SMALL-SCALE AND TRADITIONAL INDUSTRIES: A DEVELOPMENT ALTERNATIVE
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I. INTRODUCTION

The place of small-scale and traditional industries in the development of less developed countries (LDCs) has received very little attention in the literature or in government development programs. In this paper we intend to consider a development alternative in which the potential role of the sector of small-scale and traditional industries, particularly culturally oriented ones, is explicitly recognized. Because of the particular attributes of this class of industries, we believe they can contribute importantly to the development of LDCs by reducing the degree of inequality in the distribution of gains from development, balancing the geographical distribution of population, and generating employment and foreign exchange earnings. For brevity, we shall call this group of industries the small-scale sector. The study contains four parts. We first examine what we consider the biases and deficiencies of government policies and theoretical models of development that overlook the actual and potential contributions of the small-scale sector. In the second part we discuss the attributes of the small-scale sector and the growth implications of an alternative that incorporates the small-scale sector. In the two remaining sections, we demonstrate the empirical relevancy of our theoretical consideration and consider the type of programs required to develop the sector as a viable source of growth and employment.

II. DEVELOPMENT BIASES AND THEIR CONSEQUENCES

The alternative model of development proposed in this paper is built on the assumption that every development policy has its particular distributional consequences. Thus the common social and economic problems of urban high unemployment and congestion, rural poverty, and the glaring income gaps between the rich and the poor found in most contemporary LDCs reflect the biases and deficiencies in the developmental programs and policies adopted in the past. The terms biases and deficiencies are used in the sense

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that these programs and policies tend either to heighten or to perpetuate the existing degree of inequality in the distribution of gains from development.

From the point of view of equity, the major shortcomings of the present development programs and policies may be specified as 1) too much concern about growth per se without due consideration of equity, and 2) too much emphasis on large-scale, capital-intensive techniques and industries. It is also typical of theoretical models of development to describe the essence of development as a process of substitution—capital for labor, industry for agriculture, and modern manufacturing for traditional small-scale industries. Indeed, the substance of development is often seen as the progress from small-scale and traditional industries to modern large-scale industries. Even the coexistence of small-scale, labor-intensive cottage industries in the rural sector with large-scale, capital-intensive industries is generally regarded as a symptom of backwardness in a dualistic economy.

In the classical two-sector growth model, the non-industrial sector is assumed capable of producing only goods for which consumer demand does not grow as rapidly as does income. Therefore, in a growing economy the sector is bound to decline in relative importance in output and employment. The central feature of economic development as theorized in the model is the labor reallocation process from agriculture to industry under fixed real wages. Once growth starts, the industrial sector is assumed to expand smoothly through investment and capital accumulation in the sector. Concurrently, surplus labor is continuously pulled away from agriculture and relocated in industry. Only when the surplus labor in agriculture is totally absorbed by industrial expansion is growth assumed to take on different characteristics. Once growth reaches this important turning point, real wages begin to move upward and the industrial sector tends to assume a capital-intensifying character.

In reality, however, the growth experience in most LDCs in the well-publicized growth decade of the 1960s contradicts the profile described above. There is evidence that a preference for capital-intensive techniques and industries is rather common in the LDCs regardless of their stage of development. Even in countries where the industrial sector has expanded rapidly, the labor reallocation process it generates has never been sizable enough to absorb fully the growth in labor force and the migrated labor from agriculture. The low labor absorption character of industrial expansion is largely attributable to a pattern of development biased toward capital-intensive techniques and industries.

Emphasis on interindustrial linkages and on positive external effects in development programs and projects often leads to a sharp imbalance and high concentration in the geographical distribution of economic activities, hence in the distribution of gains from development. Such a geographic
imbalance necessarily encourages the flow of population from rural hinterlands to urban industrial centers in search of employment opportunities that do not exist for the unskilled, unsophisticated peasant migrants. The migrated population that is left unabsorbed by non-agricultural employment inevitably raises social tensions and necessitates a diversion of resources to them for urban services. It is regrettable that in the drive for modernization and industrialization through capital-intensive, large-scale development programs the LDCs are besieged with new social problems of multiple dimensions.

Development strategy that solely emphasizes the development of capital-intensive techniques and industries and large-scale manufacturing may affect the character of the growth process in still another manner. It is generally known that unequal distribution of income is largely due to the unequal distribution of wealth. Given the distribution of wealth, the impact of its inequality may be lessened if the share of income from property in national income decreases and the share of labor correspondingly increases. The share of labor in national income is least likely to rise in an economy in which demand for capital increases relative to labor because of the capital-biased character of development policies.

It is therefore not surprising to find that in the theoretical framework of the two-sector growth models for the LDCs, little attention is given to the small-scale sector as a means of promoting development and as a means of lessening the social and economic frictions that growth brings. Activities and industries in the small-scale sector are invariably characterized as backward and inefficient. The products of the sector are also considered inferior in quality to those produced by large-scale methods. The consumer is assumed to favor the latter. Thus, as development proceeds and income rises, firms and industries in the sector are assumed to be replaced by modern large-scale manufacturing.

III. AN ALTERNATIVE MODEL OF DEVELOPMENT INCORPORATING THE SMALL-SCALE SECTOR

We present here an alternative model that is a direct challenge to the one prescribed in the two-sector development models for the LDCs. If consideration is given to the distribution aspect of development programs and policies, in our view the core of the development solution in the LDCs should be the creation of substantially more productive employment in modern industries or, if not here, elsewhere. Admittedly, development and growth imply changes in the employment structure. And structural change often means the relative decline in importance of rural based, agriculture-related economic activities. Although a decline in these industries has
actually been observed, the phenomenon should not be generalized as an investment criterion for development. Measured changes in the employment structure may merely be a statistical fallacy if a growing part of the working age population is left either underemployed or unemployed.

Moreover, we question the validity of the generalization that products of the small-scale sector are necessarily inferior and that the sector should necessarily decline because of low income elasticities for its products in a growing economy. We find it useful for analytical as well as policy purposes to divide the small-scale, traditional industries sector into two distinctly different groups. For identification purposes we shall call them Type I and Type II.

We define Type I as the segment of the small-scale sector that produces non-traditional, manufactured products. These manufactured products may be produced more efficiently by larger-scale firms. Type I firms are thus definitely technically inferior to larger firms because of their small scale of operations. The existence of such firms and activities can be explained only in terms of market imperfection and constraints on market size. Therefore, their presence is pertinent only to a particular stage of development. Given time, firms or industries in the group will either grow in size through development or will disappear through competition. Current examples from Asia include bicycle production, decorative lights, and some textiles and clothing.

Type II industries are firms that specialize in hand-made goods, artistic products, and other products with a distinctive cultural character. The product distinction of these goods is directly derived from the small-scale, labor-intensive process of production. Thus the small scale of operation in this instance is a definite market advantage rather than a disadvantage. More importantly, we believe that the products are highly demanded as consumers' incomes rise. Hand-made woolen and cotton clothing, and leather goods, are the best examples of such products; jewelry, pottery, straw products, ceramics, and local Indian crafts are also excellent examples of what we have in mind.

The theoretical structure of the development alternative proposed here recognizes the existence of a small-scale subsector, capable of producing goods that increase with income, in the traditional rural sector. The model consists of an industrial sector, an agricultural sector, and a small-scale subsector within the agricultural sector; it produces a new set of growth implications significantly different from those drawn from the two-sector growth models.

In our new model, the labor reallocation process from agriculture to industry is no longer necessarily the most important dimension of growth. Growth can take place without labor reallocation. Development and ex-
Expansion of the small-scale sector can create employment opportunities for labor released by agriculture. Since we believe that firms and activities in the small-scale sector are largely rural based, the magnitude of labor reallocation can be minimized, if not eliminated. The process of modernization as seen from this alternative approach is not merely a substitution of industry for agriculture, of capital-intensive, large-scale manufacturing for labor-intensive, small-scale, traditional industries. Rather, the model postulates that development and expansion of the small-scale sector may provide a source of growth and an impetus toward modernization for the LDCs. In essence, the alternative model suggests that a wholesome, balanced approach to development requires coordinated efforts in promoting industrial and agricultural development on the one hand, and modern manufacturing and small-scale industries on the other hand.

Our alternative view of development does not deny that historically certain types of traditional industries have been both non-competitive in production and unresponsive in demand when faced with competition from larger scale, more efficient manufacturing production. Such a general characterization of all products and activities within the small-scale sector is not accurate, however. Nor does the model suggest that the small-scale sector entirely replaces the industrial sector in the development process. The model does suggest that the development of the small-scale sector should be integrated into overall development programs to complement industrial and agricultural transformation in the LDCs. Because of the unique features that products and firms in the small-scale sector possess, development of the sector may make significant contributions in the following areas:

1) Employment creation. As we have argued in section II, development of large-scale, capital-intensive techniques and industries has been given priority in the LDCs for over a quarter of a century, but has not provided the desired amount of employment in spite of rapid growth in output. It is of great social importance therefore that a solution be found. We hypothesize on a priori grounds that products of the small-scale sector have higher employment content than most large-scale manufacturing activities. It follows that a given amount of investment in the small-scale sector will create more employment than it would create in manufacturing. It is true that the small-scale sector normally has relatively low value added per worker, implying relatively low wage rates. But low wage rates do not seem too important in economies where labor has few alternative skills or opportunities.

Since the small-scale sector could put to work a part of the rural population that might otherwise be left out, the gains from development of the small-scale sector are likely to be spread over a broad base and therefore to improve income distribution.
2) **Balance in geographic distribution.** A conspicuous phenomenon common to the contemporary LDCs is an unevenness in the geographical distribution of economic activities and a resulting regional inequality in income distribution. The regional inequality and geographical imbalance inevitably set the labor migration process in motion, from the retarded to the growing regions. Population movement is both socially necessary and desirable as long as the migrated labor force is subsequently absorbed into productive employment. Evidence has shown, however, that the labor absorption rate of industrial expansion has typically been low in the LDCs relative to the magnitude of migration and growth in the labor force, implying that regional imbalance and high urban unemployment and congestion are closely related. In addition, migration of the labor force is known to be selective; it is mostly concentrated in the youngest and best educated. As a result, the quality of the remaining labor force in the migrating sector deteriorates. Regional imbalance is thus partly responsible for rural poverty and stagnation. Possibly a diversified geographical and industrial structure may provide a better solution to the problems of high urban unemployment and rural development, compared to the alternative of continued centralization and growth of cities with accompanying external factors that decrease amenities of life and increase costs of government and costs of urban living.

Our interest in the development of the small-scale sector lies partly in its tendency to be rural based. Expansion of the sector can slow the destabilizing flow of population to the urban areas insofar as employment opportunity in the rural as well as urban areas is a fundamental variable in the migratory flow equation.

3) **Trade and export potential.** The present structure of international trade, as viewed in the well-known neoclassical theory of comparative advantage, is characterized by the flow of industrial and manufactured goods from the developed to the developing countries, and the flow of raw materials and agricultural products in the opposite direction. The developing countries in the Third World have been highly critical of this pattern of trade. The existing pattern of international trade is looked upon as a mechanism through which the industrial centers exploit the periphery. Although the recent oil crisis and other raw material shortages may have temporarily turned the argument around, the fact remains that developing countries rich in resources are the fortunate few. Most LDCs still must accept the existing pattern of international trade. Moreover, in the foreseeable future, it is highly unlikely that the present directions of trade will reverse. If one looks ahead realistically, export expansion in light manufactured goods and goods that are produced by labor-intensive and small-scale industries, particularly those with a distinctive cultural character, provides a promising avenue for growth.
IV. THE EMPIRICAL RELEVANCE OF THE MODEL

The theoretical validity and empirical relevance of the alternative model of development undoubtedly depend on the question of whether a set of products and activities having the special attributes we describe exists in the rural sector of contemporary LDCs. To test this proposition, we identified some eighty-one SITC (Standard International Trade Classification) commodities that met the following two criteria: 1) they are produced or producible by small-scale, traditional industries, and 2) they are either presently traded or potentially tradable on the international market.9 In the initial phase of testing the empirical relevance of the model, we concentrate on the set of commodities of the small-scale sector traded on the international market because most other published data are not disaggregated enough to allow the type of empirical test the model requires. In addition, the impetus for the development of the small-scale sector in LDCs may initially come from its successful penetration into markets in the developed countries.

Although the SITC categories were less disaggregated and complete than we would have liked, we pieced together three sets of operable data: 1) U.S. import data between 1964 and 1970 annually, 2) a combined cross-section of import data for fifteen OECD countries for 1968 and 1969, and 3) a combined cross-section of import data for fifteen OECD countries for 1968 and 1969, confined strictly to imports from the LDCs. Evidence derived from the econometric study of the data indicates that: 1) Import demand for the eighty-one selected commodities had high income elasticities (in most instances both individual category and total income elasticity estimates are far above unity10); 2) the eighty-one SITC commodities were internationally traded in important quantities from 1964 to 1970, with rates of expansion even exceeding those of general manufacturing (import demand for products with cultural distinction grew at 11.6% per annum on the average versus about 9% per annum for all manufactures); and 3) all items in the set we have investigated were goods of high labor content. Moreover, an analysis based on the cross-section data for the fifteen OECD countries suggests that the higher the labor content, the higher was the income elasticity of import demand.

Explicitly, the results confirm our a priori hypothesis that a group of small-scale goods of high income elasticity does exist. Contrary to the assertion that products of the small-scale sector decline in relative importance as income rises, as a group they have expanded as well as, and in many instances better than, all internationally traded goods in a period of rapidly growing trade. In fact, numerous other goods that may be produced by the small-scale sector in the LDCs are yet to be identified. And others currently traded on the international market can increase in importance if concerted efforts are made in financing and marketing.
The rapid expansion of demand for such small-scale, traditional products is not difficult to explain, particularly with respect to their market expansion in the affluent, developed economies. The basic reason is that tastes are changing toward differentiated, distinctive products as the growing middle class in the wealthy nations becomes more affluent. As affluence has become widespread the vast middle income class is responding to the same product attributes (connected to craftsmanship and the local culture) as the ruling (wealthy) class did in the past. Also, as the mass of consumers has become more highly educated, their wants and tastes have become more distinctive. In this setting, mass produced factory goods, particularly consumer goods, lose much of their appeal (though they still dominate the total market), whereas hand-made, non-standardized goods of artistic merit and goods reflecting definitely distinctive cultural character become more appealing. The markets for products from the small-scale sector are likely to grow as development reaches more advanced stages. Though such products might be thought to be greatly subject to fads and fickleness in the market (since they are not necessities), our econometric evidence indicates that they are no more so than industrial products generally.

V. IMPLICATIONS FOR POLICIES AND CONCLUDING REMARKS

Having theorized a development model explicitly incorporating the small-scale sector, and having demonstrated the empirical relevance of the model, we now turn to the discussion of significant policy issues implied by the model. First, we find it is essential to recognize that the small-scale sector is a heterogeneous aggregation of firms that analytically can be separated into at least two groups. The classification of Type I and Type II industries in our analytical framework is made on the basis of the importance of the scale factor in the determination of operational efficiency and the market characteristics of the products. Whereas the scale of operation is unimportant and products are income elastic for Type II industries, smallness in scale and income inelasticity of products are seen as disadvantages of Type I industries in the small-scale sector.

Conceivably there are similarities and overlappings in the problems and difficulties they face. We see, however, a fundamental difference in the ultimate objective of developmental policies in dealing with the two groups. That is, the relative importance of Type I industries in the sector should be reduced and correspondingly the share of Type II should be expanded if the small-scale sector is to become a more important source of growth. Accordingly, projects and programs designed to develop the sector should fully take into account the scale factor and demand characteristics that separate the firms and industries in the sector.
Empirical findings from field work in the LDCs suggest that further distinctions can be made between economies of scale from production and scale economies derivable from purchasing, marketing, and financing. Often small scale appears to be a market advantage rather than a market disadvantage in production where traditional craftsmanship and skills contribute to the product distinctions. Nevertheless, firms of small size in each subgroup definitely have less access to modern credit facilities and marketing intermediaries. In the area of material purchasing, however, it is possible that both pecuniary and non-pecuniary economies of scale can be made available to some extent to firms in the small-scale sector by the creation of cooperatives and by government interventions in the market. In order to explore fully the potential of the small-scale sector as a growth agent of significance, we see a need for government efforts and interventions of broader scope, in areas of financing, marketing, and vocational education.

Traditional and small-scale producers must rely almost entirely on self-financing their working and fixed capital requirements. Outside finance is seldom available at competitive rates. In many actual cases in Colombia, Mexico, Hong Kong, and Taiwan small establishments of family workers or of even five to ten hired workers may pay seventy percent interest on a loan, whereas medium and large scale firms will typically borrow at far lower rates of twenty to twenty-five percent. In Taiwan a fairly typical and popular credit arrangement by firms in the sector is to tie credit advances with orders, an arrangement quite similar to the ancient putting-out system. Another popular source of credit for firms in the sector is rural credit cooperatives. Here, larger firms in the sector still benefit more and have more access to funds than the smaller ones. Another deficiency of the rural credit cooperatives as a source of credit is their present limited scope in the rural areas. Nevertheless, rural credit cooperatives appear to be most promising and should be expanded if they can become responsive to needs of small-scale establishments. There are now very few rural or small-scale credit cooperatives in Brazil, Colombia, and Mexico. Most cooperatives exist for purposes of pooling products and marketing.

Of equal importance to finance is the problem of marketing, especially internationally. Few firms in the sector maintain any direct foreign contact. The putting-out system is widely practiced in Taiwan and Hong Kong by the trading firms outside the sector and by larger, newer firms inside the sector, in order to fill large orders from overseas. "Putting-out" characterizes the situation in which the buyer supplies raw materials to the small producer and sets specifications of quality. Private trading firms both produce and purchase from many smaller firms and household producers in Colombia and Mexico. Government cooperatives are of greater importance in these countries and in Brazil as well, while the putting-out system is most important in Hong Kong and Taiwan. But the scope is too limited at the moment to
expand the small-scale sector to a size comparable to that defined in our model. Market expansion of products of the small-scale sector to markets in the advanced countries may hold the key to the initial development of the sector in the LDCs. To be successful, governments in the LDCs should undertake efforts in the areas of marketing surveys and quality control to assist firms that have the specified attributes described here in opening up foreign markets. Here again there is some progress in all five countries that we studied, though it often seems to advance at a snail's pace. The trouble in the three Latin American countries is that such efforts are underfinanced and understaffed; also, bureaucratic organizational behavior often leads a life of its own, seemingly even forgetting its original purpose. Good examples abound in all three Latin American cases. In Taiwan and Hong Kong credit cooperatives are very advanced.

The training and education of workers and managers is a problem related to further expansion of the sector and replacement of skilled artisans over a span of years. At present, workers in the sector obtain their training mostly as apprentices in the traditional form, although the governments of the LDCs have also participated in training in varying degrees. It seems that special vocational schools or training centers funded by government might provide a solution to the problem. We also see great potential here in making training available to females of rural households in order to develop supplementary careers for them as producers of handicrafts.

We believe that the needs and problems of the traditional segment of the small-scale sector are qualitatively different from those of the "modernized" handicraft and artistic goods sector. For the "old" section of the small-scale sector, training of workers is closely related to the economic viability of the traditional sector per se. That is, needs and problems in marketing, financing, and training should be examined in a consistent manner. One surprising result of our field surveys in Taiwan, Hong Kong, Colombia, Brazil, and Mexico is that in the "new" section of the traditional sector wages and profits are already fairly high—in fact, wages often exceed those of similar workers in large-scale manufacturing. The concern here is that the expansion in production has led to quality deterioration. The problems then are quality control and product design. Neither problem is easily solvable, but it is clear that in the five countries we have studied, artisans have learned in many instances to expand while maintaining quality. The best antidote to quality deterioration is simply rejection of the wares by the marketing agency or purchaser. Product design is a tricky problem, one in which "helpful" governmental nabobs have frequently given artisans bad and costly advice. Still, some hard-won advances are notable in the private and governmental sectors through more trade fairs and various exchanges of information.

Overall, the new, more modern urban handicrafts are faring better than the old, traditional handicrafts from rural zones. The reasons for this are
many. In the Latin American cases the rural artisan is less educated, is less willing and able to take risks, and has little if any knowledge of many new possibilities in product design and tastes. Often the producers in the rural zone are the females and even the children. Both produce on a part-time basis when they are not engaged in doing housework or going to school. The husband, with some important exceptions, typically works in agriculture. The artisan's earnings are complementary to the so-called main source of income of the male even though they may be higher than his. To understand the present plight of the rural worker, we need mention only these problems plus exploitation by monopolistic buyers and by middlemen who sell raw materials at prices of up to fifty percent higher than the going rate elsewhere. Governments can, though do not always, behave as exploitatively as the private monopolist and middleman. Probably the best way to overcome the blocks to a potentially efficient and income-raising market opportunity for small producers is for them to organize into larger purchasing and selling units, whether as unions or as cooperatives. In Colombia and Mexico this is precisely what is now happening with some success. In Brazil progress is coming much more slowly, whereas in Hong Kong and Taiwan the "blocks" are less important at this stage of their progress.

We conclude by stating that we share the disillusion brought by the development experience over the past two decades in the LDCs. Our concern for the social and economic problems and our hope for a more equitable distribution of development gains led us to re-examine the place of small-scale and traditional industries in development and international trade and to propose a development alternative contrary to the conventional view of emphasizing growth *per se* and large-scale manufacturing. In our view, the small-scale, traditional industry sector, a sector generally overlooked by policy-makers in the LDCs and by most professional economists, has important contributions to make in lessening some social and economic tensions in the LDCs because of its unique attributes. We find it encouraging that empirical findings have confirmed our *a priori* hypotheses.

In fact, the development of the small-scale sector has taken on a new significance in the midst of the current dislocation of the world economy. The new world economic structure and order that is presently emerging further underlines the importance of such small, labor-intensive industries. One important lesson to be learned from the current economic disorder is that rural development may determine the final outcome of the over-all development efforts in the resource-poor LDCs. Development of the small-scale sector and of agriculture would appear to be two inseparable components of any sustainable rural development strategy.


3. Capital-biased growth is found to occur in most Latin American countries; see Werner Baer and M. E. A. Hervé, “Employment and Industrialization in Developing Countries,” Quarterly Journal of Economics 80, No. 1 (February 1966): 88-107. The same bias is also found to occur in the Taiwanese development experience in Asia; see Yhi-Min Ho, “Development with Surplus Population—the Case of Taiwan: A Critique of the Classical Two-Sector Model, à la Lewis,” Economic Development and Cultural Change 20, No. 2 (January 1972): 210-234.

4. Though A. O. Hirschman was one of the originators and popularizers of the backward and forward linkage approach which has often been used to justify large-scale manufacturing industries as an investment strategy, he himself carefully states that preserving handicrafts and small-scale traditional activities is important. See A. O. Hirschman, The Strategy of Economic Development (New Haven: Yale University Press, 1958), p. 131.


6. Our alternative model of development, by recognizing other non-agricultural activities in the rural sector, is similar to the agrarian model postulated by Hymer and Resnick, “A Model of an Agrarian Economy,” but there is a fundamental difference between the two models. That is, non-agricultural activities in the rural sector in their model produce what they call the Z goods, which are assumed to be income-inelastic.

7. Hymer and Resnick, in “A Model of an Agrarian Economy,” identify the historical process of replacement of traditional products with the present as well, seeing them as being inferior goods in both domestic and international markets. In fact, Hymer and Resnick appear to have identified all traditional goods as being Z goods when in fact their Z goods pertain to only one portion of the small-scale, traditional goods sector, viz., cottage industry goods, which are produced in the home as a part-time occupation primarily by members of one family using human or animal power. Handicraft goods, in contrast, are usually produced full time in a separate shop by both family members and outside labor which has been apprenticed, sometimes for up to two years’ time. Thus the evolution of cottage, home, part-time production is toward small shop production. And the importance of the latter with respect to income and employment is greater than the former. In this sense, the Hymer-Resnick aggregation may not be appropriate in the context of the present paper.


10. The overall income elasticity for the eighty-one imports was 1.60120 in the U.S. time series and 1.29910 for the OECD cross-section. For LDC imports alone into OECD countries, however, the income elasticity was 2.08692 for a smaller sample of commodities. Cf. Ho and Huddle, “Traditional and Small Scale Culture Goods,” tables I, II, and V.

11. Policy issues raised here are primarily based on the findings from our field surveys in Brazil, Colombia, Hong Kong, and Taiwan. Each of the above countries is interesting either from the point of view that they have serious problems in labor absorption, foreign exchange shortage, and geographical imbalance, or that they have systematically taken steps in solving those problems. Our research work described in the paper is still continuing in the countries named above.