International Industrial Development Center
STANFORD RESEARCH INSTITUTE
MENLO PARK, CALIFORNIA
CABLE ADDRESS: STANRES

Rural industries C,

Research Program on Small Industry Development
Miscellaneous Paper No. 3
August 1959

RURAL INDUSTRIALIZATION FOR AGRICULTURAL DEVELOPMENT

by

Dr. William Bredo
Senior Economist
Stanford Research Institute

Paper Read at the Conference of the
American Farm Economic Association
Cornell University
Ithaca, New York August 25, 1959

RURAL INDUSTRIALIZATION FOR AGRICULTURAL DEVELOPMENT

by

William Bredo*

In this paper the aim is to explore the possible role of rural industrialization as a major vehicle for developing agriculture and the rural communities in the underdeveloped countries. The view is advanced that it is desirable, in the interest of broad-based economic progress in the underdeveloped countries, to achieve early integration of industry with rural and agricultural development. To enlarge the impact on the rural economy and to perform other economic and social benefits to the nation, decentralization of industry is proposed for consideration as a means of bringing underdeveloped regions and agriculture into the mainstream of development and of planning for the large population increases that may be in imminent prospect.

In recent years there has been extensive discussion in economic literature about the respective roles of agriculture and industry in economic development. Most prominent has been the controversy whether the desirable policy is "industry first, and agriculture to follow," or whether early simultaneous development of these two sectors is preferable. The wisdom of the policy of developing industry and agriculture as separate and isolated economic sectors is questioned in this paper,

---

* I should like to thank Eugene Staley, Edward S. Prentice, Joseph E. Stepanek, and Guy Benveniste for comments on an earlier draft of this manuscript.

especially the position that the development of industry should precede the development of agriculture. To build each sector on solid economic foundations, it is felt that development of the one should reinforce and strengthen the other. Multiple economic cross-linkage is believed necessary for the purpose. To transform subsistence agriculture, development policy should incorporate the concept that agriculture must be made interdependent with the rest of the economy.

The problem is presented from the viewpoint of such predominantly agricultural countries as Pakistan and India, which have extremely low incomes per capita, dense and rapidly growing populations, and serious foreign exchange problems--countries unusually handicapped in making rapid progress in development.

In this kind of milieu it seems essential to make substantial investments in the development of agriculture and the rural communities in the early stages of economic development, as the very possibility of executing the development program is at stake. Early expansion in the supply of food and industrial crops is required for the following reasons:

1. To provide for the rapidly growing domestic demand for food and agricultural raw materials;
2. To expand exports and increase earnings of foreign exchange for financing the importation of development goods; and
3. To obtain increasing revenues from agriculture to finance the development program.

It may be useful to illustrate the significance of these points by brief concrete references to the recent experience of Pakistan and India bearing on these aspects.

Effects of Slow Agricultural Progress on Economic Development

Both countries made large investments in agriculture and irrigation in their development programs. In the First Five Year Plan, 1955-60, Pakistan planned to invest Rs. 4.20 billion, or about 45 percent of the entire expenditure for development. During India's First Five Year Plan 1951-56, 32 percent of the entire allocation to development was planned to go into agriculture and irrigation, a total of Rs. 7.41 billion. In both countries 16 percent of the total development expenditures were to be devoted to agriculture, as distinct from irrigation investments. The importance of agricultural investments in development continued to be recognized in India's Second Five Year Plan when the total planned investment was raised to Rs. 9.49 billion, but proportionately this allocation represented a decline to 20 percent of the over-all program.[1/]

In spite of these heavy investments in the agricultural sectors at the very beginning of their planned development efforts, both India and Pakistan are encountering grave difficulties. Imports of food are costing India about $500 million and Pakistan about $80 million a year;[2/] in both cases these imports cost a significant portion of foreign exchange earnings. These two countries became independent in 1947 approximately at the time when the demand of the growing population for food was beginning to exceed the domestic supply. It also appears that the

---

1/ The allocation to agriculture was raised from Rs. 3.57 billion to Rs. 5.68 billion, but this change represented a decline from 16 to 12 percent of the total Plan.

2/ The Economist, "India Focuses on Food," June 6, 1959, pp. 951-52 and "Pakistan's Bootstraps," September 6, 1958, p. 766.

population may be growing at an increasing rate, close to 2 percent annually instead of at the 1.4 percent rate used in recent planning estimates. Thus the population may be growing at the annual rate of an additional 8 million persons in India and 1.8 million persons in Pakistan. These population gains require about an additional 1.7 million tons of food grains each year.[3/]

The effect of the failure to meet domestic requirements of wheat and rice, particularly, has been to reduce the quantity of foreign exchange available for industrialization and infrastructural development. At the same time, it has not been possible to increase earnings from agricultural exports, though there have been some gains from manufactured jute and cotton textiles.

It is interesting to note the similar experience of Communist China during the First Five Year Plan. Between 1953 and 1956 about 7 percent of the annual output of consumers' goods, mostly agricultural products, was exported to earn foreign exchange for capital formation. The Chinese experience has particularly reflected the key importance of agriculture as the basis for maintaining a high rate of capital formation and for maintaining, if not increasing, per capita consumption. This lesson was learned from the poor harvest of 1956. As a result there was a very substantial increase in the allocations to the agricultural sector for the Second Five Year Plan, issued late in 1957, which incorporated the

---

3/ Ansley J. Coale and Edgar M. Hoover, Population Growth and Economic Development in Low-Income Countries - A Case Study of India's Prospects, Princeton, 1958. Chap. IV, pp. 29-42, Table 7. The projections for the period 1961-71 are at the annual average rates of 1.8 percent assuming a 50 percent decline in fertility in the period 1956-1981, and 2.5 percent assuming fertility is unchanged.

view that "industrial development requires simultaneous development of agriculture."[4/]

Pakistan's First Five Year Plan called for a production increase of 13 percent, but until now the Development Program has had no significant impact on increasing agricultural production.

In India the view seemed to prevail that the First Five Year Plan, ending in 1956, had been successful in raising agricultural production about 15 percent.[5/] But a more sober evaluation suggests that most of the progress of Indian agriculture might have been due to favorable weather conditions.

The fact that the three most populous countries of Asia are faced with severe development problems due to the failure to obtain an adequate development of rural resources, in spite of proportionately very heavy investments, is indicative of the difficulties inherent in developing the agricultural sector. Their experience also serves to question the theory of resource allocation referred to, which discourages investments in agriculture in favor of "urban investments" and heavy industry in the early stages of development.[6/]

4/ Choh-Ming Li, Economic Development of Communist China - An Appraisal of the First Five Years of Industrialization, University of California Press, Berkeley and Los Angeles, 1959, pp. 219-221.

5/ Government of India Planning Commission, Second Five Year Plan, New Delhi, 1956, p. 255.

6/ Stephen Enke, "Speculations on Population Growth and Economic Development," Quarterly Journal of Economics, February 1957, Vol. LXXI, No. 1, pp. 19-35; and Walter Galenson and Harvey Leibenstein, "Investment Criteria, Productivity and Economic Development," Quarterly Journal of Economics, August 1955, Vol. LXIX, No. 3, p. 346.

The theory rests on a number of assumptions which are believed to require further investigation. It would lead to recommending a pattern of development placing primary emphasis on large scale industrial investment, and postponing improvement in the living conditions of the people. This is a policy which recent history is believed to have shown can be implemented only by severe repression of the people, and is impossible of execution within a democratic framework. The theory rests on the primary assumption that additions to income resulting from investments in agricultural and rural pursuits will be largely consumed, rather than reinvested, and that the effects of investments in this sector of the economy will be to stimulate population growth. There will be occasion to come back to this argument again later.

The Problem of Raising Agricultural Productivity

It may be taken as axiomatic that improvements in agriculture which have the effect of raising agricultural production will be due to the adoption of improved technology.[7/] A central theme of this paper is that development policy should recognize that industry, which is the source of improved technology, is the instrument for bringing about change. This means recognition of the proposition that industrialization is the dynamic element in the economy, and that if suitably directed it may give dynamic momentum to the development of all aspects of agriculture and village life.

7/ The problem of expanding acreage is an important source of additional agricultural productive capacity, but in the long run more productive use of the factors applied to agricultural production is essential even on such land.

A fair degree of success is being attained by the community development programs of the Subcontinent in bringing about change in the life of the villages, including some measure of progress in agriculture. But so far as the broad impact of this program on agricultural production is concerned, it is a shadow of what it could be.

Based upon several months of recent field work in the interior of Pakistan as a member of a Stanford Research Institute team, the conclusion was reached by the writer that to get agricultural production to respond adequately, it is necessary to introduce a much greater investment on the industrial side to provide the goods--materials and equipment--needed by the cultivators to raise agriculture to new technological levels. It was observed that better farm practices can usually be introduced only with the use of improved agricultural equipment. This emphasizes the key role of the industrial economy in the development of agriculture.

There are still vast steps to be traversed in improving agricultural implements used on the Subcontinent. In the operations of harvesting and threshing, for example, it is unfortunately impossible to record any progress over the ancient methods. Though agriculture is backward it is doubtful that any real difficulty would be encountered in getting rapid acceptance of improved equipment by cultivators. The usefulness of the village level worker as an advocate of improved farm mechanization has hardly been tapped. The outstanding problem faced by all manufacturers is that of getting an adequate supply of steel and other raw materials, even in India with its significant small industry program.[8/]

8/ For example, see Development Commissioner, Small Scale Industries, Small Scale Industry Analysis and Planning Report No. 14 (W),

Establishing Economic Interdependence with Agriculture

In terms of the concept of increasing economic interdependence, furnishing the implements and tools to agriculture for modernization provides important forward linkage.[9/] A second important approach to integration is to stimulate a growing market for the products of agriculture in order to encourage expanding farm production. This backward linkage to industry is provided by establishing firms for processing and improving the marketing of agricultural products. In addition, the manufacturing of equipment for the agricultural processing and handling industries is essential for putting new and growing demands on agricultural production.

The demand for farm products can be expanded in several major ways:

1. By expanding the demand for processed foods.
2. By processing agricultural wastes and by-products to augment the feed supply for livestock.
3. By increasing the demand for industrial crops, including oil and fiber crops, textiles, manufactured jute, etc., and chemical by-products.

In breaking away from the pattern of subsistence farming, in which each family literally produces its own food needs, it will be found that diversification of production of crop and livestock products is one of the effective ways of making farm lands generally more productive.

Agricultural Implements (Western Region), pp. 10-13. The allocation of Rs. 300 million in the First Five Year Plan was raised to Rs. 2.0 billion in the Second Five Year Plan. These investments represented 13 percent and 42 percent, respectively, of the entire allocations to industrial development.

9/ Albert O. Hirschman, The Strategy of Economic Development, New Haven, Yale University Press, 1958, Chap. 6, pp. 98-119.

However, this process is dependent on increasing the industrial demand for farm products and broadening the diet of the people.

As Ragnar Nurkse has pointed out, the problem of increasing production is to break the circularity of production and markets.[10/] This is one of the main explanations of why progress in agriculture has faltered and failed. The farmer needs to have some certainty about increasing yields, an assured market, or a price incentive, in order to produce a new crop or make investments in new farm practices and equipment. Frequently industrial processing is essential before the demand for farm products can be increased by consumers and before it can increase the livestock feed supply. For example, the introduction of canning plants to process fruits that would be wasted provides a market for these products in the off-season, raises the price to the farmer during the harvesting season and enables him to sell to a much larger market. The country gains from a more complete utilization of the products of the agricultural resources.

Industry to Provide Rural Employment

Another point of contact and integration with industry is in the provision of industrial employment and a source of additional income to the surplus rural population. To achieve this object the investment program should be twin-pronged: first, to use labor more effectively in agriculture, both intensively and extensively; and, second, to draw off

---

10/ Ragnar Nurkse, Problems of Capital Formation in Underdeveloped Countries, Oxford University Press, 1953.

labor to industry and other non-agricultural sectors. The extent to which labor can be absorbed from agriculture into industry will be vital because it will determine the extent to which productivity can be raised in the economy.[11/] There is also considerable scope in providing seasonal industrial employment between peak farm seasons, including the monsoon period when farm people in certain regions of the Subcontinent may be unemployed from four to six months of the year.

It is to be hoped that some labor intensification in agriculture can be obtained for a time, not only by extending irrigation, but by crop and livestock diversification, and by the use of improved equipment, breeding stock, and production materials, so as to reduce the pressure for additional industrial jobs in the early stages of development. As population grows in these newly developing countries, it may be expected that the proportions employed in agriculture will decline. For a time there may be comparative stability in the numbers engaged in agriculture, but as productivity increases in agriculture and the attraction from the nonagricultural sectors continues, some decline of the absolute numbers employed in agriculture may be expected. This drawing-off process will work imperfectly because capital formation in the nonagricultural sectors may not be sufficient to provide enough jobs, with the result that considerable disguised unemployment may continue in rural areas even for extended periods of time.

11/ United Nations, Economic Commission for Latin America, The Economic Development of Latin America and Its Principal Problems, Lake Success, New York, 1950, p. 45.

Historical Tendencies Toward Urban Concentration

Historically, people drawn off from rural pursuits have been attracted to the large cities. Growing urban concentration has accelerated in the industrially advanced as well as in the less industrialized countries during the past two decades, accompanied by general congestion, the growth of slum conditions, and a strain on public utilities. In the higher income countries this phenomenon has been accompanied by the large scale introduction of the automobile, which has encouraged and facilitated a flight to the suburbs. On the Subcontinent the automobile will be less of a factor for some time in facilitating suburbanization. Moreover, it is doubtful that the public transportation system will grow sufficiently rapidly to prevent congestion from getting worse.

Gunnar Myrdal has pointed out that the growth of industrial centers feeds on itself, a phenomenon which has been observed throughout industrial history.[12/] It is obvious that as population increases industrialization must grow more rapidly to absorb the growing labor force, with the prospect that the large urban centers will continue to grow ever larger. It may be anticipated that increasing urban concentration in the densely populated countries will cause additional social, political, and economic strains as time goes on unless some positive policies are initiated to improve conditions or to slow up and reverse the process.

12/ Gunnar Myrdal, Rich Lands and Poor--The Road to World Prosperity, New York, Harper and Brothers, 1957, Chapter III, pp. 23-38.

Social scientists have been giving increasing attention to the problem of urban concentration but it is not agreed as to what is the most suitable course of action for a developing country to follow: Whether a government should allow the natural economic forces to continue unhindered their attraction of industry to the larger agglomerations of industry and population; or whether it would be a wiser course to intervene with a process which may be contrary to the best long-run interests of society.

Concentration versus Decentralization

Substantial social overhead costs are attributable to urban concentration. These costs are of special importance in the underdeveloped countries,[13/] and comprise the following: (1) social costs associated with the dislocation of people from rural employment and their absorption into new employment in the concentrated urban industrial environment; (2) costs associated with the provision of living amenities; (3) costs attributed to the operation of large scale industry; and (4) costs due to the provision of transportation and middlemen services.

Among the economic overhead costs are the provision of housing, water, and sanitation, hospitals, schools, streets and lighting, policing and fire protection, marketing facilities, and other amenities usually associated with urban life. In the case of housing, standards must be higher than in the villages if slum conditions are to be avoided.[14/]

13/ H. G. Aubrey, The Place of Small Industry in Economic Development, New York, Institute of World Affairs, May 1951, p. 34.

14/ Report of the Village and Small Scale Industries Committee, Planning Commission, Government of India, Delhi, October 1955, p. 32.

Health and sanitation provisions are much more costly in the cities than in the villages, even in the underdeveloped countries. Some of these facilities and services are not needed in the villages or can be satisfied with lower standards and investments.

Attention has also been drawn in the literature to the social overhead costs included in plant overhead costs of large scale enterprises, many of which represent a strain on factors in short supply in the economy, such as highly skilled technical and administrative personnel. In small plants, a larger part of the total investment can be used for the productive processes than in large scale industry.[15/] Finally, the concentration of industry places an increased strain upon transportation facilities, including the railways and road transport, required for the movement of food products, fuel, and other goods, as well as passengers, arising from the migration of village people in urban centers.[16/]

Investment in an improved road network may not be greater when industry is decentralized; whether it is will depend on how far decentralization is extended into the rural areas. Primary and secondary roads are being built in most countries anyway under national or community development plans. But there is the possibility that additional investment in transportation equipment may be necessary.

The Report of the Indian Village and Small Scale Industries Committee stressed the vital importance of rural electrification in the development

---

15/ Aubrey, op. cit., p. 35.

16/ Peter B. Diebold, The Interdependence of Agricultural and Industrial Planning in an Underdeveloped Country, Economics and Finance in Indonesia, November 1953, Vol. VI, No. 11, p. 689.

of industry on a decentralized pattern, and recommended that electrification be extended with this object on a planned basis and with national support.[17/]

Along with the decentralization of industry, especially of the small scale enterprises, are associated certain costs which must be borne by the government, but which represent external economies to industry.[18/] Of special importance among these are industrial research, extension, credit services, industrial estates, and common industrial facilities.

In view of the fact that industrial investment in a community tends to generate additional investment and growth, the importance of decentralizing industry by establishing industrial nuclei throughout a country can be appreciated. The effects of industrialization will thus be widely distributed and dispersed, and the impact will be quickly felt on the demand for labor and the demand for farm products. The effect on rural people will be direct instead of through the trickle-down process.

Another important, and perhaps vital, by-product of industrial decentralization is the opportunity it would create for improving amenities of life and culture in the rural areas so as to make it sufficiently attractive for the people to stay and make the smaller communities their way of life instead of migrating to the large cities. Conceivably other influences of urbanization would become apparent and would be adopted by the rural people. Important among these would be the adoption of the mores of the cities as reflected in reduced birth rates. Whereas the

---

17/ Village and Small Industries Committee, op. cit., p. 23.
18/ Tibor Scitovsky, "Two Concepts of External Economies," Journal of Political Economy, April 1954, pp. 143-151.

critics of early stage investment in agriculture, referred to earlier, would prefer to increase the concentration of the urban population with the object of reducing birth rates, it would appear to be more economical and more effective for development to bring the social value of smaller families to the country. Another influence useful in development would be the more dynamic attitudes inherent in urbanization.

If these arguments in favor of rural industrial decentralization are accepted, it would seem that underdeveloped countries should bend their efforts to put such a policy into operation in the interest of speedy and balanced economic growth.

The Pattern of Industrial Decentralization

The Karve Committee of India, just mentioned, has given one view of the decentralized industrial pattern envisioned under such an approach.

> "The pattern of industrial activity that should gradually emerge is that of a group of villages having its natural industrial and urban centre. These small urban centres will be similarly related to bigger ones. Thus a pyramid of industry broad-based on a progressive rural economy will be built up. In such an organization small centres can experience a cooperative interest in the bigger ones, and these latter would develop a genuinely supporting instead of an exploitational relationship towards the smaller towns and the countryside."19/

19/ Ibid, p. 22.

Experience in the United Kingdom, particularly, has demonstrated the feasibility of a positive industrial location policy as a most effective method of affecting or controlling the distribution of the population. This has been a core principle in the regional planning of the United Kingdom. By using the concept of industrial estates and related measures, efforts have been exerted since the late thirties toward reducing the trend of industry to locate in the south of England, and to encourage industry to move to the depressed development areas afflicted by chronic unemployment.

Both Puerto Rico and India are successfully using industrial subdivisions or estates as devices to promote industrial decentralization policies. The Puerto Rico Economic Development Administration is pursuing a decentralization pattern along very specific lines, more so than India, with differential factory rentals to attract industry to the more distant and less favorable locations.

Faced with the economic realities of the underdeveloped countries, it would seem that industrial decentralization should be executed as a phased policy, in part to keep within available investment resources and in part to build soundly. Thus there might be a step-wise penetration of interior regions by establishing flourishing industrial nuclei away from the large urban centers. Eventually it may be feasible to extend industry down to the small towns and large villages. Wherever possible locations should be selected where industry exists in viable form, and efforts should be made to turn these into industrial nuclei with good prospects of generating further growth. If properly utilized, industrial estates are an efficient device for achieving this object, especially as it is

possible to build into them certain services to industry, such as industrial advisory services, supervised credit, and common facility services to provide some of the economies of large scale to small industry. It is of interest to note here that the Indian Government has recently been advised to establish small rural industrial estates to provide employment and to produce goods required in the rural areas.[20/]

In putting a rural industrialization program into effect, considerable attention should be devoted to selecting industries that will be of special usefulness in uplifting the way of life in the rural areas and increasing agricultural production. Among these the following appear to be the major important categories:

1. Agricultural implements, including processing equipment;
2. Agricultural industries processing foods, feeds, and agricultural raw materials used in industry;
3. Mechanical repair facilities;
4. Capital goods for manufacturing implements and processing machinery; and
5. Essential consumer goods industries.

An industrialization program with this kind of emphasis is on the point of being implemented on a pilot basis in a project jointly sponsored by the Pakistan Government and The Ford Foundation. The proposed Rural Industrial Service is an action-oriented project with research and technical advisory services built into the organization.

20/ India Economic Newsletter, Vol. 1, No. 12, June 1959, published by Information Service of India, Embassy of India, 2107 Massachusetts Avenue, N.W., Washington 8, D.C.

Overcoming Factors Critical to Industrial Decentralization

The major problem in decentralizing industry may be to find the entrepreneurship required to develop the industrial nuclei in the regional areas. This depends on the extent to which industry is pushed out from the large concentrations of population. Such urban centers are generators of capital and entrepreneurship, which explains why they encourage the clustering of industry. The urban cultural milieu in general and industry in particular produces technical people and individuals controlling blocks of capital which are spawned by existing industry. They are likely to see industrial opportunities relatively close to existing industry. Moreover, many of the industrial opportunities are based on serving the existing enterprises. Thus the problem is how entrepreneurship can be attracted to the new industrial centers. It is also quite essential to see that the problem of entrepreneurship is intimately tied to the problem of obtaining capital for industrial investment. As a general rule both have been obtained in the past from existing industrial centers. And experience has shown that there are considerable costs involved in obtaining the movement of entrepreneurship and capital.

It may be, therefore, that there are real economic limits in the extent to which decentralization can be carried in practice into regions beyond industrial centers of some size. It may not be wise to set up industries in the villages unless suitable entrepreneurial talent is available and the enterprises can be made viable. It may be feasible to stimulate industry in urban centers down to the small cities and large towns without incurring excessive expenditures. This may be especially

the case in relatively large communities with important technical educational training centers which can serve as generators of entrepreneurial, managerial, and supervisory personnel. In other words it would seem to be quite possible to develop entrepreneurs by stimulating them in industry and by supporting suitable training institutions. The other major bottleneck--investment and working capital--will have to be provided by development banks and a renovated commercial banking system designed to operate in the interior regions.

Finally, there might be another approach to the problem of rural industrialization; namely, by making the village the nucleus for providing entrepreneurship and investment capital. There has been some success in using the village as the industrial nucleus. The Israeli kibbutz has been operated as an economic unit on a collective cooperative basis for a long time.

The kibbutz farm has provided managerial and supervisory personnel from its membership. In the course of time manufacturing activities have grown up in many of these economic units, due to previous industrial training or interest of some members or to perform essential repairing or manufacturing services. In other cases, the kibbutz saw opportunities in agricultural processing for more effectively disposing of farm products. A collective farm of this type is an effective device for accumulating capital, and in the course of time it must necessarily expand to provide for the growth of the community by setting up new farm colonies or by investing in industrial enterprises. The members are not paid wages, all their meager needs are supplied by the community, and wealth must necessarily accumulate.

With the kibbutz acting as entrepreneurial agent, it provides the entrepreneurship, the capital, and the supervisory personnel. Some of the factory labor is furnished by the kibbutz and other labor, especially unskilled workers, is obtained from nearby urban areas.

It would seem that the recent reorganization of the Chinese village into communes is rather along these lines. The communes appear to have the same objectives as those developed by the kibbutzim in the course of their historical evolution.

Collective organizations of this type seem to require the drive of an ideology and outside pressure to be successful. The kibbutzim had the drive of the ideology of Zionism, which brought them together in the first instance. Secondly, it was held together by the dangers of colonization and general antagonism with which it was faced in the early period of development. Recent evidence seems to show that these cohesive forces are weakening and that the kibbutzim may be losing their driving force and will to survive.

Such conditions and circumstances are difficult to duplicate. Without the driving ideology, the willingness of individuals to subordinate themselves, and the press of outside circumstances, the role of the commune as capitalist does not appear dependable except perhaps on a limited scale. It would seem therefore that the most effective way of decentralizing industry along broad-based lines throughout the economy is to provide wide scope for individual action, to establish institutions for generating entrepreneurship, and to develop decentralized financing institutions for making available the capital required for industrial development.

Summary and Conclusions

It has been pointed out in this paper that the development of an antiquated agriculture to new technical levels and higher production is a difficult, expensive, and time-consuming process. Nevertheless the development of agriculture is essential at an early stage in order to feed the population and finance the development of the country. To achieve rapid progress it would seem that the interdependence of industry and agriculture should be carefully planned. Industry should introduce the dynamic element into agricultural progress by supplying the necessary equipment and production materials, by expanding the demand for the resources of agriculture, and by providing employment for surplus rural labor. It is suggested that rural decentralization of industry might be a desirable policy to follow in industrializing the country. On the one hand, it would head off the tremendous social and economic costs which might be in store if the large population growth anticipated in the future is concentrated in ever-increasing degree in the large urban centers. On the other hand, industrial decentralization would be an effective method for rapidly increasing agricultural production, promoting rural development, and bringing urban influences to rural areas. These influences would assist in speeding up modernization and, possibly by inducing a restraining effect on population, might enable solid building for higher per capita income growth. Capital and entrepreneurial shortages might be bottlenecks in such a program, but it should be possible to overcome them and develop effective methods for achieving industrial decentralization.