's resources too thin over numerous small and inefficient enterprises, and extend to types of production ill suited to its conditions, with the unfortunate result of raising costs even in industries in which it should otherwise be able to compete. A further consequence is to deny the economy the stimulus to efficiency and innovation which exposure to competition in domestic and foreign markets can provide.

In other words, "backward and forward linkages" with other industries [18] may prove to be a burden rather than a blessing if the industries selected for promotion are not well suited to a country's capabilities and size. This may happen even in the largest of the less developed countries, as is suggested by India's difficulties in providing the range and quality of parts and other inputs needed to produce diesel engines for trucks and by the cost and insufficiency of domestic synthetic fibers and artificial rubber used in the production of tires.[19] Similarly, a

[17] As Albert O. Hirschman put it, "imports still provide the safest, most incontrovertible proof that the market is there" (*The Strategy of Economic Development*, New Haven, 1958, p. 212).

[18] *Ibid.*, pp. 98ff.

[19] Jack Baranson, "Transfer of Technical Knowledge by International Corporations to Developing Economies," *American Economic Review*, May 1966, pp. 259–267, and Wilfred Malenbaum, "Comparative Costs and Economic Development: The Experience of India," *American Economic Review*, May 1964, p. 396.

United Nations review of protectionism and industrial development in Latin America is illustrated by examples from Argentina showing the unfavorable effects of high-cost sulphur and sulphuric acid on the production of chemicals and of high-cost caustic soda on the manufacture of soap.[20] Considerable caution would therefore seem to be warranted with respect to the various internal and external economies which have frequently been invoked in favor of capital-intensive industries at early stages of economic development.

The frustrations of import substitution were the subject of an urgent warning by Raúl Prebisch in his advance message, as Secretary General, to the United Nations Conference on Trade and Development.[21] Based largely on his close observation of the Latin American countries, he found that the "easy phase" of import substitution had about reached its limit in the countries which had followed that course, and that it could not go farther without considerable waste. He also found that high tariffs to protect narrow national markets had "encouraged the establishment of small uneconomical plants, weakened the incentive to introduce modern techniques, and slowed down the rise in productivity."

"Thus," Prebisch continued, "a real vicious circle has been created as regards exports of manufactured goods. These exports encounter great difficulties because internal costs are high, and internal costs are high because, among other reasons, the exports which would enlarge the markets are lacking. Had it been possible to develop industrial exports, the process of industrialization would have been more economical, for it would have made possible the international division of labour in manufacturing."

Responsibility for exaggerated import substitution does not fall only on the governments of the less developed countries and their advisers. Two world wars and the Great Depression in between were reason enough for many countries to try to produce at home what, in those circumstances, they were no longer able to buy abroad. But the least to be said in criticism of the less developed countries is that so far they have shown little tendency to reverse course and expose their small monopolies to outside competition.

[20] Santiago Macario, "Protectionism and Industrialization in Latin America," *Economic Bulletin for Latin America,* United Nations, March 1964, p. 79. The same issue contains a relevant article on "The Growth and Decline of Import Substitution in Brazil."

[21] *Proceedings of the United Nations Conference on Trade and Development,* Vol. II, *Policy Statements,* p. 14.

Regional or International Integration

Under the conditions described, negotiations for regional integration by various groups of less developed countries are likely to mean hard bargaining for mutual support, and reciprocal sacrifice, of high-cost industries.[22] With each participant concerned lest it lose more than it gains, the difficulties of arriving at agreement and successful implementation are apparent.

Considered in this light, it may be significant that the one regional grouping which has been showing signs of progress toward integration —the Central American Common Market—is one whose member states had previously remained relatively open to the outside world and consequently did not differ widely from each other in their cost and price structures. Nor, it must be added, did the members differ much in the relatively low state of their industrial development. There may be, in fact, some risk that the progress now being registered in their manufacturing output and in their trade with each other could prove to be another example of what Prebisch called the "easy phase" of import substitution. The outcome is likely to depend on how successful they are in diversifying and expanding their exports to other countries at the same time as they increase their trade within the area.

Political conditions permitting, other countries with relatively simple and open economies may be able to form local economic unions on the Central American model. That experience also suggests the paradoxical thought that countries where import substitution has gone much further, such as most of the other Latin American countries, may be able to move toward regional integration only by first reintegrating with the world economy and bringing their cost and price structures more in line with those outside.[23] A different, and perhaps more realistic, strat-

[22] In a sympathetic review of the slow progress and special difficulties of integration among the less developed countries, Gunnar Myrdal states, "This means that a simple 'common market' is not enough; it must be completed by formal agreements, reached after negotiation, concerning what industries should be located in what countries. When thought through with all its consequences, this implies the need for a joint common planning" (paper, "The Efforts Toward Integration in Rich and Poor Countries," delivered in Mexico City on October 3, 1966). Myrdal notes, however, that the difficulties of achieving this objective are "formidable," and Sydney Dell, in *A Latin American Common Market?* (New York, 1966), while also stressing the necessity of common planning, says, "Of course, it may be unrealistic to talk of regional planning in Latin America at a time when even national planning cannot be said to have a very firm foundation in most countries of the region" (p. 212).

[23] In that event, the objectives of integration would presumably be largely political.

egy is evidently reflected in the renewed effort toward economic union undertaken at Punta del Este; namely, as Joseph Grunwald has expressed it, that integration is a "means of lifting the Latin American countries to a level of economic maturity where, without the aid of inefficient protection, they will eventually be able to compete as equal partners with the developed nations." [24] The expectation underlying this strategy, as expounded by Grunwald, is that integration would expand market perspectives, allow a more rational allocation of resources, permit economies of scale, spur competition, and stimulate private investment. Also, a "protected region-wide market" would provide the catalyst needed to break down economic, political, and social rigidities and restore economic viability.

This may be a correct appraisal of the Latin American problem and the most promising way of accelerating growth in the region. It seems unlikely, however, that this approach will significantly alleviate the need for a rapid increase in exports to other areas, particularly in view of the extended period—1970 to 1985—over which the common market is to be achieved. In the worst case, regional integration could hinder such an increase in exports if it were to mean the spread of cost-raising import substitution to countries in the region which, otherwise, would set their policies toward becoming more competitive in world markets.

Summary of the Study

To recapitulate, this study accepts as its point of departure that if the less developed countries are to earn foreign exchange in amounts commensurate with their needs, they will have to achieve a rapid increase in their exports of manufactures to the developed countries. This is where the world's buying power is concentrated, as long as levels of economic development remain so far apart, and it is also where the less developed countries will have to obtain most of the capital equipment and much of the materials and even some of the food needed by their growing economies and population.

[24] "Some Reflections on Latin American Industrialization Policy," paper presented at the conference on Key Problems of Economic Policy in Latin America, University of Chicago, November 9, 1966 (mimeographed, p. 40). W. W. Rostow expressed much the same thought in a lecture at the University of Leeds, England, on February 23, 1967; that is, that the Latin American countries "must go through a transitional stage of regional protectionism before they can emerge with competitive efficiency on the world scene" (*Department of State Bulletin,* March 27, 1967, p. 498).

Value Added as a Guide to Factor Intensity

The next question, to which Chapter 2 is devoted, is to try to identify the kinds of manufactures in which the less developed countries are most likely to hold or to be able to achieve a comparative advantage in international trade. According to the factor-proportions theorem and leaving aside strongly resource-based industries, these would be products requiring large inputs of relatively unskilled labor compared with both human capital, or skills, and physical capital. Rejecting certain criticisms of this theorem, the chapter examines the rationale of taking value added by manufacture per employee (roughly, value of output minus value of materials used divided by employment) as a guide to interindustry differences in capital intensity. By this criterion, the higher the value added per employee, the more capital-intensive the industry, and the lower the value added per employee, the more labor-intensive it is.

Though affected by various market imperfections, value added per employee has significant advantages as a measure of factor intensity in manufacturing. One is that this measure may be taken to reflect the flows of services into the manufacturing process from both human capital and physical capital, and permits their treatment on a common basis. Another advantage is that value added per employee is available in considerable industrial detail for the United States and a number of other countries from their censuses of manufactures. The use of this measure contrasts with the usual reliance on more infrequent statistics of stocks of physical capital as a measure of capital intensity, sometimes supplemented by verbal qualifications with regard to skill requirements.

To test the validity of this approach, value added per employee is then broken down into its wage-and-salary component and the rest, and significant relations are found across industries between the first component and other measures of skill and between the second and stocks of physical capital. It appears that value added per employee is a reasonably good, though not infallible, guide to the capital intensity of different industries.

By this criterion, the labor-intensive industries include such major industry groups in the census of manufactures as textiles, clothing, lumber and wood products, furniture, leather and leather products, and the broad group of miscellaneous manufactures. They would also include many important components of other groups, such as motorcycles and bicycles, cutlery and various other metal products, chinaware and pottery, ceramic tiles, glass containers, paperboard containers, pleasure craft and other small boats, and various kinds of printed matter and printing services.

All of these items are counted as labor-intensive on the basis of the direct factor inputs into manufacturing, ignoring the factor intensity of material inputs on the assumption that the latter are ubiquitous or readily transportable. The final section of Chapter 2 suggests that a few other items more closely tied to the origin of the material inputs—chiefly certain canned or preserved foods—may also be counted as labor-intensive on the basis that, in these cases, the material inputs themselves as well as the processing of the materials are labor-intensive.

A Common World Pattern

Chapter 3 explores the question whether or not the interindustry pattern of factor intensity found for the United States would be valid for other countries as well, particularly for countries in which skills and physical capital are relatively scarce and unskilled labor abundant. Theoretical arguments, along with some limited empirical evidence, have been given elsewhere for supposing that industries would differ significantly in their propensities to substitute labor for capital, and that they would therefore rank differently from country to country in factor intensity. The question is of crucial significance to the factor-proportions theorem, which could not provide reliable guidance to comparative advantage and specialization in international trade if the notion of "factor-intensity reversals" were borne out.

Despite problems of comparability, the analysis of value added per employee in the United States and other countries, developed in Chapter 3 at various levels of industrial aggregation, gives little evidence of factor-intensity reversals. The comparisons tend rather to support the strong-factor-intensity hypothesis underlying the factor-proportions theorem and, more specifically, the relevance of the U.S. pattern of factor intensities to other countries at very different levels of economic development and with very different factor-price ratios. The selection of labor-intensive manufactures based on value added per employee in the United States stands up well on the basis of similar data for other countries, including detailed comparisons with the United Kingdom, Japan, and India.

The concluding section of Chapter 3 is devoted to cotton textiles in the light of various statements to the effect that this industry is becoming "highly capital-intensive"—a change virtually completed in the United States and Japan, according to an OECD committee report, but still slowly proceeding in Europe. This view is sometimes invoked as a reason why, pending completion of the transformation and to assist in it, imports of cotton textiles from the less developed countries should continue to be curbed. The analysis given here indicates that, though capital expenditures in the industry increased significantly during the first half of the 1960's, it still ranks as strongly labor-intensive by comparison with other industries according to the criterion of value added per employee. It seems unlikely that the less developed countries are about to lose their comparative advantage in cotton textiles.

Characteristics of the Trade

A detailed selection of labor-intensive manufactures is made at the beginning of Chapter 4 on the basis of the criteria developed in the two preceding chapters. Then, after compressing the trade figures into four main groups, the import values of those foreign countries which include freight and insurance (c.i.f.) are adjusted down to an f.o.b. basis to render the data both more comparable with United States imports and more meaningful as a measure of payments to less developed countries.

Analysis of the imports of labor-intensive manufactures by developed from less developed countries brings out the following main features:

1. The trade is relatively small, accounting in 1965 for less than 10 per cent of total imports by developed from less developed countries. The share of imports from less developed countries in total imports of labor-intensive manufactures by developed countries was also small—about 13½ per cent (excluding certain items near the margin between labor-intensive and capital-intensive, which are much less important in imports from less developed countries than in imports from other sources).

2. The trade is highly concentrated by origin, destination, and product. Hong Kong alone supplied 28 per cent of the 1965 total, and all together the less developed countries of the Far East supplied two-thirds. The United States took almost 42 per cent of the imports and, together with the United Kingdom and West Germany, 72 per cent. Textiles and clothing, exclusive of products of jute and other coarse fibers, made up almost one-third of the total, or 45 per cent if the coarse-fiber items are included.

3. The trade has grown very rapidly in recent years. In 1965 the total was 4.3 times the 1953 level, an increase averaging about 13 per cent per annum, unadjusted for price increases, or perhaps one or two percentage points less if so adjusted. This is much faster than seems to have been generally expected only a few years ago. Recently, the increase

has been much faster in miscellaneous light consumer manufactures than in the other three groups (textiles, food products, and processed materials).

Reasons are given in the final section of Chapter 4 for thinking that there may be a continued rapid growth in the trade. An important condition, however, is that the structure of wages in less developed countries not be such as to nullify their comparative advantage in labor-intensive products. This qualification seems to apply to a number of the less developed countries and may explain why some of the more advanced among them have not done well as exporters of labor-intensive manufactures while still unable to compete in other manufactures. Otherwise, the ability of the less developed countries to export labor-intensive manufactures should continue to strengthen as they gain experience and as incomes rise in the developed countries.

Policy Choices and Results

How fast imports of manufactures from the less developed countries increase depends not only on the strengthening of their competitive position and the growth of demand in the importing countries but also on the extent to which the latters' commercial policies inhibit these forces. Chapter 5 reviews two main types of interference with the flow of trade. One is direct controls exemplified in the "Long-Term Cotton Textile Arrangement." The other is the structure of tariffs, rates generally rising with the stage of manufacture so that the effective level of protection of finished products is typically higher than the nominal level. This is scarcely less true of the United States than of other countries, but the effect, judged by the composition of trade, nevertheless seems to be much less restrictive here than in western Continental Europe and Japan.

The final section of Chapter 5 concerns the debate over commercial policy in the developed countries and, in particular, the demand of the less developed countries for tariff preferences. It is suggested that the outcome is likely to be a mixed bag at best, with both positive and negative features in enlarging market opportunities for less developed countries. Under these conditions, it would be important to make sure that the policies followed by the developed countries, however they may differ from each other, are at least consistent with the results aimed at and, therefore, to express the results anticipated in explicit quantitative terms with regard to the level and growth of imports of manufactures from the less developed countries.