SELF-RELIANT INDUSTRIALIZATION

by

Paul STREETEN

Extract from: "The Political Economy of Development and Underdevelopment"

Distributed for: 3-MONTH PROGRAMME

COURSE: INDUSTRIALIZATION STRATEGIES AND POLICIES

Professor: Fawzi MANSOUR

NOVEMBER, 1982
SUMMARY

This paper surveys the role of industrialization in developing countries in the light of certain objectives (efficient growth, reduced inequality, diversified jobs, integrated development) and certain constraints (environmental damage, scarcity of resources, protectionist policies by industrialized countries). It is argued that the basic objective of development provides a key to the solution of a number of problems that appear to be separate but on inspection are related: urbanization, protection of the environment, equality, a better international division of labor. This approach throws a new light on the demand for sources of energy and for sophisticated products, the transfer of inappropriate technologies, the role of the transnational enterprise, the relation between rural development and industrialization and the relation of domination and dependence.

Self-reliant development is a complex process in which many variables act upon one another and in which policies must act upon several objectives either simultaneously or in an appropriate sequence. Industrialization is clearly only a part of a unified, self-reliant development strategy. A unified, self-reliant strategy provides an opportunity to overcome the fragmentation that some critics have discerned in national policy-making and also in the organization of the United Nations specialized agencies. It is a challenge to organize and integrate all development efforts aimed at improving the lot of the poor people of the world.

In a concerted and unified strategy, industrialization has a special role to play. The poorer the country, the larger the proportion of the population that is engaged in producing food. To rise above poverty, industrialization is necessary, for industrialization means the application of power to production and transport. Output and consumption per head can rise toward desired levels only with the help of mechanical aids. In this sense, development, including rural development, is industrialization.
In addition, manufacturing industry is subject to increasing returns, to learning effects, and to cumulative processes. The exceptionally high growth potential of manufacturing industry (reflected in the annual average growth target of manufacturing output of 6 percent) has been demonstrated in several countries in recent years.

Rapid economic growth, and especially industrial growth, has come under attack from several directions. It has been argued that social objectives, such as income distribution and jobs, are more important than the rise in some abstract index number to which industrial growth contributes substantially. It has been said that the drive for industrial growth has destroyed the environment and has rapaciously used up exhaustible natural resources, particularly, sources of energy. It has been claimed that rapid growth, spurred by industry, increases inequalities and proceeds without regard to the damage inflicted upon its victims. Perhaps most convincingly, it has been argued that in countries where cultivable land and capital are scarce and where the labour force grows rapidly and mass emigration is ruled out, development must aim at raising the yield of the land; that food output can grow only if markets exist in which the food can be sold; and that exports apart, these markets must be found in the countryside, amongst the mass of the rural population. Rural development, the argument goes, combined with income redistribution, is a necessary condition of economic growth.

In the face of all these charges against and criticisms of industrialization, it must be emphasized that to achieve the social objectives rightly advocated and to fight the evils of pollution, premature exhaustion of raw materials, unemployment, inequality, and market limitations, industrial growth is an absolutely essential condition. It must, of course, be growth that benefits the right groups. It must be correctly composed and measured so that social costs are fully accounted for and proper relative weights are given to different components, to the working conditions and to the human relations in which production is carried out.
Statistically there is no evidence of an inevitable conflict between high rates of industrial growth and the achievement of other development objectives; if anything, there is evidence to the contrary. In many, though not in all, cases, the achievement of social objectives has been consistent with high rates of industrial growth and, indeed, has depended on them. The causal links between these variables are complex, controversial, and still partly unknown, but the promotion of industrial growth is one of the strategic variables in the complex set of related national and international development policies.

The current combination of a worldwide energy crisis and worldwide cost-inflation has called into question the whole inherited framework of economic analysis and policy. If it needed underlining, the crisis has certainly underlined the fact that economic and political forces cannot be treated separately and in isolation, for the demands of the trade unions and the demands of the oil producers (and possibly of other producers of scarce raw materials and food) are economic exercises in political power. The role of industrialization in this new framework of thought and action also requires a thorough reappraisal.

INDUSTRIALIZATION FOR WHAT?

Many confusing and complex issues become clearer and simpler if we remind ourselves of the purpose of development and the place of industrialization in a development strategy. In particular, questions about energy, the environment, pollution, appropriate technology, appropriate products and consumption patterns, markets, international trade and integration, and the transnational corporation can be answered more easily if we know where we want to go. Many apparently technical and separate problems are seen to be connected and become amenable to a solution if we bear the basic objective in mind.

Development is not about index numbers of national income, it is not about savings ratios and capital coefficients: it is about and for people.
Development must therefore begin by identifying human needs. The objective of development is to raise the level of living of the masses of the people and to provide all human beings with the opportunity to develop their potential. This objective implies meeting such needs as adequate nutrition and safe water, continuing employment, secure and adequate livelihoods, more and better schooling, better medical services, shelter, cheap transport, and a higher and increasing level of measured income. It also includes meeting nonmaterial needs, such as the desire for self-determination, self-reliance, political freedom and security, participation in making the decisions that effect workers and citizens, access to power, national and cultural identity, and a sense of purpose in life and work. Much of this can be achieved in ways that do not increase the measured output of commodities, while a high and growing index for national income growth can leave these basic needs unsatisfied.

If we approach development in these terms, the place of the private motor car, of heavy demand on sources of energy, of highly sophisticated luxury goods, of the transfer of inappropriate products and technologies, of the role of the transnational enterprise, of urbanization, of the relation between industrial and agricultural policies, and of domination and dependency, all appear in a different light.

The disenchantment with industrialization in recent writings and speeches has been based on confusion; it is a disenchantment with the form that economic growth has taken in some developing countries and with the distribution of its benefits. Certain types of modern products and modern technology have reinforced an income distribution and a style of development that is out of tune with the basic goals sketched out above. After a reorientation of goals, industrialization as the servant of development regains its proper place in the strategy. Industry should produce the simple goods required by the people, the majority of whom live in the countryside—hoes, simple power tillers, and bicycles, not air conditioners, expensive cars, and equipment for luxury flats.
An industrialization strategy guided by the goal of meeting the needs of the poor not only leads to a different composition of products and techniques but also reduces the demand that rapid urbanization makes on scarce capital, scarce skills, and scarce natural resources. By raising the level of living of the poor people in the countryside, it may reduce the pressure to leave the farms and to expand expensive urban services.

In subsequent sections, I shall survey several problem areas and reexamine the appropriate policy in the light of the basic objective. The conclusions depend upon countries opting for a style of development that gives priority to satisfying the simple, basic needs of the large number of poor people. Industries producing clothing, food, furniture, simple household goods, electronics, buses, and electric fans would thrive without the need for heavy protection in a society that had adopted this style of industrialization and development. Much of the recent criticism of inefficient high-cost industrialization behind high walls of protection and quantitative restrictions should be directed at the types of product and of technique that cater to highly unequal income distribution and reflect entrenched vested interests. It is in no way criticism of industrialization for the needs of the people.

This does not mean that opting for such a style is an easy matter. Among the enormously difficult tasks are the required changes in the thrust of research and development expenditure and of science policy; the attack on the living standards and power of those profiting from the present pattern of trade, technology, and products; the more complex system of decentralized administration of rural development; and the required coordination and changes in trade and investment policy. The point, however, is that no solution is possible unless the fundamental objective is borne in mind.
INDUSTRY AND AGRICULTURE

The dispute about whether to give priority to industry or agriculture is a sham dispute. The answer is not either/or, but both/and. Industry needs agriculture and agriculture needs industry, and for some purposes the very division into the two categories is wrong. Thus, when we are concerned with evaluating an agroindustrial project, the relevant project appraisal criteria cut across the demarcation line between industry and agriculture.

Still, some people might object by saying that the speed of progress of an economy in which the scope for substitution between sectors is limited is controlled by the speed of its slowest moving sector. For this reason in the last 15 years attention has been focused on agriculture. Although it is true that agriculture is the slowest moving sector, how do we identify it as such in the first instance? How do we unmask it as the laggard, so that we can bring pressure to bear upon it to improve its performance? It has been a platitude for many years now to say that nonexport agriculture, especially in dry zones, has been the lagging sector in many developing countries. But today's platitude are yesterday's startling discoveries. In the 1930s, when all the talk was of agriculture's surpluses, nobody would have believed what we find so obvious today. It is the very success of rapidly moving, dynamic industry combined with high growth rates of agricultural productivity in the advanced countries, and especially in the United States, that has shown up agriculture in the developing countries as the slow coach: an instance of the uses of unbalanced growth.

In spite of the Green Revolution and substantial, though patchy, progress in agriculture, we have not yet turned industry into the lagging sector. We need continuing advances in industry to provide agriculture with the input and with the markets; we need progress in agriculture to provide industry with food, raw materials, and again, markets (and in some cases, exports). If several things done together are essential for success, it does not make sense to ask which should have priority. There is less scope for substitution, even at the margin, than is sometimes thought.
Even at the margin, the choice is not between industry and agriculture. The choice is between projects and complexes of projects, many of which, like processing local raw materials (see below, p. 287), cut across the line between industry and agriculture. Priority must be given to a form of industrialization consistent with a strategy of rural transformation. Some plead for a type of agriculture that supports urban industrialization; others for industrialization that serves agriculture. The argument here is that mutual support and consistency are required.

URBAN AND RURAL LOCATION OF INDUSTRY

The concern with growing inequality has a regional dimension. There are both economies and diseconomies in the rapidly growing cities of the developing world. Urban centers offer businesses advantages of location; economies of scale; low costs of information; availability of suitable labor force; access to administrators, policy makers, and sources of learning; and opportunities to exchange information and coordinate actions. On the other hand, inability of the rural sector to hold the growing working population has led to migration to the towns with the resulting shanty towns and slums and the growing burden of constructing urban public services for the rapidly expanding number of town dwellers. The more mat is done to meet the needs of the urban immigrants through creation of jobs, clearance of slums, building of houses, and provision of public services, the more people flood in from the countryside. The social costs of urban industrialization diverge from its private costs. Even with the best policies, urban industry is incapable of providing anything like an adequate number of jobs or a satisfactory of living for all those wishing to leave the country for the promises of the city.

This proposition is sometimes critized by those who say migration to the towns is an improvement for the migrants and that economic progress consists in reducing the number of those in agriculture. But this view neglects the fact that the absolute number of people in agriculture and industry depends not only upon the rate growth of the labor force and the rate of growth of employment opportunities in industry but also on the initial, relative size of the industrial sector. For the same growth rates
in the labor force and in employment opportunities, the existence of an initially relatively small industrial sector implies that the absolute number (though not the proportion) of people in agriculture (or at any rate, in the rural sector and in the urban "informal sector") must increase. The belief that the absolute number of people in the rural work force and the "informal sector" can decline in the early stages of industrialization is false.

The creation of rural industries and rural public works could contribute to the absorption of some of the large and rapidly growing underutilized labor force. The purpose of these industries would be to use agricultural labor when it can be spared from seasonal peak demands, to use local materials, and to mobilize the underemployed labor force for the construction of rural public works, such as feeder roads, houses, and schools, which would support rural industries.

EXPORTS OF MANUFACTURED PRODUCTS: PROSPECTS OF GROWTH AND THE INTERNATIONAL DISTRIBUTION OF GAINS

The spectacular export performances of a few, but growing number of countries (and by no means only those with high GNP growth records) have shown that breakthroughs into the markets of developed countries are possible in spite of existing tariff and nontariff barriers. However, there is evidence of growing restrictions against these exports whenever they begin to be seriously felt by the protected and local industry of an importing country. Annual growth rates in the 1960s of 10 to 15 percent of exports of manufactured products from the developing countries are liable to run into obstacles put up by importing countries. These would become more serious if the lessons were to be generalized and more developing countries were to engage in massive export drives, particularly if these exports were concentrated on a few "sensitive" products.
Policy restrictions are liable to be supported by a form of "adjustment assistance" that directs research and development and compensation expenditure at defensive investment to reequip the industry hit by the low-cost imports or simply to subsidize it to remain competitive.

Apart from restrictions by importing countries, there are also institutional limitations to increasing exports, limitations that cannot easily be classified under "supply and demand". Such limitations include absence of export credits, absence of marketing and sales organization, and lack of knowledge of required designs. Calling in a transnational corporation to overcome these obstacles may solve some of the problems while raising others (see below, pp. 291-294).

There are also supply limitations. These may lie in the lack of entrepreneurial ability to spot the type of products for which world demand is expanding and which can be produced at low costs; in weak organizational and administrative ability (in both the private and public sectors); in the inability of the economy to supply enough food for the workers engaged in manufacturing to keep industrial wages low and prices competitive; and in the inability to resist the power of the urban trade union to extract ever higher money wages.

While organizational and other supply obstacles clearly account for part of the export failure of some countries, this failure contributed to the success of the successful exporters. If all developing countries had adopted the strategy of Taiwan and Korea, their exports and the exports of some other countries would have fared less well in the 1960s than they did.

There is also the question of the distribution of the grains from the rising volume and value of manufactured exports. When transnational corporations are engaged in producing and selling exports, part of the gain accrues to countries other than the exporting country. In conditions of the form of lower prices, or to workers, in the form of higher wages, but may only swell profits.
What is often considered to be the peculiar virtue of private foreign enterprise, viz., that it brings a "package" of capital, enterprise, management and know-how, is also its peculiar defect: it means that monopoly rents and profits accruing to these factors go abroad and that only the reward for unskilled or semiskilled labor, in highly elastic supply and with little bargaining power, goes to the host country. If, on top of this, the country gives tax concessions to the foreign firm and subsidies it through trading estates or import privileges, the division of the gains is very uneven, and export figures give a misleading picture of the host country's gain. Alternatives might be subcontracting, the encouragement of indigenous firms with management contracts, national export sales corporations, or various forms of joint venture.

If we are interested in the limits to the growth of exports of manufactured products and the likely international and internal distribution of gains, a typology by product will be useful. We may then distinguish between the following products.

1. **Processed local primary products.** These include products such as vegetable oils, foodstuffs, plywood and veneer, pulp and paper products, and fabricated metal. The processing may be into semiprocessed, refined or completely manufactured products. When these products are less expensive to transport in a processed form rather than in a raw state, countries processing them enjoy an advantage over the countries in which they are sold. Cascading tariffs (rising with the stage of processing) in developed countries discriminate against this type of export. Yet processing is clearly not appropriate in all cases where a developing country has the raw material. But where appropriate countries with highly sought after raw materials can insist that the materials be processed locally. This is another instance of a strategy directed at exploiting the scarcities of raw materials and food in combination with industrialization.
2. **Traditional labor-intensive goods.** These include garments, textiles, footwear, and simple engineering goods. While low labor costs make the exports of developing countries competitive in these products, they face particular obstacles in importing countries where the competing industries are often concentrated and politically well organized. Successful exporting may have to be combined with the mobilization of interests in importing countries. Independent retail chains, mail-order firms, trading bourses, or consumers' associations are useful allies in organizing pressures against the producer's organizations and their lobbies. A better system of international monetary adjustments would also give wider scope to increased exports of these products.

3. **Newer labor-intensive goods.** Goods such as plastic and wooden items, rattan furniture, glassware, pottery, and wigs have appeared in recent years. The fact that their impact on importing countries is more dispersed and less noticeable makes them better export prospects as long as not too many countries compete in selling them.

4. **Processes, components, and assembly in a vertically integrated national firm.** A comparative recent phenomenon is the location of a wide range of activities in a vertically integrated transnational corporation in developing countries. Semiconductors, tubes, and other electronic components are assembled in developing countries for the parent firm in developed countries. Garments, gloves, leather, luggage, and baseballs are sewn together in Taiwan, South Korea, Thailand, and India; automobile parts, such as radio, antennas, piston rings, cylinder linings, headlights, brakes, batteries, and springs are made in many countries. Data are flown to Southeast Asia and the West Indies for punching on tape by low-wage key punch operators; watchmakers fly jewels to Mauritius for precision drilling. These industries are footloose, attracted by low wages, tax concessions, docile trade unions, relative absence of corruption, and political stability. They also represent an organized interest in the importing country opposing import-competing interests and sometimes enjoy tariff advantages.
5. Import substitutes or local products turned exports. These products, often goods such as automobiles (Brazilian Volkswagen is an outstanding example), car parts, steel pipes and tubes, electric wires and cables, bicycles, electric motors, and diesel engines, were set up initially to replace imports; having become established, they have entered the export market. They represent the last stage in the product cycle. Marginal-cost pricing for exports is common (i.e., export prices are lower than domestic prices), and exports may be subject to antidumping measures.

This classification is useful for identifying problems of adjustment and pressure groups in the importing countries, and hence for identifying the possible limits to growth in the exporting country and the division of gains between different factors of production and different countries. The classification also indicates that it would be rash to conclude that promotion of exports of manufactured goods through price incentives is necessarily the best strategy for all developing countries. A good deal has recently been written about negative value added in import-substituting manufacturing as a result of excessive protection. We should not forget that negative value added can also occur in exports and that a recipe of universal export promotion, extrapolated from the experience of the 1960s, supported by transnational enterprises with concessions, privileges, and incentives, can be as detrimental to the developing host country as high-cost import substitution.

The next ten years will be a more difficult period, especially as more and more countries adopt export-promoting strategies. Overexpansion may turn the income terms of trade against the exporting countries (though this would improve the terms of trade of developing primary producers); import capacity and import willingness are not likely to keep in step with accelerated export expansion; and even when exports are successful, the gains to the developing countries may be small or, in extreme cases, negative.
This does not mean that developing countries should not devote considerable efforts to promoting exports, or that export-oriented strategies do not have advantages over import-substituting ones. It does mean that institutional, political, and technological constraints will have to be investigated and overcome and that some coordination and cooperation between developing countries is essential if they are not to erode the benefits through excessive competition.

COLLECTIVE SELF-RELIANCE AND INTERNATIONAL TRADE

An industrialization strategy guided by the goal of meeting the needs of the poor also introduces different incentives and opportunities into international and intraregional trade; it implies a reorientation toward more trade between developing countries. Starting with similar factor supplies and similar levels of demand, developing countries can more appropriately produce for one another what they consume and consume what they produce. This can be the basis of mutually beneficial trade. In simple goods for mass consumption, often produced in a labor-intensive, capital-saving way, the developing countries have a comparative advantage and could expand trade among themselves.

I have argued that even if the developed countries were to resume high rates of economic growth, their ability and willingness to absorb large increases of manufactured products from developing countries is limited. There are good arguments on grounds of comparative advantage for increasing trade among developing countries. Some developing countries, such as Brazil and Mexico, have been registering high rates of growth, and it might well be in the high-growth countries of the Third World, rather than in the OECD countries, that the future of the international division of labor lies. To interpret "collective self-reliance" in this sense is entirely compatible with the most conventional economic doctrine. Sir Arthur Lewis drew a historical parallel.
Besides competing in the O.E.C.D. markets, the tropics can also compete in their markets. In 1965 they imported manufactures, excluding metals, valued at $14.1 billion; to wit $2.3 billion of chemicals, $4.7 billion of light manufactures and $7.2 billion of machinery and transport equipment. At least $12.5 billion of this came from outside the region. It follows that the tropics do not have to depend on competing with O.E.C.D. countries in O.E.C.D. markets. They can just as well compete with O.E.C.D. in their own tropical markets.

This point sometimes comes as a surprise to policy-makers in the tropics. We have got so accustomed to the idea that the tropics trades with the temperate world that we tend to assume that the chief way to expand tropical trade is to sell more to the temperate countries. Actually, as Germany industrialized in the second half of the nineteenth century, she did not concentrate primarily on breaking into the British and French markets, though she did this too. She looked rather to the countries around her in Eastern and Central Europe, who were even more impoverished than she, and made big gains there. Similarly Japan's trade drive in the 1930's was directed not at the industrial nations but at Asia and Africa and Latin America. This is where the rising new exporters should surely be looking, rather than to European and Nordic American markets, since it is surely easier to beat your competition in third markets than it is to beat them at home, once you have established the machinery for making customer contacts.

The continuous discussion of the possibility of creating new custom unions or common markets in Africa and Asia and Latin America indicates that many people have seen the light, though the paucity of actual results also indicates how difficult the problem is. The basic difficulty centers in the fact that only a handful of tropical countries are currently in a position to benefit from expanded opportunities for exporting manufactures. Twelve of these accounted for 85 per cent of the trade. The problem stands out clearly if one asks the following question: Since among themselves the tropical countries now import over $14 billion of manufactures, why do they have to wait for preferences for their exports in O.E.C.D. markets? Why do they not just accord preferences to each other in their own markets, in their own markets, in line with the already agreed principle that discrimination against developed countries is acceptable? The answer is because this would benefit the leading twelve at the expense of the remaining seventy, who might now have to pay higher prices to these twelve than they would have had to pay to O.E.C.D. countries. The problem differs only in scale when one shifts from global tropical preferences to more limited regional preferences, customs unions or free trade areas. In each region one or two countries stand out as the ones most likely to benefit at the expense of their regional partners, who are therefore not anxious to rush in without some clearer indication of what the balance sheet of profits and losses is likely to be.
But there is another type of argument for increased trade between developing countries that does not rest on comparative advantage and a combination of protection in advanced countries and demand expansion in developing countries. It embraces variables not normally included in a narrowly economic analysis.

Orthodox arguments for protection are based on the principle that to protect one industry one has to pull resources into this type of activity. If there is full employment, so that no spare resources are available for this absorption, this implies that resources must be pulled out of some other type of activity. It would be nonsense to wish to protect all industries. Protection, according to this argument, always favors one type of production at the expense of some other type. Conventional arguments for protection based on increasing returns or external economies imply pulling resources out of agriculture or services into manufacturing industry.

The new argument that we are now considering requires some protection (though not autarky), at least in principle, for nearly all activities. By opening up a society indiscriminately and too widely, incentives and opportunities for the development of indigenous processes and products, appropriate for the low-income groups in developing countries, are reduced. The educational, psychological, and institutional arguments against a move toward world free trade, for capital flows and general openness, point to the need to protect all activities from the eroding influences of the advanced world economy. More important, they point to the need for constructive, indigenous efforts, which may be hampered by an excessively outward-looking strategy and by emulation of the style of the rich.

Something like this also underlies the distinction between self-reliance and dependence, between autonomy and domination. Countries and groups of countries that generate their own technological capability and their own social institutions and organizations (not only in technology and industry but also in land tenure and rural institutions) will be able to mobilize their efforts more effectively than those that look at how these things are ordered in the metropolis.
There are alternative styles of development, and one type of society may prefer to develop by adapting technologies and products from abroad. While another will find its identity by raising a curtain around its frontiers or around the frontiers of a group of like-minded countries with similar factor availabilities and similar income levels. A judicious selection of features of an outward- and inward-looking strategy is likely to give the best results (drawing on foreign research and developing indigenous research or drawing on and adapting foreign technology and products, for example). The lessons of industrializing Germany, France, Japan, and Soviet Russia, which used and adapted the foreign ways of blending new institutions with old traditions, are not directly applicable because international income gaps were narrower then and the dimensions of the demographic problem which determine the scale of the need for jobs, were quite different. Yet, as the Lewis quotation shows, even these countries did not look at the established markets of England but at new opportunities and the growing markets of the future. The main point is that there may be a choice of styles of development that can be understood only if institutional and educational variables are included in the model and if a narrowly defined static economic model is transcended.

Some authors prefer to put the contrast more starkly and simply in terms of planning versus laissez-faire. According to them, it is the need for stronger, more effective, centralized planning according to social priorities and the search for independence from the vagaries of the world market that distinguishes the advocates of different trade policies. Others, while in sympathy with the planning approach, see the differences in the areas of learning, education, and institutions. A third group sees them in the political power structure. Planning and controls in an inequitable society reinforce inequalities and encourage corruption; the use of prices in an egalitarian society will contribute to the eradication of poverty and increasing equality.
THE TRANSNATIONAL CORPORATION: ITS POTENTIAL ROLE IN INDUSTRIALIZATION

The role of the transnational corporation in industrialization is of growing importance. Policies must be evolved that enable governments, willing to admit the corporation, to harness its potential for the benefit of the development effort. It has been argued above that the basic objective of development (that is, meeting the needs of the hundreds of millions of poor) provides one rallying point around which many development issues can be grouped. The transnational corporation is not a goal but an instrument of achieving certain goals. It, too, provides a focus for a number of different issues.

1. Regional integration. Two distinct sets of problem arise here. One is an anxiety shared by many countries. When several developing countries form a customs union, a free trade area, or a closer region of corporation, new profit opportunities arise for the already-operating and newly entering foreign companies. Policies have to be devised to ensure a fair sharing of these profits between the union and the foreign companies.

A second set of problem concerns the sharing of the gains from integration between different members of the union. The creation of a new form of international company, the shares of which are held by the member countries of the union, might be one way of solving this problem, though so far it has not been successful. The proposal would be for the company to combine low-cost and efficient location and operation with sharing of the gains between member countries.

Alternatively, there can be agreement on other forms of compensation, such as agreeing to pay higher prices for the exports of the less industrialized member countries, or to permit their citizens to migrate within the region or to locate universities and research institutes in the less developed partner countries.
2. Environment. In the new international division of labor that would be guided by differential pollution costs in different countries, the location of certain "dirty" processes in developing countries could be one of the functions of the transnational corporation. This function could be carried out either by locating "dirty" processes within the firm's vertically integrated system of operations in a developing country where the social costs of pollution would be lower and the benefits from industrialization higher, or by transferring the whole operation to such a country. The argument would be analogous to that of locating unskilled- or semi-skilled-labor-intensive processes using unskilled and semi-skilled workers in developing countries. The comparative advantage consists in one case in an unpolluted environment, in the other in inexpensive labor. One important point to be investigated here is whether the transnational corporation could be used as a pressure group to ensure access for the products to the markets of the developed countries.

3. Technology. In terms of technology, the objective would be to devote more research and development expenditure to the invention and dissemination of appropriate technologies and products either in the developed or in the developing countries. The potential, but as yet unrealized, contribution of the transnational corporation to transferring and adapting existing technology and to inventing new and appropriate technology may be substantial. It would raise the problem of the ability of the developing countries to absorb existing or new technologies and of the contribution that the transnational corporation could make, preferably through joint ventures, to training people, encouraging research, and fostering attitudes favorable to such absorption.

4. Bargaining. Since the transnational corporation has become one of the main vehicles for transferring technology from developed to developing countries, an important aspect of policy is the terms on which the technology is transferred. In settling the bargain and in drawing up the contract, a
large number of items may be up for negotiation. Some may involve incentives, such as protecting the market for the product or improving the quality of input (public utilities, a disciplined labor force); others may lay down conditions for sharing the benefits with the host country, such as tax provisions, use of local materials, local participation in management, training workers, creating jobs, raising exports, and so on; others will relate to such policies as conditions for repatriation of capital and profits, raising local capital and so forth.

Hitherto, multilateral technical assistance in negotiations of this type and in training negotiators has been given on a very small scale. International organizations could render vital technical assistance in strengthening the bargaining power of LDCs in negotiating such contracts and could contribute to an informed dialogue between managers of companies and public officials through training courses, in an area at present obscured by emotional and ideological fumes. What is needed is both direct technical assistance in drawing up contracts, possibly with the aid of model contracts, and indirect aid through training and the provision of information.

5. **Institutions.** Another important area of policy is the imaginative exploration of new legal and business institutions that combine the considerable merits of the transnational corporation with the maximum beneficial impact on development. This area comprises joint ventures — that is, joint both between private and public capital and between domestic and foreign capital. Such ventures would give developing countries access to information and a role in decision making; they would also include provisions for divestment and gradual transfer of ownership and management from foreigners to the host country. Thus, countries wishing to curb the power of large groups in their manufacturing sector might find investment reduced. This might make it advisable to institute a "joint sector" in which public capital is combined with private national management with or without an equity stake, or in which public capital is combined with private international capital. Another possibility would be a management contract with a national or international investor.
Thought and action in this area have suffered from poverty of the institutional imagination, which has lagged behind the scientific and technological imagination. Discussions have turned partly on the ideological dispute between private and public enterprise. Yet, the real issues have little to do with this type of ideology. Mixed companies can be devised that simultaneously harness private energy and initiative, yet are accountable to the public and carry out a social mandate. Equally arid has been the dispute over the virtues and vices of private foreign investment. Here again, the task should be to identify the positive contributions of foreign firms and the social costs, to see how the former can be maximized or the latter minimized, and to provide for gradual, agreed transfer to national or regional ownership and management. There is a need for a legal and institutional framework in which the social objectives that are not part of the firm's objectives can be achieved, while giving the firm an opportunity to contribute efficient management and technology.

**COSTS AND BENEFITS OF ALTERNATIVE POLICIES OF INDUSTRIALIZATION**

Since the last World War, many developing countries have attempted to promote their manufactures by a large number of direct interventions, such as physical controls, licences, and so on. These were accompanied by a host of other incentives and deterrents, such as multiple exchange rates, import entitlements, export bonus vouchers, and subsidies. In some cases, there have been periodic reversions to more simplified and uniform policies, often under pressure from the World Bank and the International Monetary Fund, and the government of the United States. The theoretical pros and cons of both approaches are by now well known. At the same time, quantitative estimates of their practical significance are scarce, unsystematic, and usually out of date.

It would be useful to compare high levels of intervention and the incidence of decline in efficiency, not only in a narrowly allocative sense, but also through blunting of incentives and divergence between social and private productivity, between the pursuit of static comparative advantage and the mobilization and generation of new resources, between the costs of
and returns to a sizeable bureaucratic control of industry; and between unified and multiple exchange rates. Such comparisons might be made in the light of certain social and economic objectives over time.

The debate is sometimes confused by an identification of the interventionist approach with protectionism and of the "market" approach with free trade. These distinctions, in turn, are occasionally confused with that between "inward-looking" and "outward looking" policies. The issue here is not the well-rehearsed dispute between protectionists and free traders, and those who advocate looking outward. The issue is instruments, and comparing the effects of a battery of direct controls and intervention with operation through prices and the market. Export-orientation and looking outward have been and can be pursued through intervention and directives, just as import substitution and looking inward have been pursued. An objective, quantitative appraisal would contribute to taking some of the ideological wind out of the sails of the better-known disputes between "freedom and planning" and similar choices presented to developing countries.

TECHNOLOGY AND ENTREPRENEURSHIP

Technologies both determine and are determined by the objectives of development strategy: growth, distribution, savings, employment. Capital-intensive, labor-saving methods will generate large profits and high salaries for a small labor aristocracy. Unless ownership of capital assets is widely shared or is public, these incomes will accrue to a small group of owners of physical assets and people with the required skills and access to education. Their consumption - often influenced by advertising, open communications, and foreign imitation - will reinforce the demand for capital-intensive, foreign-exchange-using luxury goods, the production of which will reinforce unequal distribution of income. It is often maintained, though not enough hard evidence has been produced as yet, that a more equal income distribution would give rise to a consumption pattern that is more capital-saving and labor-using. More capital-saving, labor-intensive tech-
niques may distribute a larger share of income to the unskilled and semi-skilled and are likely to lead to a different consumption pattern. But the causal nexus in either direction is not yet established with any certainty.

These connections between choice of industrial technology, both in core processes and in ancillary activities, choice of industrial products, income distribution, wealth distribution, access to education and training and consumption patterns are vital for policy decisions.

Inward-looking policies of import substitution have been blamed for distorting the price and incentive system; these distortions have been said to cause growing inequalities. At the same time, it has been argued that reliance on the price mechanism and outward-looking, freer trade policies also increase inequalities, though these have a different cause and take on a different form. It is true that both inward-looking and outward-looking industrialization and trade policies increase inequalities? Are these forces inherent in rapid industrial growth that make for greater inequality? If so, institutional, structural and technological changes are required to distribute the fruits of growth more evenly.

It is in the nature of modern technology that it reduces the scarcity value and hence the rewards of unskilled labor and traditional know-how, while modern medical science, by reducing mortality rates, increase the supply of unskilled labor. An important question arises here about strategies that proceed on "both legs" by simultaneously promoting the modern, capital-intensive, high-technology sector, and the nonorganized, self-employed, "informal" labor-intensive sector. Can rapid, modern industrialization proceed in a manner that will not destroy, but encourage, the non-organized, low-income, low-productivity sector? Can the surplus from modern industry be used to create jobs, to raise productivity, and to generate incomes in that part of the economy that has not yet been absorbed in it?
Income distribution and employment are only two aspects of an entire cluster of social objectives. Different forms of industrial organization are accompanied by different degrees of workers' participation and different power structures.

The test of a successful self-reliant strategy of industrialization is the extent to which it reduces the gap between the high incomes in the high-productivity, high-technology sector and the low incomes in the low-productivity, low technology sector, by raising the performance of the latter, without impeding progress in the former.

NOTES

1. On the other hand, the turmoil and disruption caused by rural modernization, with better roads, easier transport, better primary schools, the introduction of radios, cinemas, and other media of communication bring about more migration to the cities than if the villages had continued in their traditional ways. Nevertheless, sufficiently attractive rural opportunities, combined with limited opportunities in the towns, is bound to reduce the flow of migrants.


3. It might be thought that having similar factor supplies and demand patterns there would be less scope for trade. Even without calling on Stefan Burenstam Linder's trade theory, according to which most trade takes place between countries with trade where countries start off, under protection, with similar production and European Economic Community has confirmed that unions between similar but potentially complementary patterns are most promising.

4. The leading exporters of manufactures in 1955 were as follows: India, 799; Singapore, 295; Pakistan, 150; Mexico, 130; Brazil, 124; U.A.R., 123; Rhodesia, 116; Philippines, 66; Malaya, 64; Colombia, 34; El Salvador, 32; Trinidad, 28. Kenya is also a substantial exporter if her trade with Uganda and Tanzania is counted as foreign trade.


6. Ignacy Sachs, Trade Strategies for Development, ed. Paul Streeten (Mcmillan, 1973), Ch.3