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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

THE EFFECTIVENESS OF INDUSTRIAL ESTATES IN DEVELOPING COUNTRIES

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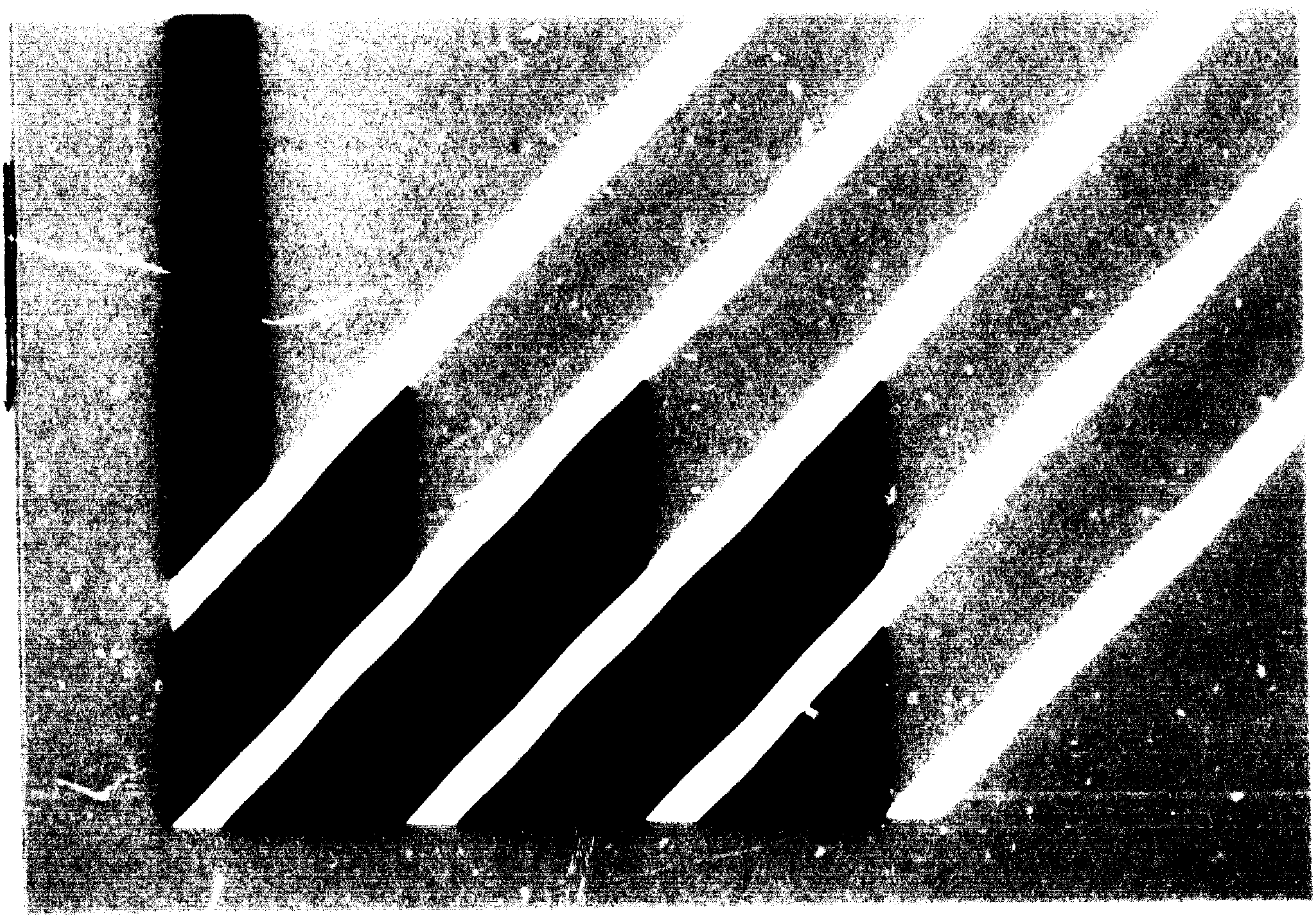

UNITED NATIONS

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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna

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EXPLANATORY NOTES

References to dollars ($) are to United States dollars, unless otherwise stated.

References to "pounds" (£) are to pounds sterling, unless otherwise stated.

The following forms have been used in tables:

- Three dots (. . .) indicate that data are not available or are not separately reported
- A dash ( ) indicates that the amount is nil or negligible
- A blank indicates that the item is not applicable
- Parentheses around a figure indicate a minus amount (in tables only)

The following abbreviations of organizations are used in this publication:

CENDES	Centre de Desarrollo (Argentina and Ecuador)
CSIO	Central Small Industries Organization (India)
IDC	Industrial Development Centre (Nigeria)
LEDB	Lagos Executive Development Board (Nigeria)
LSDPC	Lagos State Development and Property Corporation (Nigeria)
MICEI	Ministry of Industry, Commerce and Integration (Ecuador)
OSSI	Organization for Small-Scale Industries and Industrial Estates of Iran
PSIC	Pakistan Small Industries Corporation
SIB	Small-Scale Industries Board (India)
SIDA	Swedish International Development Authority
SITE	Sind Industrial Trading Estate Ltd (Pakistan)
SISI	Small Industry Services Institute (India)
SSIC	Small-Scale Industry Credit Schemes (Nigeria)
SONEPI	Société Nationale d'Etudes et de Promotion Industrielle (Senegal)
USAID	United States Agency for International Development

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Introduction

In the Lima Declaration and Plan of Action on Industrial Development and Co-operation, adopted at the Second General Conference of the United Nations Industrial Development Organization (UNIDO) in March 1975, the Conference expressed its conviction that industry was essential to the rapid economic and social growth of the developing countries, and set a target for the share of the developing countries in total world industrial production of at least 25 per cent by the year 2000[1] (their present level is 7 per cent).

In conformance with General Assembly resolutions 3201 (S-VI) and 3202 (S-VI) on the Declaration and Programme of Action on the Establishment of a New International Economic Order, the Lima Plan of Action noted that national industrialization policies should encourage and support small-, medium-scale and rural industries which fulfil the basic needs of the population and contribute to the integration of different sectors of the economy.

Industrial estates have long been regarded as being among the best and most economical tools for promoting the development of manufacturing industries, especially in the medium- and small-scale sector, in countries in the process of industrialization. Their use has also been extended to promoting the economic development of rural and backward regions.

Over the years, several studies have been undertaken and seminars have been organized by UNIDO and its predecessor on various aspects of industrial estates and on the closely related questions of small-scale industries. Most of these have been devoted to describing national experiences and projects, much of the emphasis being on the mechanics of estate design, planning, construction, management and operation. Little has appeared by way of critical appraisal, a notable exception being a paper prepared by A. Molinari and published in the proceedings of the United Nations Regional Seminar on Industrial Estates in Asia and the Far East.[2] The Swedish International Development Authority (SIDA) has also been active in this field in recent years.

In November 1975, UNIDO and SIDA initiated a joint programme to evaluate the effectiveness of industrial estates as an instrument of industrial development. When the International Centre for Industrial Studies of UNIDO was established, it adopted this project as part of its work programme and brought it more closely in line with the Lima Plan of Action by defining, as its main objective, the development of "a concept and project design for the establishment of industrial estates based as much as possible on the use of local resources and related to local social, economic and cultural factors".

Altogether, some 13 country studies (all but one of which were financed by SIDA) were conducted, in two separate phases. In phase I, six countries were visited:

[1] ID/Conf.3/31, chap. IV (A/10112); and UNIDO PI/38.

[2] A. Molinari, "Some controversial questions concerning industrial estates", *Industrial Estates in Asia and the Far East* (United Nations publication, Sales No. 62.II.B.5), pp. 415-443.

Cuba, Ecuador, Iran, Pakistan, Senegal and Turkey. In July 1976, after reviewing the results of this phase, it was decided to proceed with phase II, in the interest of more representative coverage, and studies were carried out in Argentina, Malaysia, Nepal, Nigeria, Sri Lanka and Sudan. The principal questions underlying the studies were:

(a) If developing countries are to be assisted in industrializing, is the promotion of industrial estates, and by implication the provision of public funds, national or international, to help them, a valid and economical means of doing so?

(b) If the use of industrial estates as a promotional tool is discarded, what alternative means exist whereby the process of industrialization can be accelerated?

(c) What are the conditions necessary for the success of an industrial estates programme or an individual estate, and what factors must be taken into account?

(d) What are the economic and social effects of an industrial estate on those working in it and on the community in which it is located? Does an industrial estate, of itself, have special effects other than those resulting from concentration of industry in a location without the formal structure of an industrial estate?

(e) What role can industrial estates play in the least developed countries, given the special conditions prevailing there?

The consultants were also asked to calculate the return on investment in an industrial estate, which might be measured in terms of revenues to capital investment, separating total investment into investment in infrastructure, factory premises and technical services. In the final analysis, it proved impossible to answer this question. Only in a few countries, and for a limited number of estates, was it possible to obtain separate figures relating to the various elements, and even then return on investment was difficult to define. Industrial estates financed from public funds are normally set up to achieve objectives wider than the simple profitable investment of government or municipal money. Thus, the direct return on public money invested in, or loaned to, an estate may be too narrow a concept. Since the primary objective of such investment is some form of national or local development, return might be better measured in terms of increased national or local industrial output, employment generated, and specific human or material resources used, all of which are directly attributable to the existence of the industrial estate or programme.

The actual studies were carried out by carefully selected consultants, in keeping with the guidelines given in annex I. Their findings were subsequently presented in two consolidated reports covering the individual phases of the Expert Group Meeting on Evaluation of the Effectiveness of Industrial Estates in Developing Countries, held in Vienna from 13 to 16 December 1976.

The material collected in the course of the studies was supplemented by an analysis of the performance of selected industrial estates in Mysore.[3] This study was very critical of many aspects of the industrial estates programme in India. However, the author, like Molinari, did not suggest that industrial estates were ineffective under all conditions. Both authors cited successful examples, yet challenged the indiscriminate establishment of estates without proper preliminary studies. This point of view is upheld by the United Nations Development Programme (UNDP) and UNIDO as well as by the World Bank, which always insists on adequate feasibility studies being made before considering the disbursement of financial aid.

[3] N. Somasekhara, *The Efficacy of Industrial Estates in India* (Delhi, Vikas, 1975).

Other supplementary material included an extract from a report on selected industrial estates in India prepared on behalf of the Overseas Development Institute of the United Kingdom; and data on the industrial estates programme of India furnished by the former Development Commissioner, Small-scale Industries, Ministry of Industrial Development of that country. Further information provided in the course of the Expert Group Meeting touched upon industrial estates in Greece and rural industrialization in China. A full list of the documents provided at the Meeting is reproduced in annex II.

The work carried out on the evaluation of industrial estates is being brought out in two publications. The present publication includes in part one a summary of the proceedings of the Expert Group Meeting including the highlights of the findings and an analysis of the salient issues. Part two provides summaries of 12 evaluation studies on Argentina, Ecuador, India, Iran, Kenya, Malaysia, Nepal, Nigeria, Pakistan, Senegal, Sri Lanka and Turkey.

The second publication is entitled *Guidelines for the Establishment of Industrial Estates in Developing Countries*. The guidelines are based on the results of the evaluation studies, on discussions in the Expert Group Meeting, on previous publications of the United Nations and of UNIDO on industrial estates and on project experience gained by UNIDO.

PART ONE

Summary of the proceedings of the Expert Group Meeting on evaluation of the effectiveness of industrial estates in developing countries

I. The role of industrial estates

General

The reasons for the establishment or promotion of industrial estates put forward by the Governments of the countries visited were broadly similar, and included some or all of the following:

(a) To advance national economic development by accelerating industrial development;

(b) To create employment opportunities and, in many cases, to offset periodic irregularities in agricultural employment;

(c) To decentralize industry and to spread the benefits of industrialization more evenly in the country, thus diversifying and increasing economic activities in rural and backward areas;

(d) To promote and raise productivity in small-scale industries;

(e) To promote, particularly in India, specific industrial sectors and groups of skilled and qualified persons;

(f) To relocate industries, especially small-scale and artisan industries, away from congested urban areas.

As described in the guidelines contained in annex I, industrial estates fall into three classes:

(a) Tracts of land with suitable infrastructure, of which plots are sold or allocated to entrepreneurs and on which they build their own factories;

(b) Land with infrastructure, divided into plots which are either offered for sale or rental to entrepreneurs to construct their own factories, or on which standard factories are constructed by the estate authority and offered for sale or rental;

(c) Land divided into plots on which standard factories are constructed for rental and where services (common service facilities) are provided.

This classification was adopted for the purpose of the evaluation studies. However, in practice the first two categories are included in the same type of industrial estate in many countries, and in some other countries the last two categories are included in a single type of industrial estate. It is rare that the three classes exist separately.

The first two classes of estate are sometimes categorized as "industrial areas" or "industrial zones" (in Iran, "industrial parks"). These types predominated in most of the countries visited, and in many cases might be expected to have the same effect on industrialization and economic development as the third type, which is generally considered the archetypical industrial estate.

The first question posed in this study, namely, are industrial estates a valid and economical means of using public funds for the purpose of accelerating industrial development, is the central problem examined. The question relates to those estates sponsored and financed directly or indirectly from public funds, national or international, and used as instruments to promote private industry in accordance with national economic and industrial development plans and objectives. The emphasis on private industry is important, because the private industrialist in an economy that does not have total central planning and direction may choose whether he sets up his factory on, or transfers to, an industrial estate, or takes some other course of action. Thus the success of an industrial estate or programme ultimately depends on the extent to which the private industrialist sees it as offering him better opportunities for development for a given outlay than any other alternatives, such as buying a piece of land and building his own factory on it, or, if he is already established, simply staying where he is. For this reason, industrial zones or their equivalents in centrally planned economies such as China and Cuba have been excluded from the main body of the study, although they have features of interest. The Cuban experience is discussed briefly in chapter III.

The same applies to privately developed, profit-making estates, which are mentioned in the reports on Argentina and Ecuador. These estates, which lack all the special advantages, concessions and benefits usually associated with government-sponsored estates, must be made attractive to industrialists, who will judge them solely on commercial criteria. In any case, public funds are not a risk and the validity of the investment is solely a matter for the sponsors of the estates.

The third type of estate, which represents an alternative to the publicly financed and developed one, is one set up by a co-operative of manufacturers, or by a manufacturers' association. This type is commonly found in Turkey where it is being developed on a large scale. Since government aid in the form of loans on non-commercial terms is provided to these estates, they are discussed in the present report, even though the main element of risk is borne by the entrepreneurs.

Types of industrial estates

As a convenient method of classification, estates may be divided by virtue of their objectives, in the following manner:

Promotion—To promote new industry in areas where it already exists but where it does not provide sufficient employment opportunities or economic development

Development—To further the development of backward areas through the introduction of industry from outside and the establishment of new industries and entrepreneurs from within

Relocation—To relocate existing enterprises that are prevented from developing because of their locations—generally in congested towns and cities—thereby enabling them to expand and develop while improving both working conditions within the relocation plants and environmental conditions in the areas vacated

Sponsorship may be by the government (national or provincial), a municipality, a co-operative, an association of industrialists, a chamber of industry or commerce, a private profit-making company, or by a combination of these.

Normally, service trades are excluded from industrial estates in India, but some small, specialized estates are being established in response to demand. Service establishments are by no means excluded in all countries: in Turkey, they form an important, if not the main, element in many estates. The wide variety in India reflects both the size and maturity of the estates programme, its autonomous administration by state authorities, and the policy of providing special assistance to selected groups of entrepreneurs and other persons.

II. The contribution of industrial estates to economic and industrial development

The conditions under which the field studies were conducted did not permit the collection and scientific analysis of data, which might have produced some more definitive answers to the questions raised. There are serious gaps in the evidence, some of which is necessarily subjective for want of reliable or comparable statistical data. An effective assessment of the value of industrial development has been hindered in all but one study by the absence of control groups outside the estates.

Since some countries have very small industrial estates programmes, with a negligible effect on national development, it was found necessary to examine certain programmes (sometimes only a single small estate) in terms of their effects on regions or localities, or even on the development of a small group of entrepreneurs (as in the case of Senegal). In the Sudan, industrial estates do not exist, although a number of studies have been made in the last few years indicating that the country could with advantage support at least two or three estates if properly located (see chapter IV).

Cuba is a special case. It is a centrally planned and controlled economy in which the rate of industrialization, the selection of industries to be developed, the locations of the industrial zones and related questions are part of an overall socio-economic plan. The success or failure of industrialization is thus in no way dependent on the promotional or developmental value of grouping industries together, except to the extent that economies can be effected in such matters as infrastructure construction and the provision of centralized services. As interesting or educational as it may be, the Cuban experience is largely inapplicable within the context of this study since all the other country studies relate to a mainly market-oriented economic system.

The industrial estate programmes of the following countries are summarized in part two: Argentina, Ecuador, India, Iran, Kenya, Malaysia, Nepal, Nigeria, Pakistan, Senegal, Sri Lanka, and Turkey.[4]

Cursory analysis of the country summaries would indicate that, viewed quantitatively, industrial estates make a major contribution to industrialization or to employment in only one country: Malaysia. Whereas India has a very large industrial estates programme in absolute terms, it represents only a very small percentage of the total output and employment in the small-scale industry sector. In the summaries, an endeavour is made to discern whether *(a)* through the promotion of specially important industries or the development of industry in certain backward regions, industrial estates have made important qualitative contributions not ascertainable from global or national statistics; *(b)* firms on industrial estates grow faster or are more productive than equivalent enterprises in the same branches of industry outside; and *(c)* a case can be made for the investment of public money in promoting industrial estates for private industry.

In his very carefully controlled survey carried out in Mysore in 1961-1962 (see the Introduction to this report), Dr. Somasekhara covered nine industrial estates

[4] Unless otherwise stated, the facts and figures cited throughout the report have been taken from the country evaluation reports and the background documents listed in annex II.

(107 units) and a control group of 107 comparable units. He repeated his survey in 1971-1972 on the same basis, this time gathering data for 114 units on the estates, including those he had visited 10 years previously and 84 of the same outside firms. It proved impossible to cover all the original outside firms since some had gone into liquidation, the mortality rate of outside firms being substantially higher than that of firms on estates.

The second survey disclosed that for eight estates, the fixed assets and capital invested had increased at a higher rate in the estate enterprises, and the total employment, gross output, gross earnings and share of the market had grown less rapidly than in those of the control group. From these factors it is inferred that industrial estates have sustained enterprises that would not have survived otherwise.

The survey further showed that industrial estates had not been very successful in contributing to the establishment of small-scale industries in rural and backward areas, or in attracting enterprises from areas of high industrial concentration.

Similar criticism, although much less scientifically documented, has been voiced by other researchers and observers in recent years, including the International Perspective Planning Team financed by the Ford Foundation, and a World Bank mission in 1965.

The Somasekhara study does not suggest that all industrial estates in India are ineffective; it points out as exceptions the Okhla estate at Delhi and the Guindy estate at Madras. According to the study, the major reason for the success of these estates is that their facilities are better organized, possibly because they are big and homogeneous in terms of the industries represented.

The Somasekhara study has been criticized on the grounds that it deals with only nine estates out of some 450 that were operational in 1971, or the more than one hundred estates already established a decade earlier. This criticism may well be justified, but the fact remains that this study is so far the only one to have been carried out using scientific and statistical methods and the control group described.

In 1964 the Government of India undertook a survey to examine the progress of the industrial estates programme, to pinpoint any weaknesses and to study the impact of industrial estates on the growth of small-scale industries. The findings of the survey corroborate many of the points in the Somasekhara study, among them the folly of attempting to set up estates without adequate preliminary studies or in areas in which their location is not economically justified. The problem of attracting entrepreneurs to backward areas was recognized, as was the need to stimulate local entrepreneurship through special inducements. The survey indicated that the shift to an estate had a substantial effect on output and employment. The 444 units which supplied information on this item had employed 5,702 workers and produced 46 million rupees ($5.2 million) worth of goods in the year prior to moving to an estate. Once established on the estates, they employed 8,621 workers and produced 83 million rupees ($9.4 million) worth of goods: increases of some 51 and 88 per cent, respectively, showing a 20 per cent increase in labour productivity.

The Government of India recognizes that in the past the importance of industrial estates to the development of backward areas has been overestimated and that a sober assessment of the problem should be made. Among possible lines of action suggested was that of locating a large firm on an estate in a backward area and of encouraging small firms to cluster around it, without them necessarily being commercially associated.

The Overseas Development Institute (ODI) study shows that considerable success has been achieved in promoting specialized and advanced technology estates, such as the technocrats estate at Balangar, Hyderabad (graduate engineers), the Instronics estate at Madras (electronic products and instruments) and the Tiruvarambur estate at Tiruchirapalli, which is composed mainly of subcontractors of the Bharat Heavy Electrical Corporation.

On the basis of the evidence available from the country studies and other reports submitted to the Expert Group Meeting, the contribution of industrial estates to overall industrial development and to employment in the countries discussed was seen to be relatively small in statistical terms. Allowances have to be made, however, for the fact that the concept of industrial estates in many of the countries visited is quite recent and that investment in the estates is minor. One exception is Malaysia, where industrial estates have played a key role in the country's industrialization efforts. A further exception is the large-scale and medium-scale industry estate programme in Pakistan, notably the Karachi estate, which provided the prime source of industrialization in the early years of the country's independence, and which continues to offer employment to an appreciable number of those currently employed in the large-scale industry sector. Another country in which industrial estates are beginning to contribute significantly to industrialization and output is Turkey. The Indian industrial estates programme, though the largest in the world in terms of estates developed and persons employed, represents only a comparatively small fraction of that country's output and employment in small- and medium-scale industry.

Nevertheless, industrial estates have had an impact in certain specific fields such as the promotion of high-technology industries and the training of specialized, skilled personnel. Industrial estates could also contribute to the development of specific regions, given the necessary incentives and other conditions for attracting industry or for developing local entrepreneurship. However, the use of estates to promote rural industrialization or to develop backward areas has not always been successful. This notwithstanding, it seems improbable that Senegal, for example, would have enjoyed its limited success without an industrial estates programme.

The qualitative contribution of industrial estates has not proved easy to identify and analyse. A study carried out in Mysore State, India, suggests that the efficiency of firms on industrial estates is lower than that of comparable firms outside. Firms on estates in several other countries have continued to operate when they would have been regarded as failures elsewhere. This situation was due no doubt to lower rents and favourable conditions pertaining on the estates. While this situation might be tolerable where such firms occupied sites which would otherwise be vacant or the closure of which would cause additional unemployment, little justification was seen for the use of public money to support them particularly if by so doing firms likely to benefit were excluded from the estates.

Other reports, however, show that lower efficiency is by no means universally true of firms on industrial estates, especially in the case of specialized estates where efficiency is substantially higher. Further investigation is needed to establish the reasons for the higher degree of capital intensity on some industrial estates, which might result from easier and cheaper facilities offered to tenant firms for the purchase of machinery, particularly imported machinery. It is shown, however, that in centres or regions without an industrial base, considerable investment in industrial estates has not contributed to entrepreneurial development to any significant degree.

Furthermore, in few cases were aids to increased productivity such as central workshops and production services, extension services for advice and training, inter-firm co-operation through contracting and division of labour, or common purchasing or sales seen to be operating effectively; even in India, some of these aids had been discontinued or sold to private interests. Nor was much evidence found of inter-firm co-operation and contracting, except on estates confined to a single industry or to related industrial branches.

Industrial estates have played an important role in relieving urban congestion, as, for example, in Turkey where conditions in many cities have impeded the expansion of small firms and artisan workshops. At the same time the presence of these units in crowded, built-up areas has contributed to serious traffic congestion and has prevented urban development and slum clearance. Unfortunately, however, in some other countries industries have moved out of cities to estates only to have their old sites taken over by new firms. As this naturally discouraged firms from moving, it was clear that municipal authorities would have to play a greater part in curtailing such abuse.

Prerequisites for effective performance of an industrial estate are homogeneity of membership and an estate management that envisages the estate as a coherent entity, acting and planning accordingly.

Industrial estates could also be effectively used to accommodate small ancillary industries. Such satellite estates might be composed of plants manufacturing products using the materials produced or supplied by a large firm, as in the case of estates in Malaysia that assemble electronic equipment, or the Tiruvarambur estate in India where 20 small units process a significant share of the output of a major electrical corporation. It is recognized, however, that if quality and production standards are to be maintained, the parent firm must provide elaborate controls and extensive technical and managerial assistance.

Even where no organic work relationship exists between large and small firms, estates containing a mix of sizes stand a better change of developing successfully than those composed solely of small units, because larger firms, in addition to providing subcontracts to, or using in some other way the services of, the smaller firms, can assist in matters pertaining to management, finances and personnel.

In an attempt to assess the contribution of publicly financed and sponsored industrial estates to economic and specifically to industrial development, account must be taken of the direct and indirect charges on public funds, as well as of the direct and indirect benefits derived from the existence of the estates. Direct costs, including both domestic and foreign exchange components, relate to those of land, infrastructure, common facilities and, where provided, industrial buildings. Other direct costs, such as the charges for operation and maintenance, might be covered only partly by rents and other contributions. Indirect costs, which are not so easily measurable, include such variables as planning resources invested at both national and regional levels in the establishment of an estate.

In the countries studied, benefits, which are usually considered to include increased industrial output, employment, national industrial and economic development and the decentralization of industry, have been marginal, with the notable exception of Malaysia. External economies through public investment in roads, power supplies, drainage and other public works could be more effectively realized by concentrating industry on large but compact sites, rather than on dispersed smaller sites in several estates.

III. Alternatives to industrial estates

A critical view of industrial estates would be incomplete without looking briefly at the alternatives. First, however, it should be explained that the present study is concerned primarily with government-sponsored industrial estates composed of small- and medium-sized private enterprises and used as vehicles for major investments of public funds. It is not concerned with industrial estates wholly financed from private resources or with those composed wholly of public enterprises, although the latter are discussed briefly below as representing one alternative to the estates programmes under discussion.

Three possibilities would appear:

(a) Non-intervention on the part of government in private industry, except as regards basic legislation governing such matters as corporate and labour activities;

(b) Promotion of and intervention in private industry through concessions, tariffs and quotas for specified industries, extension and training services, subsidies and other incentives;

(c) Complete nationalization of the means of production and distribution, with centralized socio-economic planning.

Non-intervention on the part of government

In none of the countries visited did the Government pursue a policy of non-intervention; in fact, it does not appear to exist anywhere in the world, even among industrially advanced countries. The private sector everywhere is subject to, or in receipt of, some form of government intervention and aid.

Government aid to private industry

Government aid to private industry is common to most developing countries at all levels of growth, including the majority of those visited in the course of the study.

The study showed that Argentina, India, Iran, Malaysia, Nigeria, Pakistan and Turkey—all of which may be said to be industrializing rapidly—have an important and active small- and medium-scale sector embracing most of their industrial enterprises. The Governments of all of these countries give substantial aid to small industry, but further benefits given to firms moving to industrial estates are often marginal, except, in some cases, where the Government seeks to attract enterprises to estates in rural or backward areas. (A notable exception is Malaysia, where the process of industrialization is closely dependent on the industrial estates programme.) National bodies for the promotion of small business usually cater to more firms outside than on industrial estates.

The fact is that most of these countries have progressed rapidly without the benefit of industrial estates, and it is a moot point whether they would have progressed (or might still progress) any faster or with greater economy of resources, especially public funds, if estates had been established earlier on a large scale.

When they wish, governments can always direct industry into certain regions merely by prohibiting the establishment of new firms or extensions of existing ones in specified areas, viz. Ecuador and Iran. Too severe an application of such a policy, however, may lead to opposition by vested interests, unless it is softened by the offer of substantial incentives (a combination that has been most effective in Argentina and a number of European countries). Indeed, it can be shown that "pull" factors, such as low rental or purchase price for plots or even buildings, do not always suffice unless "push" factors, such as extreme urban congestion, convince the industrialist of the reasonableness of an offer to move to a new location.

The real alternative where a large private sector, especially of small- and medium-sized firms, exists may well be to adopt the Turkish practice of promoting the establishment of estates financed by the industrialists themselves. In Turkey, although some promotional action was required from the Government in the early stages of the programme, the initial success of this practice soon persuaded industrialists and artisans all over the country of the benefits to be derived from industrial estates, whereupon the programme gained momentum. When industrialists establish estates on their own initiative, and at their own cost, they ensure that no land shall be purchased or infrastructure developed until a sufficient number of firms have pledged participation to guarantee success. Under such circumstances, government action is limited to the provision of loans. In Turkey, the only direct government loans are given for the construction of buildings, those for infrastructure and equipment being provided by state banks. The Government also provides advice at the planning stage to ensure that choice of site, design of estate, membership of building co-operative, and so on, shall conform to standards known to be necessary for success.

Centrally planned nationalization of industry

Centrally planned nationalization of industry has been adopted by countries of Eastern Europe and certain others, including Cuba. In the latter country, which was studied in the course of the survey, planning is based on close co-operation between government departments and state enterprises. Private property is found today only limitedly and in agriculture. One of the key features of central planning is the high degree of integration in any one plan period (usually five years), a balance being maintained in the development of the economic and social sectors through sectoral interdependence. Agro-industrial development, for example, is linked with that of agriculture; basic materials are produced in the variety and quantities needed to meet the planned outputs of the manufacturing sector; and technological education is geared to the development of technologically advanced industries.

Thus, in the five-year plan of Cuba, 1976-1980, the traditional emphasis on creating a physical and social infrastructure and on modernizing agriculture has yielded to industrial development. In this sector a balance is being struck among agro-industries (including the manufacture of agricultural machinery), building materials and consumer goods industries in order to absorb some of the increased purchasing power of the population.

The strategy of industrial development includes the relocation of industry away from the capital and its distribution throughout the provinces and extensive mechanization and automation of production to offset increased labour shortages. As a result, emphasis is placed on large plants, and small firms (formerly private enterprises) have been merged with larger units. Small production units exist only where they have to be near the consumer (e.g. bakeries and ice plants), or where demand does not justify a large unit. The concept of small-scale industries has disappeared to such an extent that an official definition of small-scale industry does not even exist. This, however, does not mean total disinterest in small-scale industry, since the Government is concerned to have efficient production in those sectors of the market where demand is still restricted.

Industrial plants are set up and operated by state-owned enterprises. Project proposals, which are rigorously scrutinized for their economic and technological feasibility, must be submitted to the National Planning Board for approval and allocation of priority.

Industrial estates as defined in this study are unknown in Cuba, where, however, industrial zones have been developed with the necessary physical infrastructure and facilities, including social amenities an integral part of all industrial projects. These industrial zones have been set up in areas selected as "development poles", or they comprise one or two vertically or horizontally integrated industrial complexes designed to use local raw materials. The plants are grouped for reasons of economy, efficiency and ecology. The complexes have extensive social facilities, such as central kitchens and canteens, nurseries, medical centres and social clubs.

Two features of interest are worthy of mention. The first is an institution akin to an industrial estate, composed of eight workshops, three of them producing sporting goods and the other producing digital computers, radio sets, desk calculators, dry-cell batteries and television sets. These are combined with a vocational training school providing tuition and board for 4,500 students, male and female (11 to 19 years). The students spend five hours a day at school and a further three hours doing factory work or agricultural work on the school farms. The factory workshops accommodate 2,100 students on three-hour shifts supervised by technical staff. They are run on a commercial basis, the products being sold through government trading organizations. Five such schools already exist and others are being established in the provinces. In view of the great demand for entry, only outstanding primary students are accepted.

The second feature of interest is the manner in which certain light industrial plants, such as textiles and garment-making, are located in residential areas so that housewives can take up employment close to their homes.

Of the difficulties hampering efficiency in the industrial zones, the most notable is the need for more compact zoning, thereby minimizing investment in infrastructure for a given level of occupancy and service. In the past, for example, the economic use of land and possible cost consciousness have not been adequately emphasized. Problems have also arisen from insufficient consideration of common services when establishing industrial zones.

As such, the industrial zones have had a negligible effect on industrial development; they are the result of decisions to establish certain plants in certain localities without thought to efficacy. From 1970 to 1975, the growth rate of Cuban industry averaged 7.7 per cent a year, varying from 2.3 per cent (mining) to 30.1 per cent (building materials).

When the government controls the finances of a country, industrialization can proceed at the pace the government deems sustainable, given the availability of foreign exchange (for the purchase of equipment and raw materials) and the financial claims of other sectors. Since regional development is an integral part of overall development, central decisions are taken as to the location of industry, subject to such techno-economic considerations as proximity to raw materials or ports. No meaningful estimates can be given of costs and benefits, since the criteria applied in centrally planned economies do not conform to those used elsewhere.

Conclusions

Of the three alternatives discussed, non-intervention on the part of government was dismissed as being virtually non-existent. Centrally planned nationalization of industry was seen to have certain merits for the developing countries, particularly the least developed countries. However, as could be seen from the report on Cuba (and the summary account of industrial structure in China given at the Expert Group Meeting), the implementation of such an approach hinged on political factors and decisions that would have been beyond the scope of the present study; moreover, industrial estates did not exist in these countries in the sense in which they have been examined in the study.

The most common alternative to government participation in, or sponsorship of, industrial estates was the provision of government aid to small and medium-scale industry through financing, extension services and other schemes. Industries receiving such aid should have constituted the control group in the studies conducted; in fact, such control featured in only one study not directly associated with the present series.

This alternative might be considered the norm in most countries, whatever their level of development; it had contributed appreciably to industrialization. Whereas it might involve less expenditure of public funds than direct investment in industrial estates, loss of revenue due to tax and other concessions could become considerable. Its effectiveness in the promotion of industrialization necessarily depended to a large extent on conditions in the respective countries, as well as on the manner in which the industrial estates programme, if any, was conceived and managed. Evidence showed that this alternative was likely to be less costly and more effective in accelerating industrialization than direct participation in industrial estates, unless the industrial estates programme was planned on a scale commensurate with the local needs and given all the necessary financial, promotional and technical support. The experience of Malaysia suggested that when a government was prepared to commit itself to a major and continuous effort in pursuance of a clear and consistent policy, industrial estates could have a significant effect on industrialization in a medium-sized country.

The most viable alternatives to government-financed small-scale industry estates might be co-operative estates along the lines of the Turkish model, or privately promoted estates such as those near Buenos Aires and in developed countries throughout the world; both did not exclude the possibility of government sponsorship in specific cases.

IV. Factors contributing to the success of industrial estates

The criteria of success have to be clearly defined for both the industrial estates programme and the individual estates. The study revealed a tendency to measure success in terms of occupancy: the extent to which an estate had succeeded in attracting the industrialists for whose benefit it had been set up. It is true that no programme can succeed if the estates are not occupied; occupancy, however, cannot be an end in itself, except in the case of a purely commercial venture. The ultimate bench-mark of success is the extent to which the estate or programme achieves the objectives envisaged by the authorities—objectives, however, which may vary according to the nature or the location of the estate and to the level of development of the country or the region concerned. In practice, it is extremely difficult to assess the success or failure of a programme, or even of a single estate, in terms of overall objectives. Normally one cannot know what the result would have been, had the resources devoted to the industrial estate been used, for example, to provide direct subsidies to existing industries, thus enabling them to improve their equipment and working methods or to provide more intensive training and consultancy. Given the rate of investment per job on the Ahwaz estate in Iran ($7,000 in estate capital costs alone), a great deal of equipment and technical aid could have been provided. However, this is an extreme case, although investment per job was high in other cases.

As measuring success against global or even local objectives is difficult, it becomes necessary to return to simpler criteria, of which occupancy is important in a situation in which firms are free to join an estate or not. The second obvious criterion is the increase in business efficiency enjoyed by a firm since moving on to an estate. This cannot always be measured with great accuracy, however, because innumerable small and medium-sized firms fail to keep accurate records or accounts and, even when they do, are not always willing to disclose them. A third criterion is measurable growth in terms of output and employment. This criterion was particularly important in most of the countries studied, whose common major objective in setting up estates was to increase national and local industrial output and employment opportunities. A fourth criterion is the return to government on its investment in an estate. As was stated earlier, this is very difficult to measure other than in terms of interest earned on loans or profit on sales of buildings or plots since the objective of the investment is often itself difficult to quantify.

The World Bank has certain definite financial criteria by which it measures success: all industrial estates financed by the Bank should make an adequate return on the money invested in them. The present norm is a minimum of 10 per cent internal financial return when calculated over a 20-year period. In general, projects supported by the Bank are mixed estates composed of large-, medium- and small-scale industries. In certain circumstances, an element of subsidy is acceptable in rents set for very small and financially weak firms. The Bank has found that such subsidies do not materially affect the financial performance of an investment in an estate, since they are small in comparison with the net income generated by the sale or lease of sites and services to the larger factories on the estate. If an estate project fails to show an adequate financial return or cannot be justified on national or economic grounds, it is considered a questionable investment.

Whatever criteria for success are applied, a number of factors can be seen to contribute to the success or failure of an estate, among them:

General conditions and their conduciveness to successful programme development
National and local economic activities
Socio-cultural patterns
Estate location, size and related urban infrastructure
Government objectives in establishing estates
The depth of feasibility and pre-investment studies
Financing methods
Support by government and other authorities
Selection of industries, product lines, technologies and entrepreneurs
Organization and management of the estate
Advantages seen by potential occupants

General conditions and their conduciveness to successful programme development

This factor is of particular relevance to the least developed countries. The minimum pre-conditions for a successful industrial estates programme in the small-scale industry sector appear to be:

(a) Concentrations of population with sufficient purchasing power to constitute markets for a diversity of products and services that can be supplied by a number of small firms and artisan industries;

(b) The existence of a large number of small firms or artisan workshops in appropriate industrial sectors;

(c) Entrepreneurs able and willing to take advantage of the facilities and benefits offered by industrial estates;

(d) A nucleus of skilled workers or of workers whose skills may be upgraded;

(e) Urban conditions hampering industrial operations and expansion;

(f) Clear-cut and consistent government policies with respect to the aims and objectives of the estates, and the willingness to provide the necessary incentives;

(g) Government institutions capable of planning and implementing the programme, and financial institutions that will provide loans and credits;

(h) Adequate infrastructure in terms of water, electricity and transport, at least within the region to be served by the estates;

(i) An adequate number of staff with training and experience in industrial estate promotion and management, as well as technical staff capable of operating the extension services;

(j) Ability to screen potential occupants.

These points are particularly relevant to the Sudan, where an industrial estates programme has yet to be launched. The population of the Sudan is concentrated in three main areas. Although communications between them are poor, they are the relatively rich areas of the country and would appear to have sufficient purchasing power to sustain a considerable number of small industries, as well as a few large ones. Many of the local entrepreneurs show themselves capable of development under the right conditions, and a work-force exists with basic skills capable of absorbing advanced training. At present, the small firms and artisan workshops operate under bad conditions and many have expressed the desire to relocate if workshops could be provided at a reasonable cost.

Although it has not yet evolved clear-cut ideas as to what it expects from industrial estates, the Government is interested in exploring the matter further. It already offers substantial incentives to small industries, and additional inducements would most probably be the possibility for expansion at a modest cost and the provision of substantial site-services. Financial institutions already exist, as does a government structure which could plan and direct the programme. A nucleus of well-qualified administrative and technical personnel is on hand, but such personnel would probably need to be sent abroad for specialized training.

National and local economic activities

One of the special advantages usually attributed to industrial estates is that facilities, land, buildings, common services and the like are available at much lower costs than normally. In many cases, another advantage is the presence of firms in related, possibly complementary fields able to provide one another with business opportunities or to operate co-operative purchasing and marketing schemes.

Like any well-conducted industry, industrial estates cannot be expected to succeed where national or local purchasing power is insufficient to sustain the increase in production that might be generated. Whereas an artisan estate might succeed under such conditions, one involving industry using highly productive equipment would not. Prior economic studies are essential and should investigate the following national and local factors:

National

(a) GDP and GDP per capita, hence the available or potential purchasing power;

(b) Distribution of markets and industry throughout the country;

(c) Nature of industries and handicrafts throughout the country and their development potential, particularly through the exploitation of locally available raw materials and skills (for import substitution and export);

Local

(d) Nature of local activities, such as heavy or light industry, commerce, services, including repair services, and tourism, and the possibility of a large or medium-sized industry serving as the nucleus of a small-scale industry estate;

(e) Markets to be served and the location of the estate: near a port or frontier (for export), at a road or rail centre, near large industries able to offer subcontracts, or in an area of mechanized agriculture;

(f) Number, size and nature of local industrial units;

(g) Level of local entrepreneurial development;

(h) Availability of local raw materials such as wool, timber, kaolin, hides and agricultural products;

(i) Availability of skilled labour and training facilities.

Some of the factors listed above are identical to the general conditions cited earlier. In most countries, including least developed countries such as Senegal and the Sudan, scope exists for a few industrial estates which can be used to develop industries. However, where the general level of economic activity is low and many live outside the money economy, industrial estates may have to be considered as long-term investments. In a comparatively advanced economy such as Argentina, whose population has substantial purchasing power and is consumption-oriented, an estate set up at a distance from main markets and material sources may still succeed. Advantages can be offered to industry on the estate to offset the disadvantage of distance, and the volume of production can be such that economical transport would be possible, especially when the raw materials and finished products are light in weight and high in value. In Nigeria, which is enjoying a surge in consumer demand, the abundant entrepreneurial talent in need of direction into modern industrial channels suggests that a substantial industrial estates programme for small and medium-sized industry could be very successful.

The nature of industries throughout a country and their suitability for incorporation into industrial estates is an important factor. The most important single activity on the estates visited in Turkey was automobile repair and servicing, followed by agricultural machinery repair. Automobile repair is most suited to relocation on an estate since, as a sector, it is already distributed among a large number of specialists, each concentrating on one element (engine, brakes, springs, electrical system and body). On an estate in Izmir, some 700 firms are engaged in such work, while an additional 878 repair shops are waiting to move on the new estate at Gaziantep as soon as it is ready. The reason for this nation-wide preoccupation with automobile repair is that many of the half million or more Turkish workers in Western Europe eventually return home with cars, often in rather poor condition, to have them reconditioned at very low cost. Once on the estates, some of the repair shops develop into manufacturing units, and a few become suppliers of authorized spare parts to car manufacturers.

At the other end of the scale, the estate at Tulcan in Ecuador can hardly expect to prosper, since at the time of the study (1975) there were only 17 firms in the town, and the remaining local economic activity was importing goods from Colombia to take advantage of the favourable exchange rate.

Socio-cultural patterns

Socio-economic patterns are among the most neglected in all studies of industrial estates. Although difficult to define, they nevertheless merit attention since an effective industrial estate is a co-operative venture that will only really benefit its member firms if they can assist and support one another, working together towards common objectives. Furthermore, the benefits derived by individual firms will depend on the quality of entrepreneurship and on their capacity to take advantage of the opportunities offered for expansion, and of whatever advisory and training services may be available. The socio-cultural elements that might be expected to contribute to success in an industrial estate programme would include:

Homogeneity (ethnic or commercial) in any given region
Tradition of honest dealing
Tradition of co-operation in business
Tradition of saving towards long-term goals
Tradition of craftsmanship, industry or commerce
Respect and desire for education and training
Initiative

Some societies may have some or even all of these qualities to a marked degree; others may not, but in one or two case studies, it was found that attitudes were changing for the better. For example, thanks to the efforts of a few particularly dynamic industrialists at Rosario, Argentina, an estate will be opened shortly. Hitherto, the city's small industrialists had little dealings with one another, but in working together on the estate committee they acquired the habit of co-operation which has now extended to business.

The small industrialists and artisans in the Turkish provinces are a very close-knit group with a tradition of honest dealing; consequently, setting up the co-operatives needed before establishing an estate presents few difficulties. Members have rarely been known to default on payments or loans. In Ecuador, the Peguiche Indians possess entrepreneurial talents of a high order. They are skilled craftsmen, who maintain retail outlets for their handicrafts in both Spain and the United States of America. They are setting up a small co-operative estate without government aid, which has good prospects of success.

Estate location, size and related urban infrastructure

The experts engaged in this study rated location as a factor crucial to success, and the report of the Government of India on industrial estates, in referring to the low occupancy rates on rural estates, stated that the most common mistakes were poor location decisions. The question of location comprises the following elements:

(a) Would the estate be suitably situated with respect to national markets, transport routes, raw material sources and skilled labour?

(b) Would an industrial estate provide the best and cheapest premises in the area selected?

(c) Would there be enough industries or enterprises willing to move to an estate of a given size?

(d) Would the industrial facilities and social amenities be enough to attract and hold industry and personnel from elsewhere?

The question of location assumes particular importance when it is envisaged to establish an estate in a rural or backward area. Sometimes locations are selected for political reasons, in which case the risk of failure is high. The failure of an estate can have a deleterious effect on the development of a rural area. Such as the case in two estates in Mysore: Gulbarga and Ramnagaram, which were set up with the object of attracting industrial units away from conurbations. Gulbarga remained largely vacant, the three units that moved on to it coming from the town itself and not, as had been hoped, from major cities. The Ramnagaram estate was rather more successful in that five out of seven new units came from Bombay. The survey found that, in general, establishing new industries in, or shifting existing enterprises to, economically backward or rural areas was fraught with difficulties which could not be surmounted by simply setting up industrial estates. All the evidence suggests that, if it is decided for developmental reasons to locate an estate in a rural or backward area, the authorities must offer incentives sufficient to overcome the commercial and other disadvantages of the site, these costs being considered as part of the regional development costs. Examples of this approach are the estates in Chubut, Argentina, which at first sight appear unattractive. The inducements offered by the provincial authorities, however, are such that industry has been attracted despite the estates' relative remoteness from markets and raw material sources.

The question of location in rural areas does not appear to have been sufficiently thought through. Too often, estates so located tend to be miniature urban estates, the only "rural" element being the land. Rural estates are most likely to succeed:

(a) When they are run on a comparatively modest scale;

(b) When they are run by local people, and not by people coming from big cities;

(c) When they are run in accordance with local objectives and activities, using as much as possible those materials and skills in which local people enjoy a comparative advantage.

In India and elsewhere, it is becoming apparent that the time needed to develop estates in rural or backward areas, and probably in least developed countries as well, may be much longer than was originally thought. A period of 10 to 15 years does not seem excessive in the light of recent experience. In the case of urban estates the development period may be expected to be much shorter. However, the example of the estates in the Santa Fé province of Argentina would seem to suggest that even in the case of urban and semi-urban estates with entrepreneurs ready to move, the period between inception and full occupancy may still be several years.

One important factor of particular relevance to firms moving from cities to estates in rural areas would seem to have been completely overlooked. It relates to the purely human questions affecting the industrialists, their families and employees. In most developing countries, the difference between town and countryside is much more marked than in more advanced countries. Villages, and even comparatively large towns, may lack almost all the amenities to which city dwellers, even those in modest circumstances, are accustomed. The difficulties of persuading professional men, such as doctors and civil servants, to serve in remote areas are well known in some developed countries. It is understandable that industrialists, who have lived all their lives in a city and whose families are established there, should be reluctant to move to country towns. Their wives are likely to be even more reluctant to move and problems may arise regarding the children's schooling—all of which add to the commercial and business problems involved.

While there would appear to be no statutory minimum size for towns needed to ensure the viability of an estate, the average population of towns supporting estates would seem to be 40,000. More essential to viability is the nature and intensity of local activity, and whether production is directed primarily towards the satisfaction of local needs or towards the requirements of large urban markets. Also important is easy access to local centres to permit quick deliveries, direct contacts with clients and short commuting distances for workers.

Site selection is governed primarily by the physical characteristics of the site: it should not involve too much earth-moving; it should be secure from flooding; and it should be equipped with the requisite public utilities. Furthermore, it should be so situated that environmental damage and urban encroachment are avoided.

The Ministry of Industry and Technology in Turkey pays particular attention to site selection prior to lending government support to estates seeking funds, and the evaluation criteria it uses include price as well as technical and environmental suitability. The Ministry has refused loans to building co-operatives purchasing sites that did not meet its requirements. Conflicts often arise between co-operatives which are reluctant to move away from cities and the Ministry which sees the potential dangers of buying land too close to cities.

The Indian studies suggest that a minimum size for an estate would be when the number of firms could not be reduced without making the operation of central services and similar facilities uneconomical. It is quite clear that when an estate contains only two or three firms, it ceases to be an industrial estate as such. There is also a minimum number of firms in the same or related industrial branches below which it is not feasible to have common facilities. Definitive figures cannot be given since a number of factors have to be considered, such as the number and nature of the industries, industrial plant sizes, the method of common services being used, and the levels of development. Where market demand for an estate is so low that only a few firms may be expected to participate, it is not worth promoting.

There would appear to be no upper limit to the size of an estate: however, individual firm sizes are a decisive factor. In the course of the study, estates containing up to 700 firms were visited in Turkey, where a new estate at Gaziantep has 1,200 potential members signed up. However, the average size of the firms on these estates is very small; most are no more than artisan workshops with three or four employees. Few of them have common facilities, except on the estate at Gaziantep, which has been supported by UNDP/UNIDO. Despite the sizes of the tool-room, prototype shop, treatment shops and laboratories at Gaziantep, there is every possibility that they will be overwhelmed with work once all the firms have moved to the estate. At the other extreme, the large and medium-sized industries estate at Karachi, which contains 823 firms and provides employment for over 100,000 people, has no common services and the firms are not organically linked. Contrary to the general belief that, with respect to infrastructure and services, large industrial estates offer cost advantages, experience in some small countries suggests that establishing small estates near a number of smaller towns rather than one large estate near a major town may serve to provide more employment to local people since they are not obliged to travel long distances daily.

The infrastructure of the nearest town is decisive in its effect on the cost of supplying public utilities, communication and transport facilities to the estate. The absence of such an infrastructure may make the cost of estate development prohibitive. It may also be important that the firms on the estate be able to purchase raw materials, spare parts, minor tools and equipment, and office supplies in the nearest town, in addition to acquiring legal and other professional services.

Government objectives in establishing estates

In the countries visited, the declared objectives of the Governments for promoting and supporting estates were diverse and sometimes contradictory. For example, decentralizing in favour of backward regions, which are likely to be distant from main markets and have poor communications, may conflict with efforts to attract new or foreign firms. This happened at Cuenca, Ecuador.

The objectives of an industrial estates programme cannot be divorced from national economic development and industrialization aims. An estates programme is but one tool of the many needed to further these aims and, like any tool, it has to be used to do the job for which it is best suited. In the same way, an individual estate must have organic linkages with the region in which it is located and have a role to play in the development of that region. For this reason, administrative power over industrial estates programmes should be decentralized and delegated to the lowest feasible level (e.g. provincial or municipal). Most countries having a federal structure appear to have done this, among them Argentina, India, Malaysia and Turkey.

Objectives may be classified as primary or secondary. A primary objective may be the creation of employment and the generation of additional output; a secondary objective may be the removal of industry from cities to relieve congestion. Experience suggests that these objectives are compatible, since relocation to more spacious premises with improved working conditions enables workshops to become more productive and, in the medium term, permits increases in the number of machines and work-places, which in turn provide more employment. On the other hand, setting up estates in rural areas with the primary aim of diversifying economic activity in those areas may be conditional on accepting, for some years, a lower level of productivity in the estates' enterprises than would be acceptable had they been established on urban estates.

One factor emerged clearly from the studies conducted: whatever objectives the government may set, they should be rigidly adhered to (after all the necessary preliminary studies have been completed) and not changed unless the conditions governing their original formulation also change. The success of the estates programme of Malaysia undoubtedly is mainly because the Government tailored it to the realities of the situation and then established a system of incentives and took other action in support of policies consistent with the objectives. In Argentina, on the other hand, the Government, at both federal and provincial levels, has undertaken an extensive series of feasibility studies, but it has not, in the main, pursued its campaign vigorously. The delays in Santa Fé province are specifically ascribed to changes in policy resulting from changes in the Government over the past few years, incoming ministers and civil servants having to be convinced anew of the importance of the programme. Other provinces, however, notably Chubut and Neuquén, have adhered to the original concept and are beginning to reap the rewards.

In India, the objectives for specific estates are as diverse as the estates programme is vast. In the case of the estates specifically designed to promote technologically advanced industries or specially qualified groups of entrepreneurs, there is evidence that the original aims have been pursued and that all necessary facilities and incentives for success have been provided. In any case, in the 20 years of the programme's existence, the Government has continuously reviewed its performance and modified its objectives whenever they were seen to be unrealistic.

In a modest way, the Government of Nepal seems to be achieving its aims. In centrally controlled economies such as Cuba the problem does not arise, except in so far as the policies themselves may prove faulty and an industrial zone may be established in an unsuitable location.

The depth of feasibility and pre-investment studies

An industrial estate is a business venture, even if it is not required to show a profit in the accepted sense of the term. It involves the often considerable investment of public and private funds and the element of risk inherent in any new venture. It is the duty of prudent management to minimize risks in decision making by ensuring that all relevant factors shall be taken into account and appropriate information collected in the course of feasibility studies. The factors that should be taken into consideration include most of those listed earlier in this chapter.

As setting up new firms or moving existing ones to an industrial estate may be expected to increase productive capacity, market surveys must project the possibilities of market expansion. Productivity in enterprises in developing countries is often very low at times insufficient to meet market demands which sometimes leaves industrialists with the impression that they can sell everything they produce. However, it may happen that even small increases in productivity on the part of a few firms, such as might be expected after moving on to an industrial estate, may saturate the market to the extent that firms find themselves operating below capacity. At local levels, the elements governing location, discussed above, should be carefully assessed in pre-investment studies.

Further to influencing size, location, and other estate parameters, the findings of the feasibility and pre-investment studies will determine the supporting action to be undertaken, be it financial aid, fiscal concessions, subsidies and other incentives, or the provision of various facilities and services. The types of support or incentive needed can only be determined when the actual requirements revealed by the studies are examined in the light of the declared objectives of the programme or estate. The objectives may, thus, be modified as a result of the findings.

Such studies should take into account not only government policies and objectives, but also the views and attitudes of industrialists expected to settle on the estate. The potential users should be associated closely with the studies at all stages. The cost-benefit estimates made in the study should be related not only to the objectives of the government, but also to those of the firms it is hoped to attract.

It is recognized that decisions as to the location of industrial estates are often governed by political motives. An industrial estate established in a community through the efforts of a local politician is tangible proof of his having worked on behalf of his constituents. Nevertheless, a decision to establish an estate should never be based on such motives alone. The appropriate authorities should at least be in possession of the relevant survey data in order that they may see clearly the risks involved if they choose to disregard the findings. Discrepancies between the declared objectives and the possibilities of implementing them must be pointed out.

In Argentina, feasibility studies are mandatory if a project is to receive official backing. In India, feasibility studies are normally stipulated by the Government; however, these have not always been carried out effectively in the past, leading to bad choice of location. In Turkey, the Government does not insist on feasibility studies, but when approached to approve an estate, it carries out a two-phase survey, comprising a questionnaire directed to the local authorities and a field survey conducted by an official team. The questionnaire is designed to obtain information on the socio-economic structure of the small industries in the town and on all matters relative to the proposed estate and its member firms, including their credit ratings. The team, which consists of an industrial economist, an architect and a mechanical engineer, follows up the questionnaires, discusses the data obtained with the representatives of the group promoting the estate and the local authorities, and examines the proposed site. The Turkish programme differs from most normal government-sponsored programmes in that the decision to establish an estate is taken by a group of industrialists who ensure full occupancy while the contribution asked of the Government is comparatively small, the main risk being borne by the industrialists themselves.

Financing methods

In general, the ready availability of funds to both estates and individual enterprises is considered more important to success than, for example, a low rate of interest. Most countries have institutions capable of financing estates, but in many cases governments do so in the form of direct grants or loans. In countries with federal structures, the central government usually finances industrial estates programmes through provincial or state governments, leaving the provinces to administer the distribution of funds to individual estates.

In Turkey, the Government grants direct credits to executing agencies for buildings only. These may cover up to 70 per cent of the construction costs of both industrial and administrative buildings in standard regions, or up to 100 per cent in economically depressed regions. The loans are paid back over 10 years at an annual interest rate of 5 per cent well below normal commercial rates. It is a condition of government aid that land be bought by the industrialists themselves, while the cost of infrastructure can be met through loans from a government bank set up especially to cater to municipalities.

Whereas in Turkey all the buildings are accounted for before the estate is approved, in other countries large sums of money have been invested in buildings which remain vacant for years. Today, it is considered best for the authorities to invest in land and infrastructure, and subsequently to provide tenant industrialists with low-cost, long-term loans to build (if necessary to approved designs) since such an approach involves less capital being tied up. A plan for phased development should also be built into estate projects where occupancy rates are uncertain.

In Turkey, where the buildings on any one estate are generally of a very functional standard design, building costs vary widely. For example, on the estates completed up to the end of 1975, the average unit cost varied from 7,954 to 73,324 Turkish lire (LT). Admittedly, the cheapest buildings may be nothing more than small artisan workshops on very small estates. If, however, the highest and lowest unit costs quoted are eliminated, there is still no correlation between costs and the number of buildings, or (within certain limits) costs and the date of construction. It has been observed that when governments and other public bodies are directly responsible for building programmes, costs tend to rise, a possible explanation being that governments tend to demand higher specifications than private firms. A second explanation could be that the bureaucratic handling of contracts incurs greater overheads. Whatever the cause, it would seem that the financing agency should monitor to some extent the building operations, including tendering and cost control.

Support by government and other authorities

The survey showed that in practically all cases, government benefits to small industry comprised:

Direct financial aid to enterprises
Fiscal concessions
Marketing assistance and guaranteed supplies of raw materials
Technical assistance, including extension services

Direct financial aid includes loans, credits and grants for the purchase of land, plant and equipment, the construction of infrastructure and buildings and low-interest loans for working capital and subsidized rents. Such financial aid is a major incentive to move on to industrial estates, especially when it is provided more readily to estate firms than to firms outside. One of the problems common to industrialists everywhere is that if they do not have security in the form of land or buildings, development banks are reluctant to provide loans. In Turkey, in cases in which the Government had accepted land as collateral for building loans, firms encountered great difficulty in obtaining loans for equipment purchase from the appropriate state bank. In most countries, banks are generally unwilling to grant loans for equipment when approached by co-operatives. Development banks should be encouraged to adopt more liberal criteria for approving loans to small enterprises than those applied by commercial banks: they should place more emphasis on project merit than on collateral. At the same time, they should supervise the use of their funds closely. This in turn might demand specially qualified bank personnel who, in several countries, have already been given training in project development and management.

Most schemes designed to assist firms in purchasing land and buildings on industrial estates feature loans repayable over a number of years at a low rate of interest. In Santa Fé province, Argentina, the provincial government offers loans for the purchase of land and the construction of infrastructure. This has to be repaid over five years at an interest rate of 8¾ per cent, calculated semi-annually and indexed. Up to May 1976, of a total of 469 million new pesos invested in infrastructure in seven estates, 342 million new pesos had originated from the provincial government, the balance coming from the private sector and other bodies such as municipalities.

On the estate at Trelew, in Chubut province, cheap land may be bought in four six-monthly instalments at commercial interest rates. Mortgages are available through the national development bank and the provincial bank. Firms are required to submit progress reports every three months and to erect buildings covering not less than 30 per cent of their sites within five years of the date of purchase.

The financial benefits offered by the Government of India to small industry include loans for fixed assets and for working capital, guarantees for loans by commercial banks (through a credit guarantee scheme of the Reserve Bank of India), and hire-purchase schemes for plant and machinery (through the National Small Industries Corporation and State Small Industries Corporations). Firms on industrial estates may also enjoy subsidized rents and hire-purchase facilities for land and buildings.

Such benefits as subsidized rents and the estates authorities' readiness to allow rent arrears to mount over long periods have, however, undoubtedly prolonged the existence of firms on estates that would otherwise have disappeared in a standard commercial environment. The answer to this probably lies in a stricter selection of firms in the first place. This subject is discussed in the next section.

Fiscal concessions are widely used to promote small enterprises and to attract firms to industrial estates, especially those in economically depressed regions. The Government of Malaysia appears to have been successful in decentralizing industry using this policy. Companies accorded "pioneer" status are exempt from income tax for two to three years, while those not so classified can obtain other forms of tax relief, such as labour utilization relief (based on the number of full-time employees) and investment tax credit, which allows companies to deduct from their taxable income a sum equal to at least 25 per cent of the amount spent on fixed assets. A further 5 per cent may be deducted if the factory is situated in an area earmarked for development.

The Argentine authorities consider that their incentive system, which includes substantial relief from duties and taxes, has contributed appreciably to the success of their decentralization policy. Among the incentives offered by Chubut province are:

(a) Exemption from, or reduction of, various taxes, including sales tax and value-added tax on finished products and raw materials;

(b) Until 1980, exemption from the (heavy) tax on buildings;

(c) Until 1980, exemption from stamp duties;

(d) Exemption from vehicle tax;

(e) Low tariffs on water and electricity.

The last concession is of particular importance to the artificial fibre and textile industries.

In Ecuador, small industry benefits from a similar range of concessions, which, however, seems to have had no effect on the industrial estates. In Turkey, on the other hand, small firms, on industrial estates or off, receive few fiscal concessions. Full import duty is levied on machine tools imported by workers returning from Western Europe for use on industrial estates.

India is particularly active in providing marketing assistance and in guaranteeing supplies of raw materials to small industry, on or off estates. Under the government stores purchasing programme, 222 items are tagged for procurement from small-scale industry. The Small Industry Service Institutes provide market surveys, feasibility studies and industrial-potential surveys. The development of 177 products is restricted to small-scale industry. Small industry enjoys set quotas of scarce raw materials, and local supply depots are maintained. In Iran on the estate at Ahwaz, and in Senegal on the estate at Thies, firms are given assistance in dealing with the authorities and in obtaining scarce raw materials. In Pakistan, a major attraction of the estates at Sialkot and Gujranwala has been the foreign currency credits made available to estate members, but unfortunately, many firms have slipped heavily into arrears.

One major advantage which industrial estates might be expected to have over firms outside lies in the ease with which they can avail themselves of extension services and use common facilities, such as treatment shops, tool-rooms, quality-control laboratories and foundries. Grouping firms together makes it easier to run technical and management training programmes, and to provide advisory services. In Turkey, the industrial estates are given priority in the training programme drawn up by the Ministry of Industry and Technology. With the exception of those in India, few estates have set up effective central services, and even in India, a third of the common facilities originally set up have since been shut down or handed over to the state or private enterprise.

It is advantageous to install common facilities on an estate only when it is of a minimum size in terms of numbers of firms and of demand or when there is a sufficient number of firms in the same or kindred branches of industry to make it worth maintaining such services. It is therefore essential that careful assessment be made at an early stage of the extent of use of any proposed facilities. In two of the estates visited, Ahwaz in Iran and Yaba in Nigeria, the workshops were disproportionately large for the numbers of firms using them, and the estates in any case were mixed, with the result that few firms were able to take advantage of the common services. The well-equipped central workshops and laboratories of the Gaziantep estate, on the other hand, were much used and appreciated by firms in the city while still waiting to move out to the estate. When fully occupied, this estate will hold some 1,200 small firms, which should keep the central workshops busy.

Firms moving on to industrial estates rarely appreciate the possibilities they offer, apart from the tangible subsidies or incentives. It has always been difficult to sell the idea of training and the use of specialized services to the mass of industry, and firms on industrial estates are no exception. Since most incentive schemes and fiscal concessions are applicable to small firms regardless of whether they are on industrial estates, the real attraction, apart from low rents and cheap sites, lies in the possible benefits to be gained from proximity to organized joint training and advisory services and, where applicable, common workshops and similar facilities. It is up to the authorities creating the estates to ensure that each of them shall be so structured that the fullest possible advantages can be derived.

Selection of industries, product lines, technologies and entrepreneurs

An industrial estate can rarely be effective and yield the optimum benefits in terms of inter-firm contracting, common facilities and extension services if it has too few firms on it belonging to the same industrial branch. In such circumstances, the main benefits might be the subsidized rentals, the cheap plots and buildings, or possibly the convenience of having certain amenities such as banks, shops or canteens at hand. The estate would contribute nothing, however, to the improvement of the firms' performance, or to their increased trading.

There is considerable scope in several industries for firms to complement one another and to profit from central workshops and other facilities. In India, the most successful estates appear to be those that house specialized industry groups, and estates where small firms are ancillary to larger ones.

The choice of product lines and their associated technologies is especially important in selecting industries for estates in rural areas and remote from large urban centres. As far as possible, product lines of firms on these estates should exploit local materials. When artisans and small industrialists on rural estates attempt to imitate slavishly the products of urban firms, they inevitably find themselves at a disadvantage, if only because they do not have readily available the materials and skilled labour necessary for the manufacture of such products.

In developing countries as a rule very few officials or industrialists can assess the optimum plant-mix for an enterprise working in a given economic environment, let alone know the range of equipment available to any one industry. Thus, officials charged with purchasing capital equipment and industrialists or their technical managers are more or less at the mercy of salesmen who, quite naturally, are more interested in selling their products than in giving impartial advice.

This, obviously, is an area that needs attention. UNIDO already provides assistance to industries in developing countries in the selection of plant and equipment, but this service might be expanded and improved. In the meantime, financing authorities should maintain better control over low-interest loans to ensure that they shall be spent as efficiently as possible, which would appear to be more rational than suppressing them altogether because a minority may misuse them.

Finally, if an estate is to achieve its objectives, the industrialists accepted for participation must be those best able to take advantage of the benefits offered. Government money spent on establishing an industrial estate will inevitably be misused if the firms on the estate fail to develop as anticipated. If an estate has been set up to provide employment, there may be some justification for maintaining inefficient firms as a form of unemployment relief; but if the intention is to support efficient small industry, such tolerance is hardly justified.

Any population with a normal distribution will include a small percentage with outstanding entrepreneurial abilities. These can be counted on to prosper in the long run without much external intervention, and if facilities are provided, they will derive more benefit from them than most. Next come a percentage which, though able businessmen, nevertheless need some support to attain peak performance. The third category ranges from the competent to the altogether incompetent. Industrialization cannot be carried through by the first category alone: it needs a mix of all three categories. Those who may not be very good at running businesses may still be competent craftsmen.

When it comes to selecting entrepreneurs for places on heavily subsidized and assisted industrial estates, there seems to be a case for choosing those who have potential or proven entrepreneurial acumen. It is often difficult, however, to select such entrepreneurs from among the myriad firms, often operating under adverse conditions, in cramped premises, and comparatively ignorant of modern technological and managerial matters. Studying a firm's past performance, especially its financial records, and assessing the reputation of its owner (part of the procedure adopted in Turkey) are standard methods of detecting entrepreneurial ability even among relatively new small-scale undertakings. In India, however, the authorities have become increasingly selective, particularly in the case of the specialized estates. Since 1971, the Gujarat Industrial Development Corporation, together with two state financial corporations concerned with industrial development, have run entrepreneurship development programmes. These are designed to develop a class of new young entrepreneurs from among technical graduates and others employed in industry and business (including unemployed engineers), and to encourage them to set up their own industrial ventures.

An intensive selection process lasting several days and culminating in a series of interviews is used to determine the candidates' entrepreneurial potential. The rigour of the selection process is illustrated by the fact that only 55 out of the original 540 applicants were accepted for the training programme. The methods used include modifications of the "achievement motivation" programme developed by Professor McClelland of Harvard University. His techniques are currently being used in some UNIDO projects, notably in Indonesia, where preliminary results are promising. Although it is not suggested that applicants for estates necessarily be subjected to tests as rigorous as those conducted in Gujarat, some degree of testing might weed out potential failures.

Organization and management of the estate

This factor was not examined in any depth in the course of the studies. Its relative importance to the success of an estate clearly depends on the extent to which the estate is an organic entity or simply a number of firms grouped closely together, linked by service roads in a zone reserved for industry. In the latter case, the estate management is limited to service operations, road maintenance, rent collection or similar municipal duties.

The co-operative nature of the Turkish estates ensures that, even after all the land and buildings have been paid for, a collective spirit remains. As a rule, estate management is entrusted to a board elected from among the members of the building co-operative, all of whom are industrialists. The services given by the members, including those of the chairman, are voluntary. Among the estates visited only one had a full-time, salaried director to manage the building co-operative. It may be significant that on this estate the time that elapsed between the initiation of the idea and the completion of the estate was notably shorter than average. Co-operatives have the added merit of requiring much less government financial commitment than estates directly promoted by the Government, and they can be dealt with more simply and cheaply than individual firms.

Estate management is an all-important point and calls for a person with the appropriate experience and qualifications. When central services are available, he should be responsible for their management and proper functioning. At Gaziantep, estate management involves not only control over workshop and laboratory facilities, but also common services provided by the huge estate.

Even where common services do not exist, the estate manager can play an important role in helping member firms in their contacts with the authorities. The management at both Ahwaz and Thies, for example, apply on behalf of tenant firms for the permits or quotas needed to obtain raw materials and other goods. Some estates, for example Yaba in Nigeria, have managers who are technically or managerially qualified and who can help estate members with their technical and managerial problems.

In the least developed countries and in economically depressed areas, professionally competent estate management is essential. This may have to be provided in the early years by international experts or expatriate staff. In any event, future estate managers and officials associated with industrial estate programmes should be thoroughly trained at home and abroad so that they can participate effectively from the outset.

Advantages seen by potential occupants

Potential occupants must be convinced of the advantages of moving on to an estate, the decisive factors being:

(a) The advantage of estate premises over present premises, in terms of space, expansion possibilities and working conditions;

(b) Policy of urban planning authorities, with respect to zoning and relocating industry;

(c) Comparative cost of purchasing or renting land and premises;

(d) Proximity to customers, suppliers and markets and the possible risk of competitors taking over favourably located former premises;

(e) Possibility of doing business with firms on the estate or, conversely, possibility of losing business previously done with other firms;

(f) Access to common facilities, such as warehouses, central workshops or training programmes;

(g) Eligibility for credit facilities, fiscal and other benefits offered by government or other public authorities;

(h) Elimination or reduction of delays in setting up a new establishment.

In Turkey, active promotion on the part of the Government was needed to overcome the initial inertia of industrialists. Conditions, even in many medium-sized towns, were particularly conducive to the establishment of industrial estates in that the workshops were intolerably cramped and expansion and increase of business were often impossible. In Gaziantep, for example, a number of important plants were operating in caves. Municipal councils, anxious to reduce urban congestion, were willing to offer land at very favourable prices and to guarantee that premises vacated would not be reoccupied by rival businesses. This guarantee was particularly appreciated since the fear of losing old customers had been a powerful deterrent to moving to estates.

In Santa Fé province, Argentina, some of the more forward-looking industrialists joined with United Nations experts in convincing other local businessmen that the proposed estates would benefit them. The manager of commercial estates near Buenos Aires suggested that the most decisive factor, particularly for medium- and large-size firms, was the time saved in moving to an area where the infrastructure was prepared and no planning permission had to be obtained. In Buenos Aires, this could mean a time-saving of up to two years since not only were there bureaucratic delays at every juncture, but power, water and natural gas might also have to be brought considerable distances at great expense.

Conclusions

The success of an industrial estate and of a programme lies ultimately in the success of participating enterprises. Industry, whether on an estate or off, cannot succeed if national or local purchasing power is insufficient or if the products manufactured to not correspond to market needs. The determination of such market needs should therefore be a major feature of feasibility studies carried out prior to the establishment of an industrial estate. Moreover, in normal circumstances, the type of industry selected for an estate should correspond to the industries and skills already available in, or which could be attracted to, the area. There are instances, however, in which completely new industries have been successfully developed in areas with no industrial tradition.

Failure to pay sufficient attention to the location, siting and size of the estate, and to the urban infrastructure, has resulted in the comparative or even complete failure of estates.

These elements assume particular importance, however, when it is a question of locating an estate in an economically depressed area. Rural industrial estates need more systematic conceptualization than they have been given in the past. Apart from the techno-economic problems associated with their establishment, socio-cultural problems may arise when introducing an estate in an area hitherto untouched by industry. The transfer of entrepreneurs and staff, together with their families, from urban to rural environments may give rise to domestic and other tensions. Rural estates must be assured support on the part of the local community.

If industrial estates were established in economically depressed areas to stimulate industrial growth, greater investment in terms of both money and effort would be needed than in those located in economically prosperous areas. Consequently, it might be necessary to accept, over a long period of time, a rate of occupancy below the normally accepted level. In the case of larger estates, planners would be wise to consider realistic phasing of development stages.

If common facilities in the form of workshops and laboratories were to be provided, an estate should comprise not only a minimum number of firms essential to economic operation, but also a minimum number in the same or related branches of industry. Market demand and, in certain cases, local demand would also be factors determining the size of any given estate.

Despite the declared preference for large estates which enjoyed economies of scale and a greater impact, in many cases the establishment of smaller estates near scattered townships would be more appropriate. This, however, depends on the distribution of population and resources and on the potential development of physical and social infrastructure in the country concerned.

An industrial estate programme cannot be carried out in isolation from the national economic and industrial development effort. At the regional and district level every effort must be made to involve local population authorities from the outset, otherwise the estates would be regarded as an imposition from above.

Objectives must be determined on the basis of proper economic, social and technological studies. Failure to carry out such studies could seriously jeopardize the effectiveness of industrial estates and sometimes of whole programmes. The feasibility and related preliminary studies, while remaining wholly objective, should be carried out in the context of, and related to, government objectives and policies. At the same time industries and industrialists, potential participants in estate programmes, should be associated with the preliminary studies and their needs should be related to government policies. Once the objectives of a programme or of an individual estate have been determined, the responsible authorities must provide whatever support (financial, fiscal, promotional and technical) is needed.

It was found that estate buildings constructed by the government were usually more expensive than those constructed privately, possibly due to the application of unnecessarily high standards. Furthermore, the economies of scale had not often proved applicable to the construction of infrastructure and buildings on industrial estates.

Government support in one form or another is essential to practically all industrial estates for small-scale and medium-sized enterprises in their early years. In the least developed countries, such support would be needed for a longer time

Financial aid, while recognized as a major incentive to move on to industrial estates, should be supplemented from the industrialists' own funds. Exceptions might be made for highly qualified craftsmen and technicians lacking personal capital whom the government might wish to develop into industrialists. Similarly, an exception might be made for entrepreneurs in economically depressed regions and least developed countries.

As part of their integrated programmes of assistance to small-scale enterprises, developing countries should consider instituting systems of credit guarantees and rediscounting by central banks or other government institutions as a means of reducing the risk to the lending banks and of spreading resources among many more borrowers. The availability of credit is often more important to small businessmen than low interest rates.

In instances in which low interest loans were provided for the purchase of machinery, especially when combined with partial or total remission of import duties, industrialists were apt to purchase equipment that was more expensive (and sometimes more advanced) than strictly necessary. This represented a serious misuse of scarce resources in countries suffering from a shortage of capital and foreign exchange. Large sums of foreign currency could be saved if advisory services on the matching of imported machinery to local conditions were made available in the developing countries.

Incentives in the form of guaranteed quotas and supplies of raw materials at controlled prices have proved an effective means of attracting firms to take up places on industrial estates.

V. Economic and social effects of industrial estates

Indirect economic benefits

The indirect economic benefits of industrial estates usually fall under two principal headings: first, the increased use of local materials; and, secondly, the promotion of local industry and commerce ancillary to the estates, as well as the general stimulation of the local economy.

Of the countries covered in the survey, however, only in Malaysia and Nepal was much use of local raw materials reported. In Malaysia, rubber, timber, leather, coconut fibre, coffee, vegetable oils and other local agricultural products are among the materials used by firms on the estates; and as most of the firms are new, this suggests greatly increased utilization of national resources. In Nepal, much use is made of local materials, including leather, cement and timber.

The survey did not uncover much evidence either of the second category of indirect effect. Most of the indirect benefits registered were enjoyed by the service industries from stalls set up at the gates to sell food to the estate workers, to the estate's restaurants, banks, post offices and shops, all of which provided employment.

It stands to reason, however, that a large industrial estate with thousands of employees will bring additional prosperity to any town, especially a small town. The impact of 3,000 new jobs on Trelew, Argentina, a small town which already enjoyed full employment, has been considerable. The side effects are also visible: as most of the firms on the estate have their headquarters in Buenos Aires, 1,400 kilometres away, there is a steady coming and going of executives and other senior-officer staff, all of whom patronize the local shops, hotels, restaurants and other services.

A new concentration of industry would have the same effect, but it may be that an industrial estate brings it about more intensively than a slow buildup over a long period. This is most dramatically shown in Malaysia where some estates have given birth to completely new towns.

Social effects

Social effects are difficult to identify and isolate. In most countries, industrial estates are essentially rationalized work-places, social considerations being considered of secondary importance. In Malaysia, for example, the strictly functional character of the estates is attractive to the industrialists because it keeps the cost down.

The social aspects of industrial estates may be grouped as follows:

- The development and upgrading of human skills
- Amenities and common facilities for employees
- Safety and health
- Trade unionism and industrial relations
- Effects on specific groups
- Interaction with the local community

The development and upgrading of human skills

Industrial estates should, in theory, greatly facilitate all forms of training. The Thies estate in Senegal was set up with the specific aim of grooming artisans to become industrialists. In India, the Craftsmen's and Technocrats' estates have similar objectives, while management training is available on the Pallakelle estate in Sri Lanka.

The Ministry of Industry and Technology of Turkey includes management training in its programmes, priority being given to participants from industrial estates. In several countries, industrial estate firms use the facilities offered by local technical schools and colleges for the purpose of upgrading their workers' skills. It has been noted that the presence on an estate of many firms in the same branch of industry stimulates employers to provide further theoretical and practical training for their staffs.

Nevertheless, from the point of view of economy and flexibility of operation it is probably better to have extension services and training facilities servicing industry as a whole and operating independently of industrial estates. Only very large and homogeneous estates can afford the luxury of their own comprehensive extension and training services. If, however, an extension service or technical institute is located on an industrial estate, it should also be capable of serving firms on the outside.

Amenities

On the whole, employee amenities on the estates visited were few. Some of the Indian estates had central canteens, and one had a restaurant. Six estates had a post office, a bank branch (which were at least of as much value to the management as to the workers) and a school.

In some estates in Argentina, canteens, restaurants and other facilities are planned. Most estates in Turkey had restaurants serving meals at low prices, and a number had shower facilities and barber shops.

In Malaysia, estates located at a distance from towns provide housing for their workers; in some cases complete new towns have been constructed. Some of the Indian estates also offered housing for the workers. These were generally rare cases, however, since estates in most places were located near urban centres.

Health and safety

In general, working conditions on industrial estates were found to be better than on the outside, if only because the buildings were better constructed, more spacious and with better lighting and ventilation. One of the claims made for industrial estates was that they made labour inspection much easier. This was specifically mentioned in Nigeria, where working conditions were seen to be much better than in small firms outside. Protective clothing and machine guards were used fairly consistently.

In Malaysia, the regular use of machine guards and safety clothing on industrial estates has resulted in a sharp drop in accidents. In addition, each factory is obliged to have first-aid facilities; large plants are required to have doctors and even clinics for the treatment of workers' families.

In Nepal, although working conditions in general were far superior in estate firms than in firms outside, safety left something to be desired. It is reported, however, that welfare measures pioneered by the Balaju Estate Shantra Factory have been adopted in recent welfare legislation. Several firms on the estate were forced to adopt them even before the legislation was passed.

In Sri Lanka, working conditions in estate firms are reported to be better than in firms outside. In Turkey, on the other hand, much has to be done to enforce the adoption of safety measures by firms on the estates.

Trade unions and industrial relations

The level of trade union activity in firms on industrial estates depends on the general level of development of the country concerned. In Malaysia, a widespread and active trade union movement, with a high level of membership, exists on estates and labour relations are said to be cordial. In Argentina, trade union activity had been suspended at the time of the study. Normally, there is little or no unionism in small firms, but a high percentage in large ones.

In Sri Lanka trade union membership is general; it is reported to be welcomed by the large firms and tolerated by the small ones. Labour relations generally are good. Nepal does not have trade unions as such, but workers are incorporated in a national movement, and a structure exists for handling disputes (which are few). Nigeria has an active but rather splintered trade union movement, but no unionism was found on the small industry estates. Turkey also has a strong trade union movement, but membership is rare on small industry estates. On one estate visited, unionism was beginning to make inroads, but was meeting with hostility from employers. Trade unions are active on estates in Pakistan, but seem to have had little effect on working conditions.

Finally, there is no evidence to suggest that small industry estates in themselves promote trade unionism when it is not already active, or that they improve labour-management relations.

Effects on specific groups

The only specific groups that appeared to have been affected by the introduction of industrial estates were women, in Argentina and Malaysia, and the engineers and craftsmen on the specialized estates in India.

At Trelew, the large-scale employment of women, many of them Bolivian and Chilean immigrants, in an area where female employment was previously lacking, may in the long run have social repercussions. Malaysian women who until recently led very circumscribed lives, especially in the villages, are now finding employment in factories on the estates and working alongside men.

Interaction with the community

An estate and the region to which it is expected to contribute economically and socially should interact, particularly when the region is a rural one. In none of the countries studied, however, was there any evidence of real interaction with local communities other than, perhaps, the improvement of some roads, street lighting and bus services to the estate. In Malaysia, public amenities, such as playgrounds and golf courses, have sprung up around the estates. A former squatter resettlement area at

Petaling Jaya now boasts several cinemas, a bowling alley and a five-star hotel. When an industrial estate is associated with the development of a particular town, the planners normally provide for a shopping centre, recreational facilities and schools. Even in the most modest estate housing scheme, space is allocated for schools, shops and recreation facilities.

Little evidence of any special interaction with the community was found in Turkey, perhaps because all the firms on the small industry estates had long been established in the towns before moving out a few kilometres. The benefits to the towns involved were less congestion and the clearance of old and decrepit buildings, thus making for aesthetic and environmental improvement.

Conclusions

Evidence is not forthcoming that industrial estates, in themselves, have either a significant or indirect economic effect on local communities other than what would occur on the establishment of substantial industries or through the generation of increased employment by other means.

VI. Industrial estates in the least developed countries

Although no studies were made specifically of the role of industrial estates in the least developed countries, two countries in this category, Nepal and Sudan, were visited. A present, Sudan has no industrial estates, but it was studied with a view to determining the prerequisites for an industrial estates programme.

Least developed countries are comparable to economically depressed areas in some of the more industrially advanced developing countries, such as India. They can be identified on the basis of three major characteristics:[5]

(a) Per capita gross domestic product of \$125 or less at 1970-1972 prices;

(b) Share of manufacturing in gross domestic product of 10 per cent or less;

(c) Proportion of literate persons in the age group 15 years and over of 20 per cent or less.

Typically, least developed countries lack: sound physical infrastructures; adequate financial institutions for the promotion of industrial development; mechanisms for foreign trade; governmental structures; and personnel capable of managing public finance and formulating and implementing programmes, policies and projects. As these countries differ considerably in the development of their resources, there can be no rule common to them all for the establishment of industrial estates. The populations of these countries also vary greatly, which has a major bearing on the size of domestic markets, the potential for mobilizing entrepreneurial talent, and the availability of managerial and technical cadres. Of the 29 countries rated as least developed by the United Nations, the population distribution is:

Population in millions	*Number of countries*
Less than 1	5
1 to 5	13
5 to 10	4
10 to 25	5
25 to 30	1
Greater than 70	1

The main problem in the least developed countries, apart from the obvious one of market size, is a lack of entrepreneurial, managerial, technical and skilled manpower capable of setting up, constructing and operating industrial enterprises.

[5] United Nations Committee for Development Planning, *Official Records of the Economic and Social Council, Fifty-first Session, Supplement No. 7* (E/4990), pp. 15 and 16; *Official Records of the Economic and Social Council, Fifty-ninth Session*, Supplement No. 4 (E/5671), p. 31; United Nations Economic and Social Council, "Identification of the least developed among developing countries: a review in the light of recent information" (E/AC.54/L.72) p. 7.

The potential for industrial entrepreneurship is contingent upon several known and unknown variables, which include:

Division of labour and monetization in the economy
Share of commercial farming in agriculture
Average size and distribution of cultivated holdings
Technical level of indigenous agriculture and handicrafts
Proportion of indigenous sector in foreign trade
Size of GNP
Structure of educational establishment

Common to all least developed countries is the industrial sector's low share in GDP, partly attributable to an acute shortage of industrial entrepreneurs as distinct from the numerous non-industrial entrepreneurs in trades and services. Two other contributory factors are the grossly inadequate supply of trained manpower and the general absence of the ancillary facilities needed by industrial enterprises. Compensating mechanisms for these deficiencies have to be woven into, though not necessarily integrated in, the planning of industrial estates.

Potential industrial entrepreneurs are to be found in practically all least developed countries. The difficulty is to identify them, to encourage them to become industrialists, and to train them accordingly. The feasibility of such an approach was reflected to a modest degree in the achievement motivation programmes designed by Professor McClelland and run in an International Labour Organisation (ILO) management development project in Uganda in the late 1960s. At that time, virtually all Ugandan industry and commerce was in the hands of non-Africans and the object of the programme was to identify and promote indigenous entrepreneurs. A similar programme is currently being organized by UNIDO in Indonesia.

The enterprises set up by these neophyte entrepreneurs are, as may be expected, very small at first. Many of them are artisans, and their factories are little more than enlarged workshops. As they may well have to undertake technical and manual work for some time, they may need technical training, especially in the use of more advanced production equipment. They will also require managerial training, covering financing, marketing and the organization of production and cost control.

In establishing training facilities it has to be borne in mind that many people with considerable entrepreneurial potential may well have enjoyed only little formal education and are thus quite unaccustomed to intensive study. On the Turkish estates, many burgeoning entrepreneurs were virtually illiterate and unable to read production drawings; however, this did not prevent them from making accurate copies of complicated machines and parts by measuring existing models. Courses in reading machine drawings were among the most popular in the extension programmes.

The above also applies in some measure to the economically depressed areas in the more industrialized of the developing countries. The essential difference is that firms in such areas have access to larger national markets and governments generally dispose of the financial and human resources needed to develop industry. In addition, the institutional infrastructure, albeit not as sophisticated as in the highly industrialized countries, at least offers a foundation for developing the necessary technical assistance, as evidenced by the experience in India.

The industrial estates programme of Nepal is small in relation to its total volume of industry, although about three quarters of the industrial enterprises and rather less than 50 per cent of the employment are in rice milling and oil-extraction plants. The industrial estates have a rather higher percentage of firms in the modern industrial sector. At the time of the study, some 114 establishments (of a potential 250) were operational on three estates, in which $2,132,516 had been invested. All the estates have rather large staffs which might be substantially reduced since they are primarily administrative. Training and management advisory services are supplied by various institutions and through international aid not always directly connected with the estates.

The study of estates in least developed countries was too limited to allow far-reaching conclusions to be drawn. It does appear, however, that industrial estates are a valid means of developing industrialists in countries at the lowest level of industrial development, but that programmes so oriented demand substantial inputs of financial, technical and training resources, at least over 10 years. These have to be considered, however, as part of the overall costs of a country's industrial development. The entrepreneurs have to be groomed closely and continuously at first to implant in them sound industrial habits. To launch the first estates at minimum cost, and to get firms into operation, it may be necessary to compromise with standards of building, roads, working conditions and the like. No compromise, however, can be permitted in technical services and sources of power.

Estate size poses a problem. Certainly, if central workshops and other common facilities are to be made available, the size of the estate and its membership have to be above a certain minimum. One of the problems in the least developed countries is to find enough entrepreneurs in the same branch of industry to warrant the establishment of an estate with common services. In most cases (as in Nepal) it will be necessary to rely on service institutes covering small industry in general.

In least developed as in other countries, industrialists and their staff should be trained and machinery ordered while the estate is being constructed. This can only be done effectively, however, if the whole operation of selection and training, financing, capital goods purchase and planning and construction of the estate are treated as one integrated operation. If this is not done, the various elements may get out of phase, resulting perhaps in delays of years in completing the estate, with trained personnel and their production equipment waiting to be admitted, thus tying up capital and causing frustration and disappointment.

PART TWO

Evaluation studies

I. Argentina

Background

Argentina does not conform to the conventional image of a developing country. Of its economically active population of 9 million, in 1970, 1.8 million or 19.7 per cent were employed in the manufacturing industries against 1.3 million or 14.8 per cent in agriculture. A preliminary estimate of the gross domestic product in 1974 was $33,300 million ($1,430 per capita). The prosperity of the country, however, still depends on the export of agricultural produce (wool, meat and cereals). Stock raising, which once was the major source of domestic and export earnings, has fallen dramatically on account of the unprofitably low prices fixed by the Government in the domestic market and the banning of meat imports by the European Economic Community (EEC). Cereals are now the major export, maize accounting for almost one half. There are substantial steel, automobile, machine-tool and textile industries. The importance of the manufacturing industries may be judged by the fact that in 1973 goods valued at $1,813 million were exported; the metal, machinery and transport equipment industries contributed almost 42 per cent of the total.

The country has suffered from inflation for many years. In January 1970, a new monetary unit, the new peso, replaced the old peso at the rate of 100 old pesos per one new peso. The foreign exchange rate until June 1970 was $1 = 3.50 new pesos. The rate gradually fell to $1 = 5 new pesos in August 1971. This rate was held officially until March 1975. Thereafter, the value of the new peso depreciated rapidly. In September 1976, one dollar was worth 260 new pesos. The value of exports quoted above were calculated at the then current official rate of $1 = 5 new pesos. Except for imports, it would be meaningless to convert new pesos into dollars; the conversion does not indicate equivalent purchasing power.

The population of Argentina is very highly urbanized; more than 50 per cent live in towns of over 20,000 inhabitants. Eight million, just over one third of the population, reside in the Greater Buenos Aires area. In contrast, several provinces are very sparsely populated. Industry, too, is concentrated in Greater Buenos Aires (39.5 per cent of the industrial establishments). To prevent further industrial growth, with a consequent increase in population and the possible breakdown of the municipal and social services in the area, the federal Government has prohibited the establishment of any new industrial enterprise within 60 kilometres of Buenos Aires.

The distribution of population and resources is so skewed in Argentina that one might be dealing with several separate countries. Although provincial legislation generally reflects that enacted by the federal Government, it sometimes happens that the objectives differ from province to province. The evaluation report deals only with the provinces of Chubut, Neuquén and Santa Fé and the Greater Buenos Aires area.

Policy

It has been the policy of successive federal Governments to encourage the establishment of industrial estates *(parques industriales)*. In 1976, a resolution

(No. 94, arising out of Law No. 20.560 and Decree No. 11/74) was promulgated by the Secretary of State of Industrial Development. It defined an industrial estate as "prepared land provided with an infrastructure and common services necessary for the establishment of industrial plants". The resolution outlined the minimum infrastructure and services that must be provided for a site to be recognized as an industrial estate in order to qualify for concessions and government aid. It further stipulated the conditions to be fulfilled in order to obtain government recognition. These included:

(a) Analysis and approval of a feasibility study covering technical, economic and social factors, and the preliminary plans of the estate;

(b) Analysis and approval of the final plans;

(c) Analysis and evaluation of the progress of construction;

(d) Final approval of the estate, either as a whole or in previously agreed stages.

Final approval of the estate, or of successive stages, will permit firms moving on to the estate to benefit from the incentives offered under Decree No. 11/74. These include loans and other benefits.

For the purpose of granting aid, the Government has classified provinces into three categories:

0 Prosperous provinces where state aid may be reduced to a minimum;

1 Underdeveloped regions where maximum incentives must be offered to firms to settle there;

2 Intermediate regions where there is some need for encouragement, but where the full range of incentives is not offered.

These federal laws appear to be enabling instruments to permit the provincial legislatures to make laws relating to their particular situation. The necessary funds are made available to the provincial governments by the federal Government.

Feasibility studies on industrial estates in the provinces of St. Luis, Chubut, Neuquén, Santiago del Estero, San Juan, Jujuy, Santa Fé, Córdoba, Tucumán, Mendoza, Santa Cruz, Entre Ríos, Salta, La Pampa and Buenos Aires have been submitted to the federal Government for consideration.

In December 1971, the government of the province of Santa Fé passed a law (No. 6758) for the encouragement of industrial estates. It defined three classes and three types of industrial estates. The classes are: *(a)* "official", in which land and infrastructure, and where applicable the buildings, are financed entirely from official funds; *(b)* "mixed", in which land and infrastructure are financed by loans to private industry, repayable over specified periods, with buildings financed by individual firms; and *(c)* "private", entirely financed by private capital. The types are described as *(a)* "promotional", designed to promote industry in regions economically and industrially undeveloped; *(b)* "developmental", designed to promote the location of firms on a single site in cities partially industrialized with a view to further development of industry; and *(c)* "dispersal", designed to remove industrial enterprises from cities in which they are in congested areas where expansion is difficult and where they cause environmental problems.

The above law covers the expropriation of land for an estate, the method of recovering funds invested in land and infrastructure, certain technical features of the estate, and by a later decree (01492 of 1973) limits the space on "official" estates that may be allocated to large-scale establishments (high technology and more than 100 employees) to 20 per cent of the total.

The province of Santa Fé is graded as class "0" (except for the city of Rosario). The only incentive that appears to be offered is a loan to purchase land and to develop the infrastructure for a "mixed" estate. Loans provide for repayment at six-month intervals over five years, with a six-month period of grace. Interest accrues at 8¾ per cent.

The objective of the industrial estate policy of the province of Santa Fé appears mainly to be the removal of work-places from town centres. Indeed, in most of the small towns in the province (as well as in the province of Córdoba) industrialists several years ago had been given 15 years to remove their establishments from city centres. The estates are of the "dispersal" type, but there are, no doubt, "developmental" overtones. Unlike nearly every other country and even some of the provinces in Argentina the creation of more job opportunities is not an objective. Full employment already exists in the small towns of the province.

A committee under the Minister of Finance and Economy of the province is responsible for the admission policy of the Santa Fé estates.

The province of Chubut covers an area of 226,000 square kilometres. At the last census (1970) it had a population of 190,000, which it is understood had increased to 250,000 by 1976, slightly in excess of one person per square kilometre. Although fruit and vegetables can be grown in the south, over much of the province the land can support only sheep and goats. The wealth of the province is derived principally from the winning and refining of petroleum. It is graded as a class I region eligible for the maximum incentives.

The provincial legislation on industrial development, from which measures on industrial estates have evolved, dates to 1971 (Law 842). The provincial government gave itself powers to acquire land on which to erect industrial buildings and housing for workers; and to provide credit for, participate in the equity of, and award incentives including priority in state contracts to, newly established firms. The creation of industrial estates and zones was authorized. A decree (No. 2153) stipulated the terms and conditions on which firms would be admitted to an industrial estate. The most important of these relates to the provision, under oath, of information on the technical and economic features of the project, production costs, investment and the proposed method of financing. Others relate to the deposit to be paid to reserve land; the method and time allowed to pay for the site; and the submission to the government of three monthly reports on the progress made. A firm is required to have erected buildings covering not less than 30 per cent of the required area within five years of the date of purchase.

The main objective of the Chubut provincial government is to diversify the economy of the region by attracting new industries. Unemployment is not a problem. The government is relying on the job opportunities provided by new enterprises to stimulate migration from other parts of Argentina, particularly the Greater Buenos Aires area, and immigration from Chile. The package of incentives offered to new enterprises includes: exemption from taxes on vehicles; exemption from or reduction of various taxes, including sales and value-added taxes, on finished products and raw materials; exemption from the tax on buildings and stamp duty until 1980; reduced tariffs on water and electricity; long-term credit by the Banco Nacional de Desarrollo, which can be used for new buildings and extensions; and payment for land by instalments. Until recently duty-free import of machinery and equipment was permitted. This privilege has been rescinded.

The province of Neuquén has an area of 98,078 square kilometres, and in 1974 it had an estimated population of 161,000 of which 60,000 resided in the provincial capital, Neuquén. The main source of wealth in the province is petroleum, running currently at 40 per cent of the national output. Market gardening and fruit growing, together with sheep and cattle raising, are practised intensively in the river valleys around the capital, but there appears to have been no significant expansion since 1950. The industrial sector, in 1964, gave employment to just over 2,000 persons. It is believed that the number of workers was not much greater in 1970. Incomes in the capital and its surroundings are stated to be much below the national average. It has been estimated that about 50 per cent of the youth in the province do not complete their primary education. Neuquén province, like Chubut, is graded class 1.

The objectives of the provincial government, which it hopes to achieve by the establishment of an industrial estate near the capital, are economic, technical and social. The economic objectives are: an increase in the gross industrial product; the reduction of regional imbalances; and a higher per capita income. The technical aims are: zoning of industry to protect the environment of the city and to curb land speculation, and the modernization of small- and medium-scale industries. Among the social objectives are: more equitable distribution of incomes; a reduction in seasonal unemployment and underemployment created by the agricultural cycle; more and improved technical education; and the development of entrepreneurial talents. It is not know what incentives are offered by the provincial government, but it is presumed that at least the benefits authorized by the relevant federal legislation will be incorporated in the provincial laws.

The Greater Buenos Aires area consists of the federal capital, Buenos Aires, and that part of the province of Buenos Aires that surrounds the capital. It contains about 8 million residents and has by far the greatest concentration of industry in the country. On account of increasing congestion within the federal capital, industry over the years has tended to move farther and farther into the province. The prohibition on new industrial establishments within 60 kilometres of the centre of Buenos Aires has been mentioned.

The broad federal policy is to encourage the establishment of large-scale export-oriented industries, and to persuade existing large-scale enterprises currently catering to the upper end of the domestic market to concentrate on exporting. Increased attention is to be paid to the development of small-scale industry. A special organization has been set up to assist in solving its problems. It is not known if there is any intention to set up an industrial estate in the Greater Buenos Aires area to accommodate it. There was a proposal to build an industrial estate at Bahia Blanca, in the south of the province, but this appears to be in abeyance. There are, however, two privately owned industrial estates in the Greater Buenos Aires area.

Industrial estates programme

Although projects for estates at Sauce Viejo, Reconquista and Alvear were inaugurated between 1968 and 1969, the industrial estate programme of the province of Santa Fé did not evolve until 1971. The three estates mentioned were sponsored by a co-operative, a municipality and a private company respectively. All, however, received financial assistance through the provincial government. Subsequent to 1971, industrial estate projects were indicated at Rafaela, Las Parejas, Venado Tuerto and Rufino. In most cases the work on the infrastructure did not commence until 1974, and in one instance, later. None of the estates is expected to be completed before 1980. The delays between finalizing the projects and commencing work on the sites are attributable to changes of provincial government and policy. Only two estates, Las Parejas and Reconquista, had firms in production in 1976 (two and ten firms respectively).

The Alvear estate is in the neighbourhood of Rosario, which is graded as a class 2 region. Firms moving on to the estate will qualify for a limited range of incentives. Firms in the Rosario region are in receipt of technical assistance from the UNIDO-supported Centro de Desarrollo (CENDES), which is located in Rosario. The staffing of CENDES does not allow the extension service to be applied throughout the province. However, an important aspect of its work has been the design and layout of factories for firms intending to move to one or another of the industrial estates. By arrangement this service is given to expected tenants of the industrial estate in San Francisco (Córdoba).

As of 31 May 1976, the provincial government had invested nearly 342 million new pesos in six of the above estates (Rufino, a private estate, is the exception). The total investment in estates, including Rufino, from all sources amounted to 469 million new pesos ($1.88 million), yet in all but the Rafaela estate the infrastructure is less than 18 per cent completed. The total expenditure on estates is expected to reach 15 billion new pesos. The total employment that will be provided is estimated at 18,000 in 600 establishments 833,330 new pesos ($3,330) per job. As the vast majority, if not virtually all, of the firms will be those that are at present located in neighbouring towns, relatively few new jobs will be created.

The provincial government of Chubut currently is promoting an industrial estate at Comodoro Rivadavia (population 100,000), Trelew (population 25,000), Esquel (population unknown) and Puerto Madryn (population 25,000). The first three of these are already operational. Comodoro Rivadavia is the centre of the oil industry. It possesses a refinery and a number of industrial establishments, several of which are based on petroleum derivatives. The estate has a gross area of 51 hectares and contains some 35 firms, two thirds of which are in the small-scale category.

Trelew estate was constructed specially to house industries that would stimulate immigration to the town. The planned area of the estate is 300 hectares of which 244 have been acquired by the government. Some 88,000 square metres of industrial buildings have already been erected by 24 firms. Buildings totalling 89,595 square metres are planned by 27 other firms that have acquired land on the estate. In 1976 the number of employed was approximately 3,000. Several of the firms are capital-intensive, with the cost per job running as high as $19,600. An area of 50 hectares has been acquired adjacent to the estate on which it is proposed to build houses for management and labour.

There is very little information on the Esquel estate. The town of Esquel is situated in a mountainous area that is scheduled for reafforestation. Communications in winter are difficult and sometimes impossible. China clay and bentonite are mined in the area. The firms on the estate mainly make use of locally arising materials.

Puerto Madryn handles more domestic shipping than Buenos Aires. There is a large aluminium smelting works nearing completion close to the town. The estate will be built around this plant for firms working in aluminium.

The only industrial estate in the province of Neuquén lies on a main road a few kilometres outside the town of Neuquén (population 60,000). The estate at present has an area of 178 hectares, of which 109 are available for industry. All the plots have been sold, but only five firms employing 280 persons are in operation. There are plans to extend the estate. The industries of the estate are expected to serve the local market in which the oil industry is an important component.

There is apparently no industrial estate programme operative in the Greater Buenos Aires area. There are two estates built by private enterprise. The older (OKs Industrial Area) is 25 kilometres from the centre of the federal capital. It was built before the prohibition on new industrial establishments within 60 kilometres of Buenos Aires came into force. The estate area is 50.4 hectares. It contains 252,000 square metres of factory buildings (29 units). Twenty-six firms are in operation giving employment to an estimated 1,500 persons. Twenty of the firms are re-established local concerns, three are newly established, and three are foreign. The other estate is at Pilar, 60 kilometres from Buenos Aires. It is still in the process of development. The completed estate will have an area of 900 hectares. No factory is yet erected, but 26 plots have been sold.

Comments

The federal Government is committed to the promotion of industrial estates, and encourages provincial governments to implement this policy by financial aid and fiscal incentives. The provincial governments, however, are not equally active in their pursuance of it, and those that do respond sometimes do so with differing objectives in view. Among the provinces under consideration, in Chubut the provincial government vigorously pursued its industrial estates programme with a well-defined and realistic objective. In Neuquén province the same was true, although to a lesser extent. In Santa Fé the initiative seems to have come from the industrialists themselves, who appear to have remained steadfast in their intention, in spite of all the delays in implementing and the slow progress of the projects.

On a provincial basis the impact of the industrial estates on the manufacturing sector is likely to be varied. In Chubut and Neuquén, but particularly in the former, a substantial proportion of the manufacturing establishments will be accommodated on the estates. Recent statistics on the number of industrial enterprises in Argentina are not available, but in 1964 it was estimated at 140,000. Undoubtedly, the number has increased since then. In 1970, 12.5 per cent of these establishments were located in the province of Santa Fé. This means that there were, at least, 17,500 industrial undertakings in the province. If the estimated 600 establishments eventually occupy the estate, they will represent only 3.4 per cent of the total.

In planning estate programmes little attention has been paid to small-scale industry. Santa Fé is the only province in which there is a form of extension service. None of the estates in the three provinces has a common-user production facility or a central workshop. A quality control laboratory has been installed, with the assistance of UNIDO, on the San Francisco estate (Córdoba province).

The only instance of intra-estate trading was observed at the Trelew estate (Chabut). Synthetic yarn produced on the estate is sold to weavers and the fabric produced to garment manufacturers, all of whom are on the estate. The only instance of auxiliary industries arising as a result of the presence of an industrial estate was also at Trelew. Increased transport, restaurant and hotel facilities have developed, and no doubt the building trade has expanded, owing to the influx of labour. The population of the town has doubled since the estate commenced operations.

The only concrete social change initiated by the existence of an industrial estate was found at Trelew. The new factories employ a large number of women, hitherto almost absent from the provincial industrial scene. A considerable number of Chilean and Bolivian immigrants are in the labour force, some of whom are experiencing a monetary economy for the first time.

Can the estate programmes be considered to have fulfilled their objectives? In Chabut, yes, as far as it has gone. It is rather early to say in the cases of Neuquén and Santa Fé. The indications are that the objectives are likely to be achieved at Neuquén. It is more doubtful in Santa Fé.

II. Ecuador

Background

Ecuador is divided by the cordillera of the Andes into two parts of almost equal area, but with completely different economies. The western section includes the coastal plains on which the principal export crops bananas, coffee, sugar and rice are grown. The eastern half is largely devoted to peasant farming. Oil has been found in this region, and since 1973 it has been the major export commodity. At least from 1969 until 1971 there was an adverse balance of visible trade; since 1972 the position has been reversed.

Ecuador is a member of the Andean Common Market. Along with Bolivia it has special concessions as a less developed country. Under Andean Group sectoral agreements it has been allotted a wide range of goods to manufacture, which include many engineering products. There is, however, a great shortage of suitably trained personnel and capital equipment to take advantage of the allocations made under the agreements.

The total population in 1974 numbered 6,521,710, of which 1,940,628 were economically active. There are numerous discrepancies between statistics from different sources, but a usually reliable one gives 11.7 per cent of the active population engaged in manufacturing compared with 46.3 per cent in agriculture. In absolute terms, therefore, manufacturing gave employment to approximately 227,000 persons. It is difficult to reconcile this figure with information emanating from different ministries. The United Nations *Yearbook of Industrial Statistics, 1975* gives the number of persons engaged in the manufacturing industries in 1974 as 66,400 in 1,255 establishments; only firms employing seven or more persons are recorded. From this it follows that 160,600 persons must be engaged in artisan undertakings since, in one of the many definitions of small-scale industry in Ecuador, seven is specified as the lower limit of employment in small-scale industry. From the source cited above, the "seven-and-over workers category" of the manufacturing industries contributed 8 per cent of the gross domestic product in 1974. The information given in this paragraph does not agree with that given in "Evaluation report on industrial estates No. 3 Ecuador" (see annex II), for which earlier data, sometimes of indeterminate date, were used. The conclusion, however, is the same: the organized manufacturing sector is small, perhaps 3.4 per cent of the active population. Between 1970 and 1974 the number of manufacturing establishments rose from 948 to 1,255; of persons engaged from 48,105 to 66,400; and of gross output from 9,508 million to 23,976 million sucres (S). The average annual value of production per worker increased from S 197,660 to S 346,020.

As is usual in developing countries, food and textile industries predominate. In 1969 this group contained 42 per cent of the establishments against 7.4 per cent in the engineering trades. By 1973 the former had fallen to 37 per cent while the latter had risen to 13 per cent.

There is no recent information available on the proportion of small-scale establishments in the total. Under the present legal definition the dividing line between small-scale and medium- and large-scale enterprises is drawn at a level of fixed capital assets (excluding land and buildings) of S 5 million. In 1965 it was S 200,000. Obviously, there must be some overlap, depending on the years under consideration, since the investment limit is decided annually by the Inter-Ministerial Commission for the Development of Small Industry and Handicrafts. A survey conducted in 1965 found that out of a total of 639 concerns, 331 could be considered small-scale; that is, almost exactly 30 per cent. It is probable that the current percentage is lower, perhaps 22 per cent. While small-scale industry and artisan ventures are to be found throughout the country, they are most prevalent in or near the large towns. About 60 per cent are concentrated in the provinces of Guayas and Pichincha, and in particular in the cities of Quito (population 400,000) and Guayaquil (population 600,000), more than half being engaged in the foodstuff, textile, footwear, clothing and timber (excluding furniture) industries. No account has been taken of repairing of machinery and vehicles; these trades are not recognized as manufacturing in Ecuador.

To encourage the small-scale and artisan sectors very extensive privileges are granted to enterprises under the Law for Development of Artisan Activity and Small-scale Industry, 1965. These include exemption from various taxes and export duty, accelerated depreciation on capital, and partial exemption from import duties on raw materials for a period of five years. The extent of the exemption is modified according to the grading of the concern. To qualify for these benefits an enterprise must be registered with the Ministry of Industry, Commerce and Integration (MICEI) and be a member of a provincial small industries association or artisan chamber.

In 1952 the Government established the Centre de Desarrollo (CENDES) to give technical assistance in the promotion and development of industrial enterprises. It contains divisions for economic research, industrial promotion, productivity, industrial extension and industrial estates. The last three divisions were added subsequent to 1964. CENDES has had significant assistance from the United States Agency for International Development (USAID) and UNIDO.

Credit to finance industry is available from the commercial banks and specialized lending agencies. Corporación Financiera Nacional (Comisión de Valores). This institution provides assistance to private sector enterprises and public sector projects designed to improve the infrastructure. Normally finance is available for the acquisition of fixed assets, but it may be provided for technical assistance and working capital. The minimum loan is S 200,000. The Banco Nacional de Fomento provides credit to small business and artisans. It lends mainly to agriculture, but it maintains a staff to provide industrial counselling and to arrange training programmes. The average loan is about S 30,000. The Fondo Financiera Industrial of the MICEI is able to supply credit to small industries. This fund is capitalized by USAID, the Central Bank of Ecuador and some commercial banks. The maximum loan for working capital is S 2 million, repayable in two years. Loans for equipment and buildings, respectively, have a term of six and seven years. Interest is at 9 per cent.

Policy

Like most Latin American countries in the decade prior to 1964, Ecuador paid little attention to the development of the artisan sector. It was realized that some of the sectoral undertakings had little growth potential unless they were transformed into modern, small-scale, factory-type establishments. Provision was therefore made to offer opportunities and incentives to induce the change. The method of transformation was conceived in the formation of artisan co-operatives working in suitable modern premises equipped with an adequate range of machine tools. It was intended that the factory-type premises be built by government agencies and/or quasi-government organizations and sold or rented to the co-operatives.

This structural change in the industrial sector was reflected in the projected differential growth rates for the factory and the old artisanal sector over the plan period 1963-1973.

In 1975 a new law was promulgated on industrial estate development which accorded to firms setting up on an estate the same privileges and benefits as those enjoyed by registered small-scale enterprises.

Industrial estates programme

The first concept of an industrial estates programme appears in the National Plan for Social and Economic Development, 1963. The Government in 1964 invited assistance from the United Nations Centre for Industrial Development in a programme for the development of small-scale industry and industrial estates. This was supplied and the mission suggested feasible locations for estates—Ambato, Cuenca, Guayaquil, Ibarra, Loja, Quito, Riobamba and Tulcán. CENDES was made responsible for certain items of the programme—surveys, feasibility studies, planning, building and advice on the establishment and operation of the estates. These studies were directed to the first five of the above suggested locations.

The procedure adopted to organize the building of an industrial estate is to establish a development corporation in the area. The constitution of the corporation varies from place to place. Included are usually the municipal council, the financial development board, representatives of a workers' co-operative, sometimes private interests; but CENDES is invariably included since it acts as the government executing agency and is the principal shareholder in the corporation. The first project was started at Cuenca in 1964, was succeeded by one at Ibarra in 1965, and at Tulcán and Ambato in 1966.

The development corporation Cia. de Economia Mixta, Parque Industrial Cuenca, acquired 67 hectares of land. The infrastructure up to 1975 was developed only over 17 hectares. One (sample) factory was erected on the improved land, but it was not occupied. Five factories were built on the undeveloped part of the site by other interests (four private, one municipal); they do not form part of the estate. It took 10 years and the expenditure of S 38 million, to say nothing of the international and bilateral technical assistance, for the estate to reach the stage where it was ready to receive tenants.

The Industrial de Ibarra, composed of the provincial council of Imbabura, the Ibarra municipal council, the diocese of Ibarra, the Americana Footwear and the Woodworkers Co-operatives and CENDES, with a registered capital of S 1.3 million, built three factories of 520 square metres each on a parcel of land they had developed. The site has been surrounded by the growth of the town. There is no space for further expansion. Three enterprises, employing in all 60 persons, occupy the estate. It is understood that CENDES is attempting to sell the estate.

The Parque Industrial Tulcán, C.A., has a registered capital of S 1 million. The original plan was to develop the land and build seven factories, each with a working area of 450 square metres, together with an administration building, cafeteria, nursery and sports ground, which would have occupied as much space as the industrial buildings. It was later proposed to alter the layout to accommodate nine factories. Only three buildings were erected. The rest of the site has remained empty. The roads are unsurfaced and unusable in wet weather. The three factories are occupied by two enterprises under the same ownership. The total employment is about 140.

The development corporation at Ambato exhausted its entire capital of S 1.23 million in the purchase of two sites.

Four industrial estate projects are currently under way in Guayaquil. One of these is sponsored by CENDES, supported by the provincial and city councils and financial and utility interests. Land has not yet been acquired. The other three—Huancavilea, Tierra y Fecho and Los Sauces are privately owned. The Los Sauces estate is the largest, covering an area of 82 hectares. It will have between 40 and 45 plots, the minimum size of which will be one hectare. There have been many inquiries, but only one plot of 14 hectares has been sold. The gross areas of the other two private estates are not known, but their plot areas are believed to be about 2,500 square metres. It is said that 100 plots have been sold on these two estates, but it is believed that some of the buyers may be speculators.

The Guayaquil city council has passed a law prohibiting the erection of any factory or warehouse within 5 kilometres of the city boundary. This undoubtedly will assist the private estates to dispose of their plots since they are outside this limit.

The Banco Nacional de Fomento, in collaboration with the Banco Inter-Americano de Desarrollo is promoting four co-operatives, two of which are developing industrial estates: the Peguiche Andean Co-operative at Otovallo and the Woodworkers Co-operative at Quito.

Comments

The objective of the industrial estates policy has changed over the years. Originally it was to provide the venue where artisan undertakings could be transformed into small-scale industries by providing suitable premises and services to artisan co-operatives or associations. When it was found that artisans were reluctant to form co-operatives, the objective was changed to the provision of developed plots for industrial enterprises of any size. The location of the Ibarra and Tulcán estates in comparatively undeveloped regions, and the poor communication at that time between Cuenca and the rest of the country did not attract private enterprise. In about 1968, the objective became the creation of organized areas for industry at Guayaquil and Quito. The change probably was prompted by the growing congestion, uncontrolled spread, and rising unemployment in these cities. The current objective is the decentralization of industry. The absence of a consistent and coherent policy is one of the principal causes of failure of the industrial estate programme.

Other contributory causes of failure are:

(a) The unsuitable locations selected for estates (Ibarra had very little industry; Cuenca until recently was isolated);

(b) At Tulcán the premises erected were too large for small-scale industry;

(c) The lack of sustained drive in pursuing the policy (an industrial area at Quito has been under consideration for five years);

(d) A too restrictive admission policy (repairing businesses and warehousing are not eligible for benefits under the Development of Artisan Activity and Small Industry Law, or for admission to an industrial estate).

The new law on industrial estate development of 1975, which makes available to large firms on an industrial estate the same privileges and benefits as those enjoyed by the registered small-scale enterprises, is likely to attract large concerns to estates. This may be to the detriment of the small firms since it is reported that there is a reluctance on the part of development corporations to sell or lease small plots.

The official industrial estates policy has failed completely to achieve its several objectives. The private estates may be successful, but that remains to be seen; they are not yet operational. It seems probable that the co-operative estates sponsored by the Banco Nacional de Fomento will be more successful.

III. India

Background

At the time of achieving independence (1947), India possessed a very large number of unsophisticated small-scale manufacturing and cottage enterprises. There was also a relatively small, but modern, large-scale sector, the activities of which were confined mainly to the production of textiles, basic metals and railway equipment. The geographical distribution of this group was most uneven. Those industries that did not need to be near to their source of raw materials were concentrated around a few cities, notably Bombay and Calcutta.

The country, however, was and still is basically agricultural. In 1971 the total population numbered 548.2 million, of which 180.5 million, or 33 per cent, were economically active. Of the latter, 130 million (72 per cent) were engaged in agriculture. The manufacturing industries accounted for 17.1 million (9.5 per cent). In that year agriculture contributed 172.2 billion rupees (Rs) (42 per cent) to the gross domestic product of Rs 48.2 billion (11.6 per cent). Over the years 1965-1971 the share of agriculture in GDP grew by 49.6 per cent compared with a growth of 13.2 per cent for manufacturing.

In 1972, the value of the gross output of manufacturing establishments, employing 10 or more workers and 20 or more when mechanical power was not used, was Rs 184.3 billion. In the same year the value of the production of registered small-scale enterprises in 16 industrial classifications was Rs 26.02 billion. A small-scale establishment in India is defined in terms of its investment in machinery and equipment, and many of them employ more than 10 persons. Indeed, the average number of employed per unit over the 16 industrial classifications was 12. Consequently, part of the Rs 184.3 billion quoted above was contributed by the small-scale sector. In fact, the contribution of the small-scale units in the 16 classifications was 35 per cent, and the employment they provided amounted to 1.65 million (less than 1 per cent of the total labour force, but about 9.7 per cent of those engaged in manufacturing). Only 5 per cent of the nearly 140,000 small units involved was accommodated on industrial estates.

The manufacturing establishments (with 10 or more workers) in 1972 accounted for approximately 5 million workers. It is reported that there were over 500,000 registered small-scale units in 1976. Assuming that in 1972 there were 400,000 such establishments and that half of them employed less than 10 workers, say an average of eight, the registered employment in the manufacturing sector would then have been about 6.6 million, leaving some 10.5 million unaccounted for. These must have been in unregistered and artisan undertakings. There is therefore still an enormous potential for further development.

Policy

Since independence the broad industrial policy of the central Government has been:

(a) To redress the imbalance between the primary and secondary sectors;

(b) To increase employment;

(c) To reduce inequalities in regional development;

(d) To achieve self-sufficiency.

In the first Industrial Policy Resolution (1948), the important role of small-scale industry in the national economy was recognized, and it was observed that the healthy development of the sector depended on cheap power, technical advice, worker training, organized marketing and, where necessary, safeguards against intensive competition from large-scale manufacturers.

Under the federal constitution the primary responsibility for industrial development rests with the state governments. Despite the Resolution, little attention was paid to the small-scale sector. In 1951 the central Government, under the Industrial Development and Regulation Act, assumed powers to regulate the performance and development of large and medium-scale establishments in 38 industrial groups. It was not long before it was discovered that for prosperous large- and medium-scale sectors, a thriving and stable small-scale sector was essential.

Because of the very large and increasing number of small-scale establishments and their geographical spread, action to stimulate their development could not be undertaken by the central Government.

Two major restraints on the development of the small-scale sector were recognized: the lack of suitable accommodation, which always had been a handicap; and the increasingly apparent need to provide technical services and facilities. The first restraint, in 1953 at least, was considered to be a matter for state governments, although the federal Government was to take the initiative later. To overcome the second restraint, the federal Government considered the establishment of a central institute to provide the required services. Assistance was sought from a group of international experts (the Ford Foundation), who recommended that four regional centres be set up to supply technical advice and assistance, common service facilities and training to small industrialists. The recommendations were accepted and Small Industry Service Institutes (SISI) were set up at Bombay, Calcutta, Delhi and Madras. The central Government, realizing the needs of small-scale industry for credit, technical assistance and training, introduced a number of appropriate measures for which both it and state governments were to be responsible. The Central Small Industries Organization (CSIO) was formed and given the task of providing industrial extension services and of co-ordinating the activities of federal and state agencies in the development programme. A Small-Scale Industries Board consisting of representatives of central and state governments and of private small industry associations was also established to provide advice on policies and programmes.

Although attempts had been made some time earlier to establish industrial estates in the states of Mararashtra, Punjab and what is now Gujarat to provide job opportunities for refugees, the first decision to set up estates for small-scale industry was taken in 1955 by the Small-Scale Industries Board (SIB) with the following objectives in view:

(a) To foster the growth of small-scale industry;

(b) To provide conditions for achieving and maintaining a high level of productivity in small enterprises;

(c) To avoid increasing congestion in major towns;

(d) To generate growth and development in backward regions.

The SIB recommended that three categories of incentives be offered, particularly to encourage the dispersal of industry. These were:

(a) Provision of social overheads: factory accommodation at concessional rates of rent for a period of three to five years, or its provision for the purpose of purchase either outright or on a hire-purchase basis, housing facilities, and common service facilities;

(b) Supply of raw materials on a priority basis;

(c) Fiscal incentives: exemption for five years from various taxes, including import duty, sales, income and corporation tax; subsidized tariffs on water and electricity; credit facilities; machinery on hire purchase; subsidy on freight charges. Most of these are available to tenant enterprises on an industrial estate. The exceptions are housing facilities and subsidized freight charges, the latter only in certain locations.

Industrial estates programme

The central Government took the initiative by establishing two estates: one at Okhla, in the federal territory of Delhi, and the other at Naini near Allahabad in Uttar Pradesh. Both of these were undertaken by the National Small Industries Corporation (NSIC), a private limited company within the Ministry of Industry set up to assist small industrialists to obtain imported machinery on hire-purchase terms. Both estates have since been transferred to the respective territorial governments. In the final year of the first five-year plan (1951-1956), sanction was given for a further 10 estates to be built by the state governments, for which the central Government provided a loan of Rs 5.8 million and a grant of Rs 45,500. Table 1 shows the number of government estates sanctioned in each plan period up to the end of the fourth five-year plan.

TABLE 1. ALLOCATION AND EXPENDITURE IN SMALL-SCALE INDUSTRY

(Millions of rupees)

Plan period	*Number of estates sanctioned*	*Central Government allocation to state governments*	*Actual expenditure*	*Allocation to Central Industries Organization*	*Allocation for rural development projects*
(1) 1951-1956	12	6	101.8	52	
(2) 1956-1961	97	110		444	
(3) 1961-1966	348	226	216.5	861	48
Annual plans 1966/67, 1967/68, 1968/69	46	49	42.2	393	66
(4) 1969-1974	108	166	107.7 (end of 1973)	703	110
Total	611	557	568.2	2,453	224

At the end of the fourth five-year plan, 520 estates had been completed, of which 213 were functioning in urban areas, 134 in semi-rural and 108 in rural areas. Sixty-five estates were inoperative. The number of workshops completed was 13,351, of which 12,019 were allocated and 11,010 were in production and employing 175,700 persons.

During the first and second five-year plan periods the main emphasis appears to have been placed on the provision of accommodation for the small-scale sector, and the strengthening of the CSIO. Of the estates built during this period, 48 were in urban areas of more than 100,000 inhabitants, and 25 were in places with a population of less than 20,000.

The almost explosive demand for industrial accommodation was countered by the sanctioning of 348 estates in the third five-year plan. However, increasing emphasis was placed on the decentralization of industry. Many of the rural and semi-rural estates were built during this period.

The fourth plan period saw further consolidation of the programme. The major features were:

(a) The designation of certain areas as "backward", and the eligibility of enterprises formed in these areas for special incentives;

(b) The attempt to co-ordinate the development of industrial estates with town and country planning;

(c) The concept of specialized industrial estates;

(d) The establishment of specialized agencies at state level to construct and maintain estates, or to supply raw materials;

(e) The major lending agencies were meeting the working capital needs of small-scale sector, and in some instances were financing the construction of private and co-operative industrial estates.

In India an industrial estate is classified as small, medium or large depending on its area; one under 4 hectares is small, one of 4 to 12 hectares is medium, and one above 12 hectares is large. The all-India average is 10.3 hectares. The largest is believed to be about 500 hectares (Ambattur, Madras).

The central and state Governments have not so far formulated any proposals for transferring complete estates to private ownership and management. However, within certain estates the occupation of individual work-sheds by industrial units on the basis of lease on payment of rent, outright sale or hire-purchase has been allowed. In a few estates plots of land have been developed for outright sale or hire-purchase. If an estate comes under a rural industries project, the entrepreneurs to whom the plots are allotted are allowed to act as government contractors for the construction of the work-sheds and to occupy them either by outright sale or hire-purchase.

The most common form of tenure is lease on payment of rent. At the national level 78 per cent of the workshops are rented, 19 per cent are occupied under hire-purchase agreements and 3 per cent are owned by the occupiers. However the premises may be disposed, the estate remains a government estate and the management rests with the Government.

In addition to the basic utilities (water and electricity), which are provided on all estates, gas is available on 20 per cent of the estate at Maharashtra; 10 per cent at

Kerala and 8 per cent at Andhra Pradesh. Steam is on supply at some estates at Maharashtra, Kerala and Tamilnadu. Common service facilities are not provided on all estates; 25 per cent of the estates in Maharashtra have a central workshop and material-testing laboratory. In Kerala there is a central workshop in 25 per cent of the estates, and heat-treatment and electroplating facilities in 15 per cent. In respect of amenities, 30 per cent of the estates have a raw materials depot, warehouse facility, dispensary and fire protection. Banking facilities are to be found in 35 per cent of the estates and a post office in 40 per cent.

The industrial estates programme was initiated to provide accommodation for small-scale manufacturing enterprises regardless of type. Apart from those servicing motor vehicles or trading, no enterprise was excluded. Work-sheds were allotted on a first-come, first-served basis. Over the years, however, there have been changes in the concept of an industrial estate, and the advantages have been realized of an admission policy that promotes complementarity of interests among tenant establishments. Eight types of industrial estates are now recognized:

(a) The conventional *general purpose* estate in which a variety of unrelated goods are produced (by far the most common type);

(b) The *ancillary estate*, created by a large-scale concern to house small-scale establishments making components for the parent company. The tenants generally receive technical guidance and sometimes financial assistance (e.g. the Hindustan Machine Tools estate at Bangalore);

(c) A *single trade estate*, intended to house enterprises engaged in the same trade;

(d) A *functional estate*, organized for small units in a particular industry (e.g. an estate for the production of sports equipment has been established near the Okhla estate in Delhi);

(e) A *technocrat estate*, designed to accommodate enterprises employing advanced technology and owned by qualified engineers; special assistance is available to enable the engineers to launch their own businesses (e.g. Balanajar estate, Hyderabad);

(f) A *craftsman's estate*, sometimes known as a nursery estate, to provide the venue in which artisans may be assisted to become small-scale industrialists (e.g. Suryapet estate, Nalgonda District, Uttar Pradesh);

(g) A *commercial estate*, to house service operations and trading, which were previously excluded from industrial estates; these have been established in response to demand;

(h) A *co-operative estate*, founded by a body eligible for registration as a co-operative, for example a chamber of commerce. The organization may borrow funds from a co-operative bank, to the extent of 10 times its own funds, for the purpose of building an industrial estate. A somewhat similar privilege is available to a joint stock company formed with the object of constructing an estate. Loan funds are available from the CSIO or from some industrial development corporations.

A few private estates have been developed by Punjabi grain merchants who have gone into manufacturing. The estates are small and built on the merchants' land. They are not in receipt of government assistance.

Comments

The Indian industrial estates programme is the largest of any in the developing countries. It was introduced as an element of the national industrial policy before that of any other such country. It is not surprising, therefore, that mistakes were made. Officials of the government departments concerned would be the first to admit this. However, lessons have been learned from these mistakes, and the experience gained during one five-year plan period is reflected in the next.

The main mistakes were made in the selection of locations for estates. In not a few instances the choice was made on political grounds, but for many of the early estates, feasibility studies are not carried out in sufficient depth. This is particularly applicable to rural and semi-rural estates. It is illustrated in the average occupancy ratios of these two types of 65 per cent and 76 per cent, respectively, against 88 per cent for urban estates. Indeed, the rural industrialization programme was premature. An industrial estate will not attract industry to a place where none exists.

The use of capacity in the small-scale sector as a whole has been estimated at 53 per cent. This is a consequence of the rapid growth of the sector. However, in the interest of efficient use of plant and skilled manpower, a curb preferably a selective one—would appear to be necessary on the expansion of the sector.

The CSIO is a vital part of the small-scale industries development programme. Where an estate programme involves a majority of new enterprises, claimed in India to be 81 per cent, then supporting technical, financial and managerial services are an essential follow-up. The CSIO covers not only the establishment of industrial estates, but the entire small-scale sector. As industrial estates accommodate less than 4 per cent of the small-scale establishment, it seems reasonable to conclude that the CSIO has been a major factor in the development of the sector.

There is a multiplicity of organizations at federal and state levels promoting and supporting small-scale industry. It has been said that there are far too many, and that better results might be obtained if one agency were in charge of each particular trade.

There is no information on the financial viability of the industrial estates programme. In the paper of Dr. Somasekhara, dealing with Mysore State (ID/WG.231/7), it is stated that the central Government since 1961-1962 has loaned Mysore State Rs 5.6 million for the construction of estates, and that only Rs 1.49 million (27 per cent) has been repaid, although more than half the term of the loan has expired. These estates cannot be claimed to be economically viable.

How far has the industrial estates programme succeeded in attaining its objectives? If, as is stated, 81 per cent of the enterprises on estates are new in the sense that they did not operate prior to establishment there, then up to the end of the fourth five-year plan 8,908 new undertakings had been created involving some 142,000 jobs (assuming 16 workers per unit). In percentage terms that is about 1.6 per cent of the registered small-scale units, and 0.8 per cent of the manufacturing labour force.

It is reported in relation to Mysore State that the programme has had no significant effect on slum clearance or the relief of urban congestion. As regards the decentralization of industry it is stated that the shift of units from places of higher concentration has not occurred.

IV. Iran

Background

The manufacturing sector in Iran has undergone a rapid change in recent years. Manufacturing value added grew at a rate of 13.0 per cent per annum at constant prices for the period 1959-1974 and at higher rates of 16 per cent in the later part of this period (1969-1974). In spite of this rapid expansion, the share of manufacturing and mining in GDP has declined in recent years from 15.3 per cent in 1972 to 10.7 per cent in 1974, which is equivalent to its share in 1959, reflecting rapidly increasing contributions from oil revenues and the service sector. The high growth of manufacturing value added has been accomplished partly as a result of heavy investment activity in the manufacturing sector, in excess of 20 per cent growth per annum since 1972.

The main contributions to the growth of manufacturing value added have been expansion of the non-durable consumer goods industries (41 per cent) and about an equal contribution of the intermediate goods industries, with the remaining durable and capital goods industries contributing 17.4 per cent of total increase in value added. In spite of the high growth of these industries, the share of consumer goods industries remains predominant. Thus, the food processing, textiles and wearing apparel and non-metallic mineral products combined contributed about 45 per cent of total value added.

The limited data relating to manufacturing activities by small- and large-scale establishments show characteristics and trends common to those generally observed in developing countries. Although 97.4 per cent of all establishments were classified as small-scale industries, with nine or less persons engaged, these industries provided only 51.0 per cent of employment (1973-1974), 37 per cent of gross output (1970-1971) and 32.1 per cent of value added (1970-1971), reflecting low productivity.

In 1973-1974 there were 242,451 manufacturing establishments employing 928,000 persons. Employment in the small-scale industry sector declined from 569,000 in 1970-1971 to 473,000 in 1973-1974, concomitant with an increase in the labour force by 50 per cent in the 10-to-43 workers category, by almost 100 per cent in the 50-to-99 workers category, and by more than 100 per cent in the category of large-scale industries with 100 or more workers, which now account for 35 per cent of the total manufacturing labour force. A large proportion of all manufacturing establishments—more specifically 36 per cent—are located in the Central Province, which includes the capital of Tehran.

Policy

One of the objectives of the industrial policy of the Government has been to promote as rapid industrialization as possible without endangering the environment. As early as 1967 the decision was taken to prohibit all further expansion of industry in and within 120 kilometres of Tehran. Four cities were identified as zones for industrial development: Isfahan for steel-based products and light consumer goods, Rasht and Shiraz for electronic and electrical industries, and Tabriz for heavy industry. Later two states were added: Khorasan for food processing and aluminium-based industries, and Khuzestan for mixed industries. Little development took place in Isfahan and Khorasan, while in the other zones it occurred more or less according to plan. The location of industrial establishments in the designated zones was quite haphazard as was the spontaneous growth of towns, principally Qazvin and Saveh, just beyond the 120-kilometre boundary from Tehran. In consequence serious problems arose with pollution and traffic congestion.

The rapid rise in oil revenues has necessitated a complete revision of the national policy on industrial development. A new consistent policy has not yet emerged. The lines being pursued at present are: the processing of the main natural resources oil, natural gas and metallic minerals is being carried out by the public sector with foreign assistance. The private sector is being encouraged to increase import substitution industries, without any direction on the selection of products or regard to the imported content which may be difficult to obtain when the present foreign-exchange earnings of the oil industry diminish.

The environmental problems that had arisen in the zoning system prompted the Government to amend it. It was then decided to accommodate industry in industrial parks. A park, which to all intents and purposes is an industrial estate, will be developed by an autonomous and non-profit joint stock company in which various financial agencies of the Government will invest capital. The company will be responsible for the site preparation, the provision of utilities, the selection of firms, the co-ordination of infrastructural and social developments, including workers' housing, and the enforcement of environmental controls. It is planned that each park will provide employment for 45,000 persons and support a total population of 150,000. The parks are intended for medium- and large-scale establishments.

Little attention has been paid to the small-scale industrial sector. This has been left to the Organization for Small-scale Industries and Industrial Estates of Iran (OSSI), an offshoot of the Ministry of Economy and Finance. However, it is proposed to build industrial estates to promote small-scale industry within the framework of the general development policy. The function assigned to such an industrial estate will be to support that policy rather than to provide the infrastructure for small-scale industry, regardless of the industrial situation in the area. This may mean that an estate is restricted to specific types of enterprise according to the need of large establishments in the neighbourhood.

Park and estate programme

Current plans call for the construction of at least 15 parks throughout the country. One, at Qazvin, is already operational. About 140 firms occupy plots on the estate; 80 of them are believed to be in production, 40 are under construction and 20 have not yet commenced building. The company operating the park is developing land to accommodate 18 more enterprises, houses and flats (for sale to the workers) and extending the infrastructure and social facilities. Five other parks are in various stages of development. That at Saveh is well advanced with some factories already erected. The Isfahan park is in the advanced planning stage while those at Kermanshah and Qum are still in the preliminary stages. Ahwaz, Gorgan, Hamadan, Kundestan, Lorestan, Mashad, Mazandaran, Shiraz and Zanjan have been selected for development at a later date.

The fifth development plan calls for the establishment of 30 industrial estates for small-scale enterprises. Initially, in OSSI, planning is proceeding on only four. Three of these are for estates to be constructed on regional policy grounds at Bushehr, Sanandaj and Zahedan all the capitals of industrially backward regions. The remaining estate is planned for Tabriz. Land has been purchased for the estates at Tabriz and Zahedan.

Comments

An industrial estate to modernize small-scale industry in Iran was proposed as early as 1962. Two United Nations missions, a year apart, inspected and assessed possible locations. Eventually it was decided to establish the estate at Ahwaz, the choice of the later mission. The provision of technical assistance in the layout and construction of the estate became a United Nations Special Fund project, but it was not until 1965 that the project document was signed. Construction did not start until 1968. The first unit went into production in 1969, and contracts for all units were executed in 1971, although some are still not in production. The estate as it exists and there are no plans to extend it consists of 24 factory units (22 occupied), three central workshops (machine shop, foundry and electroplating shop), a guest house and an administration building containing a post office, bank, conference hall and show-room, and various ancillary buildings (gatehouse, pump-house and a co-operative shop for the workers).

The estate did not have the demonstrative effect intended. Local entrepreneurs were not interested, and were adverse to moving since the estate was considered to be too far from the bazaar area. The fact that they would be occupying leased premises had they moved was an adverse factor. They would be unable to use the premises as security against a loan, fixed property being the only security acceptable by the banks at that time.

The estate is occupied by 15 firms, five renting more than one unit. Eight of the 15 firms are controlled from Tehran. Only three are thought to be based on the local market (a printer, paper-bag maker and a maker of wooden furniture); the rest distribute their goods through Tehran. It is believed that all the firms obtain their raw materials from abroad. There is a considerable difference of opinion on the level of employment on the estate (200 by a United Nations survey, 500 by estate management). If the lower figure is correct, seven of the 15 firms would fall into the small-scale category; if the higher, then perhaps only one.

The receipts of the estate fall far short of meeting the running expenses. It is estimated that factory units are "costing" the Government 1,588 rials (Rls) per square metre per annum.

Several lessons have been learned from the experience at Ahwaz which will be applied to future estates:

(a) An industrial estate should have the basic function of supporting the general industrialization of the locality. (How this can be applied to the estates proposed on regional policy grounds is difficult to understand.);

(b) The activities of OSSI are to be limited to the development phase, expected to last about five years; thereafter the management is to be transferred to the firms established on the estate;

(c) All work-places on the estate are to be built by the firms themselves, or custom-built for them. Subsidized credit is to be available;

(d) Central warehouses will be built on estates to enable firms to keep stocks of raw materials and inventories of finished products as collateral against loans;

(e) While it is intended to build common services in advance of demand, steps are to be taken to ensure that they are relevant to the needs of the enterprises accommodated;

(f) Efforts will be made to ensure that only genuine small-scale enterprises shall be admitted to the estate and that there shall be adequate and appropriate extension services available;

(g) No incentives other than those necessary to attract small-scale industrial firms will be available. These probably will be of a temporary nature.

It is not possible to assess how far the objectives of the various *ad hoc* decisions that make up the industrial policy have been attained. If the industrial park project is as successful in the other centres, as it appears to be at Qazvin, then Iran can look forward to more rapid and regionally better balanced industrialization. The propsect for the regional policy industrial estates is not bright. It is doubtful whether OSSI, at least as presently staffed and financed, could provide adequate extension services.

The number of persons employed in the industrial park at Qazvin is not known, but it might be estimated at 3,000. This together with the higher estimate of employment in the Ahwaz industrial estate would bring the total to 3,500 only 0.4 per cent of the manufacturing labour force. Should each industrial park provide employment for 45,000 persons as planned, the labour on parks and estates would total 675,500--an unrealistic number in view of the preponderance of small-scale industry.

V. Kenya

Background

Kenya has an area slightly greater than that of France, and a population of 12.48 million (1973) with an annual incremental increase of about 3 per cent. The economically active population is not known, but, excluding domestic servants, there were in 1972 only 719,800 persons in paid employment in undertakings with more than 20 workers. This number had risen to 857,500 by 1976.

The economic base is agriculture, which in recent years has contributed about one third of the GDP (33 per cent in 1970, 31 per cent in 1973). Agriculture, however, was practised at two levels: a significant number of large farms which prior to independence were owned by foreigners, and a very large number of small-holdings owned by nationals. Now many of the large estates have been divided. The paid labour in the sector was 243,000 in 1976.

A somewhat similar situation existed in manufacturing: comparatively few large concerns and a great number of artisan undertakings. Most, if not all, of the former were established by foreigners. In 1970 there were 307 enterprises employing 65,397 persons; by 1974 the number had risen to 507 and the employment to 100,068. The share of manufacturing in GDP increased from 12 to 14 per cent between 1970 and 1973. The per capita GDP rose in that interval from $130 to $167.

The composition of the manufacturing sector is typical of a country in the very early stage of industrialization. Food and textile industries predominate. It is estimated that the manufacturing industries provide 12 per cent of the paid employment (see table 2).

TABLE 2. NUMBER OF ESTABLISHMENTS IN MANUFACTURING SECTOR WITH 20 OR MORE EMPLOYEES

Year	*Total number of establishments*	*Type of industry*				*Total employment*
		Food	*Textile*	*Wearing apparel*	*Metal products*	
1970	307	45	23	23	19	65,397
1973	349	77	31	28	21	99,672
1974	507	105	34	27	26	100,068

Policy

The industrial policy of the Government, *inter alia*, has the objectives of promoting Kenyan participation in industry, and of providing job opportunities throughout the territory to reduce or halt the rural-urban migration. To attain these ends various resettlement and self-help measures have been and are being instituted, mainly in rural areas, while the industrial estate device is employed in the larger towns.

Industrial estates programme

A start was made on the first estate in 1965 at Nairobi. The first phase, which consisted of 25 work-places for small-scale enterprises, was completed in 1968 at a cost of 9.5 million Kenyan shillings (KSh) ($1.5 million). All the units were occupied by early 1970. The second phase of 25 units for small-scale and four for medium-scale establishments was completed late in 1973. Between 1970 and 1973 an estate of 25 units was built at Nakuru.

Towards the end of 1975 a third estate of 22 work-places was established at Kisumu, at an estimated cost of KSh 5 million ($610,000). Technical assistance and a grant of 18.8 million Swedish crowns ($4.5 million) were provided by the Swedish Industrial Development Authority (SIDA).

Under an agreement between the Governments of the Federal Republic of Germany and Kenya, a fourth estate of 24 units is being erected at Mombasa. It is expected to be ready to receive tenants in mid-1976.

At first most of the enterprises selected as tenants were small and labour-intensive, with very little investment in equipment. The Kenya Industrial Estate Company, the administrators of the programme, has since adopted a policy of increasing the size and scope of operations to include more capital-intensive ventures.

The average investment in equipment per firm in the Nairobi, Nakuru and Kisumu estates, respectively, is $72,000, $122,000 and $21,000, and per employee $5,140, $5,300 and $1,400. The range of investment per employee at Nairobi is from under $1,000 to over $10,000.

As of 1 April 1976, all work-places on the Nairobi estate were occupied, but eight firms had failed. All work-sheds at Nakuru were allocated and 10 were occupied. At Kisumu only seven were occupied and less than half the remainder were allocated. There are substantial arrears of rent on all three estates. The total investment in the three estates was estimated to be KSh 50 million ($6.12 million) and to have created 1,436 jobs ($4,262 per job).

Comments

The estate programme, up to 1976, while it could claim to be responsible for the creation of 71 successful new enterprises, could have had little effect on the unemployment problem. On the assumption that half the number of firms on the Nairobi estate and all at Nakuru employ 20 or more workers, the estates would accommodate 10 per cent of the establishments, but only 1 per cent of the employment listed in table 2. These percentages are higher than those in a number of developing countries; the reason is to be found in the smallness of the industrial base. It is not possible to assess the effect on the small-scale sector, but, according to the above assumption, only 321 jobs would be involved.

VI. Malaysia

Background

Prior to the early 1960s the principal exports of Malaysia were primary and intermediate products. The manufacture of import substitutes and goods for export began to accelerate around 1957. This continued at an ever increasing speed until about 1973, when the recession in world trade reduced the pace but failed to halt the expansion. In 1975 manufactured goods valued at 1,912 million Malaysian dollars ($M) were exported, and in that year manufacturing became second only to agriculture (including fishing and forestry) as a contributor to the GDP ($M 2,197 million or 14.4 per cent of GDP of $M 15,315 million at 1970 prices).

In 1975 the economically active population of Malaysia was 4,225,000, of which 362,800 were employed in the manufacturing industries (about 8.5 per cent). Over the period 1970-1975 the labour force grew at a rate of 3.4 per cent per annum and the number engaged in manufacturing increased by 1 per cent. There is a discrepancy between the statistics published in the "Third Malaysia Plan" and those in the "Census of Manufacturing Industries", since establishments in certain trades employing under five persons were omitted from the latter publication. It is believed that this omission relates to handicrafts and itinerant tradesmen. An attempt to show the distribution of the sub-sector by size is given in table 3.

TABLE 3. DISTRIBUTION OF SUB-SECTORS OF MANUFACTURING, 1970 AND 1972

Sub-sector	*1970*		*1972*	
	Units	*Employment*	*Units*	*Employment*
Handicrafts	42,480	106,200	43,300	108,300
Small-scale industry (1 to 19 workers)	1,542	16,839	1,642	17,398
Medium and large industry	1,650	104,853	2,023	188,729
Total	45,672	263,892	46,965	314,427

The population of Malaysia is unequally distributed both racially and geographically. It can be divided into four main racial groups: the Bumiputra (Malays, Dyaks and other indigenes), Chinese, Indians, and others (mainly Europeans) comprising, respectively, 55.5 per cent, 34.1 per cent, 9.0 per cent and 1.4 per cent of the total. The urban-rural distribution is given below:

Race	*Urban* (*percentage*)	*Rural*
Bumiputra	18	82
Chinese	50.7	49.3
Indian	37.7	62.3
Others	46.9	53.1
Total	32.0	68.0

Furthermore, there are only two towns of more than 50,000 inhabitants on the eastern side of the Peninsula and only one in Eastern Malaysia, compared with 13 on the western side.

The annual mean household incomes also vary with race and urban-rural location.

	Annual mean household income ($M 1970)
Others	9,756
Chinese	4,728
Indian	3,648
Bumiputra	2,074

Annual mean household income ($M 1970)

Urban	*Rural*
5,136	2,400

The composition of the labour force necessarily reflects the racial make-up of the population. However, the skewed rural-urban distribution and the traditional attitudes of the various races create a pattern whereby certain races are more inclined to follow a particular group of trades than others. Generally, the majority of the Bumiputra depend for their livelihood on agriculture (including fishing) and services while the Chinese depend on mining, manufacturing, construction and commerce. The Indians find their major fields of employment in the service and transport industries and retail trade.

The ownership of fixed assets in the non-corporate industrial sector by racial communities may give a rough idea of their relative success as entrepreneurs. In 1973 the Bumiputra and the Indians each owned 2.3 per cent of these assets, while the Chinese accounted for 92.7 per cent.

Policy

To correct the foregoing imbalances the Government decided on a policy of expansion and redistribution of the manufacturing industries. It was realized that the decentralization of manufacturing by itself could not increase employment significantly, which was the key to the problem, unless it was accompanied by a campaign to attract industry through the provision of liberal fiscal incentives and by the creation of industrial estates at locations where labour and the requisite services were available. Arrangements were made to upgrade the level of skills and the whole programme was to be supported by adequate lending institutions. It was decided further that efforts be directed to place special emphasis on resource-based, export-oriented, labour-intensive and precision industries. New and under-represented industries in these fields were accorded pioneer status.

The package of fiscal incentives included the following (see annex II, ID/WG.231/8):

(a) Pioneer status: total exemption from income tax for a period of two to five years, depending on fixed capital of enterprise;

(b) Labour utilization relief: tax exemption as for *(a)*, depending on number of employees. It is not available to pioneer companies;

(c) Investment tax credit: permits a company to deduct from taxable income at least 25 per cent of the amount expended on fixed assets. Credit may be increased by an additional 5 per cent for each of the following:

(i) If the factory is located in a development area;

(ii) If a priority product is manufactured;

(iii) If the domestic content of the product exceeds 50 per cent;

(d) Export incentives: four specially designed incentives for firms manufacturing principally for the export market;

(e) Increased capital allowances: to encourage the modernization of factories or production techniques. These allowances are available to companies not eligible for concessions *(a)*, *(b)* or *(c)*.

Government-sponsored lending institutions were established. The principal agency is the Malaysian Industrial Finance Limited which provides medium-term loans (four years at 10 per cent per annum) for the purchase of machinery, land and buildings, and complete projects. Its subsidiary, Malaysian Industrial Estates Ltd, makes loans to the purchasers of the factories it builds. More favourable terms are granted to the Bumiputra than to non-indigenes. The Majlis Amarah Rakyat (MARA) makes loans to Bumiputra enterprises and provides an advisory service. The Bank Penbangunan makes loans similar to MARA. Under the Credit Guarantee Corporation all banks are required to increase their lending to small businesses up to 10 per cent of their total savings deposits.

A National Apprentice Training Scheme is operated by the Department of Labour and Manpower. Certificates of proficiency are awarded by the National Industrial Training Certification Board (NITTCB). Courses to upgrade skills are available by arrangement with the NITTCB.

Industrial estates programme

In 1952 some 300 acres of land, adjacent to a squatter resettlement area at Petaling Jaya, were set aside for industry. It was hoped that entrepreneurs could be induced to establish factories there; few, however, were attracted. It was not until the Government initiated its incentives to industry policy that industrialists were drawn to the area. The 300 acres reserved proved to be inadequate, and an additional 400 acres were allocated. By the end of 1966 there were 264 factories providing about 10,000 jobs. The administration of the industrial area was entrusted to a specially created body, the Petaling Jaya Development Authority, later the Petaling Jaya Development Corporation. The Corporation was so successful in persuading firms to settle on the industrial reserve that the state (Selangor) government decided to widen its authority to cover the entire state. The Corporation was reconstituted as the Selangor Economic Development Corporation.

Petaling Jaya was thus the first industrial estate in Malaysia. Although it suffered from weaknesses in its design, it provided the guidelines for later industrial estates, free-trade zones and new towns. Three important principles emerged from the experience gained:

(a) That the executive authority should be an autonomous organization responsible for construction, leasing and administration;

(b) That in general only prepared plots with the basic infrastructure should be made available;

(c) That land should be reserved for housing and units be built to accommodate the labour force as it developed.

The Selangor Economic Development Corporation became the fore-runner of similar corporations in other states. There are now 12 such corporations. The federal Government established the Federal Industrial Development Authority to co-ordinate the individual efforts of autonomous economic development corporations. The federal Government makes capital available on easy terms (three-year grace period) to these corporations to construct industrial estates and free-trade zones.

In 1976, there were 59 industrial estates (including free-trade zones) owned and operated by economic development corporations. The estates ranged in size from one acre (Permaisuri, Sarawak) to 1,106 acres (Shah Alam, Selangor). The development of the Pasir Gudang estate in Johor will extend its area to 2,126 acres. Both Shah Alam and Pasir Gudang estates are related to new town developments. With the exception of two estates on the eastern side of the Peninsula and one on the west coast intended to process respectively agricultural and fishery products, all estates are of the general purpose type designed to accommodate medium- and large-scale industry.

Only in one or two of the earlier estates was any attempt made to cater to small-scale industry. As increased employment was the primary objective, the incentives and estates were designed to attract major employers of labour.

Thirty-five of the 59 estates are under 100 acres. The average size for the whole country is 157 acres. The total leasable area is 9,240 acres of which 6,765 had been leased by September 1976. Factories have not yet been built on all the leased plots. The total employment provided by the industrial estates and free-trade zones is not recorded. An estimate (based on the leased area and total employment in the estates in Melaka) of the density of worker occupation is 31.6 persons per acre. If this density is applicable to the entire country, the total leased area has the potential of providing 173,700 jobs, or about 88 per cent of the full-time manufacturing labour force in Peninsular Malaysia in 1972. About 30 per cent of the manufacturing labour force is employed on industrial estates.

It is difficult to obtain a complete picture of the growth of the estate programme since no information was forthcoming on 13 estates. However, it is apparent that the bulk of the construction took place during the period of the Second Malaysian Plan (1971-1976), when 38 estates were built. The growth of estates in Penang may be representative of growth in other states, and illustrates the pattern for the country as a whole. (See table 4.)

Over the period 1971-1975 covered in table 4, investment in the manufacturing industries rose continuously in absolute terms, but after 1973 the annual increase fell steadily. This is reflected in the decreasing annual percentage increments in employment.

The occupancy rate of estates is high. Twelve of the estates have no more available land. Forty-six of the 59 estates are more than 50 per cent occupied, and half of these have occupancy ratios of between 90 and 100 per cent.

TABLE 4. FACTORIES IN OPERATION ON PENANG ECONOMIC DEVELOPMENT CORPORATION ESTATES

End of period	*Factories*			*Occupied land (acres)*			*Employment*		
	Total	*Absolute change*	*Percentage change*	*Total*	*Absolute change*	*Percentage change*	*Total*	*Absolute change*	*Percentage change*
1971	30			135.5			4,500		
1972	50	20	66.7	224.8	89.3	65.9	9,877	5,377	79.1
1973	74	24	48.0	335.6	110.8	49.3	23,350	13,482	154.9
1974	91	17	23.0	520.0	184.4	66.9	27,278	3,919	16.8
1975	102	11	12.1	...	...	...	30,185	2,877	10.5

Of the 59 estates and free-trade zones, 41 are situated on the western side of the Peninsula, eight on the eastern side and 10 in East Malaysia. The 12 states with industrial estates can be divided into four groups:

1,000 + leasable acres	*500-1,000 acres*	*100-500 acres*	*Under 100 acres*
Selangor (2,029) WC	Melaha (554) WC	Sabah EM	Kelantan (20) EC
Penang (1,603) WC	Pahang (576) C	Negri Semhlan C	Trengganu (57) EC
Johne (1,307) WC	Sarawak (843) EM	Kedah WC	
Perak (1,095) WC			

Note: WC = West Coast; EC = East Coast; C = Central; EM = East Malaysia.

The above groupings reflect the level of industrial development prior to the creation of industrial estates. This illustrates the opinion expressed by several writers that an industrial estate is likely to be successful only if it is located where industry already exists.

There are at least five industrial estates constructed by private enterprise: Padang Lallang (Pahang), Mukin Langgat (Kelantan), Kapayang (Sabah), Piasan and Bintown (both Sarawak). Kapayang is the largest, with 88 leasable acres, and is fully occupied. Piasan has 14 acres and is unoccupied. The Padang Lallang estate was constructed by Malaysian Industrial Estates Ltd and has 28 terraced work-sheds.

Comments

The Government proposes during the Third Malaysian Plan (1976-1980) to increase the industrial estate acreage by 9,500. In view of the 2,475 acres still to be leased, and the slowing down of new investment during the last two years, it appears to be an ambitious programme.

The system of financing industrial estate construction is complicated. While the federal Government makes a loan to the State Economic Development Corporation, the only revenue accruing to the Corporation is the land premium that the industrialist is required to pay to lease the plot. This is a one-time payment which represents little more than the development cost. For example, the development cost of the Merong estate was $M 1.15 per square foot, and the land premium was $M 1.50. The equivalent figures for Batu Berndam free-trade zone are $M 0.46 and

$M 0.85. The annual quit rent is paid directly by the lessee to the land office; from there it finds its way to the state treasury. In Johor, where there are only four estates, the annual rent is well over $M 300.000; this is practically clear profit. The Corporation has to meet the administration and maintenance costs, which in the case of free-trade zones can be heavy on account of perimeter lighting and security guards, and to repay the federal loan from its own resources.

In order to reduce their indebtedness, corporations take advantage of the grace period afforded their loans to engage in business transactions on their own behalf: the construction of houses for sale; joint ventures in manufacturing, often with firms occupying estate premises; and participation in wholesale trade. This method can be successful as long as funds can be kept revolving. One serious hitch and the whole credit structure could collapse.

The success of the Malaysian industrial estates programme can be attributed to two main causes: the liberal packages of fiscal incentives and the provision of prepared and adequately secured plots more rapidly and at lower prices than an industrialist could obtain by himself. A great deal of the credit must go to the designers of the estates who have increased the leasable plot area to the maximum and consequently reduced the unit cost. There is no guest-house, conference room, show-room, administration office, post office or bank on any Malaysian estate. Medical care to legally prescribed standards is provided by individual firms to their own staff. The same applies to the provision of canteen facilities.

The rate at which a corporation develops an estate affects the economy of operation. The preparation of land too far in advance of foreseen demand involves needless and unprofitable investment. A measure of the efficiency of investment is the ratio of the investment by the corporation to that of the client enterprises. A low percentage, decreasing each year, is to be desired. In three cases for which data were available, ratios of 7 per cent, 11 per cent and 7.2 per cent were recorded. All of these are very satisfactory. In some countries the estate investment exceeds that of the clients.

Most of the enterprises on the industrial estates have not operated in other parts of Malaysia. The few who had, admitted that their turnover and number of employees had increased.

There is little evidence of inter-firm trading on estates. The little that takes place appears to be of a sporadic nature. In and between free-trade zones inter-firm trading reaches substantial proportions in the electronic and textile industries.

The industrial estates, with the exception of the long-established Petaling Jaya estate, have not given rise to subsidiary industries and special amenities in their vicinity. At most they have caused improved transport facilities to be introduced. Where estate labour resides in a nearby town the necessary services and amenities develop there as a consequence of the inflow of earnings. If workers' housing is provided, the planners provide for the necessary shops, schools etc. in the housing area.

A voluntary system of trade unionism is practised in Malaysia. Under the Trade Union Ordinance (1959) such managerial functions as promotion, transfers, hiring and firing are non-negotiable. There are 264 registered trade unions, 39 of which are in the manufacturing sector. One hundred and twenty unions are affiliated with the Malaysian Trade Union Congress, which claims to represent 85 per cent of the organized workers. The workers are more highly organized in the long-established industries (metalworking, saw-milling and rubber-processing) in the large urban centres. There is much less union activity among employees in new industries on industrial estates.

In the event of a dispute the Conciliation Unit of the Department of Labour and Manpower must be notified. The Unit endeavours to assist the parties in reaching a settlement. If unsuccessful, the Unit has the power to refer the issue to the Industrial Relations Court for arbitration. If one party fails to implement the decision of the arbitrator, the aggrieved party can only enforce the decision by bringing an action in the High Court.

The Malaysian industrial programme has gone a long way towards achieving its objectives. Between 1970 and 1972, employment and gross output in the manufacturing sector increased respectively by 33 and 37 per cent. Unemployment among the Bumiputra fell from 8 to 6.9 per cent, and their share in professional, technical, administrative and managerial posts increased from 14.6 per cent to 24.1 per cent between 1970 and 1975.

VII. Nepal

Background

Nepal is still in the very early stages of industrialization. The manufacturing sector, as distinct from cottage industry, contributed only 3 per cent to the GDP in the fiscal year 1973/74, compared with agriculture's contribution of 69 per cent. However, if cottage industry is included the contribution rose to approximately 10 per cent. Cottage industry in Nepal does not necessarily refer to activities carried on on domestic premises or in the slack periods of the agricultural cycle. The distinction is based on the value of the fixed assets of the enterprise. Under the New Economic Policy (1974) the threshold levels for small-scale and higher categories were increased. Many of the former small-scale establishments are now classified as cottage industry.

According to the 1971 census the economically active population numbered 4.85 million, of which 0.45 million were in paid employment. The manufactuirng sector provided work for only 51,900, or approximately 1 per cent of the economically active population. The number employed in cottage industry is not known with any degree of certainty. It has been estimated at between 2 and 11 per cent of the economically active; the lower percentage is probably the more realistic.

The number of units in the manufacturing sector in 1972/73 was 2,434. Almost 2,000 (82 per cent) were in the category of 1 to 9 employees. Only 14 (approximately 0.6 per cent) employed 500 or more workers. Of the total manufacturing establishments, 1,860 (76 per cent) were engaged in rice milling and the expression of vegetable oils. This group accounted for 49 per cent (154,034,000 Nepal rupees (NRs)) of the total value added by, and 36 per cent of the employment in, the manufacturing sector.

The rate of failure of manufacturing establishments is very high. In the fiscal year 1972/73, 875 or 36 per cent were temporarily or permanently closed down. The largest single cause of failure is the inability to obtain imported raw and intermediate materials.

Policy

The Government has long been concerned with redressing the imbalance in sectoral development. In 1974, it reiterated and expanded its objectives in the New Economic Policy. These were:

(a) To bring about the quantitative and qualitative improvements in industrial production and productivity;

(b) To create more employment opportunities to absorb the excess labour in the agricultural sector;

(c) To mobilize local capital, skills and resources;

(d) To become self-reliant in essential goods of daily consumption;

(e) To minimize regional imbalances;

(f) To improve the position of the balance of payments by increasing exports and import substitution.

To implement this policy the Government offered:

(a) Financial incentives: a graduated scale of income tax, reduction of import duty on machinery and materials, and a period of exemption from excise duty (where applicable);

(b) Loans to industrialists of between 80 and 95 per cent of their fixed assets if established on industrial estates, depending on the location of the estate;

(c) An industrial services centre to provide management and consultancy services, to prepare feasibility studies for possible new products, to disseminate market information etc. The industrial services centre is expected to undertake the administration of all estates, and in due course to establish an industrial extension service;

(d) The creation of additional industrial estates.

Industrial estates programme

Prior to 1972, there were three industrial estates: Balaju (1960), Hetauda (1963) and Patan (1963). In 1972 a small estate at Dharan was built. These were followed by small estates at Napalganj (1973), Pokhara (1974), Butwal (1976 under construction), and one is planned for Surkhet.

The growth of the estate programme and the rate of occupancy of individual estates generally has been slow. There was a gap of nearly a decade between the initial efforts at Balaju, Hetauda and Patan, and the creation of the estate at Dharan. In 1966, about five years after the Balaju estate was sufficiently developed to receive tenants, there were only 13 units in operation. After four years, only 25 per cent of the work-sheds at Dharan were occupied. The Patan estate (5.1 hectares) has been more successful than the larger estates, Balaju (37.6 hectares) and Hetauda (129.0 hectares). It is now fully occupied. No information is available on the occupancy ratios of the more recent estates, but there is reason to believe they are low.

All the estates were built under government sponsorship. There is no privately constructed estate. The Balaju and Hetauda estates were established with technical and financial help provided by USAID, and all other estates with assistance from the Indian Co-operation mission.

The Patan, Balaju and Hetauda estates were intended, respectively, to house small-, medium-, and large-scale establishments. However, undertakings of all sizes are to be found on these estates. The premises on the other estates are designed for small-scale units. It is the practice of the administrations of Patan, Balaju and Hetauda estates to build work-places to lease and to allow industrialists to build their own premises on leased plots (20 years duration).

Table 5 gives relevant information on the Patan, Balaju and Hetauda estates for the year 1975.

TABLE 5. DATA ON THE PATAN, BALAJU AND HETAUDA ESTATES, 1975

Item	*Patan*	*Balaju*	*Hetauda*
Leasable area	. . .	22.5 ha	77.4 ha
Leased area	all	16.9 ha	49.7 ha
Number of work-places planned	38	50	70
Number of operational establishments	35	34	13
Number of units under construction	—	6	2
Employment	845	1,422	581
Revenue (NRs)	92,898	790,200	407,493
Expenditure (ex. depreciation) (NRs)	216,452	719,505	505,430
Balance (–) (NRs)	(123,554)	70,695	(187,933)
Cost per job ($)	1,108	1,610	7,000

Comments

If depreciation is taken into account, all of the estates must rely on government subventions to meet their annually recurrent expenditure and to provide for replacement of assets. This is owing to several causes:

(a) Fixed rentals that do not allow for increased maintenance charges;

(b) The inclusion of certain items of capital development in recurrent expenditure;

(c) Over-staffing of the administrations.

The revenue that accrues to the Government in the form of taxes on firms established on the estates more than covers the annual subventions made to the estates. The present situation in Nepal is such that it is highly improbable that the undertakings concerned would have been established but for the existence of the estates.

The industrial estates house only 3.5 per cent of the enterprises in the manufacturing sector. However, if the number of rice and oil mills, which are mainly located near their source of raw materials, is deducted, the percentage rises to approximately 15. This relatively high proportion is explained by the difficulty in finding a suitable serviced site outside an industrial estate.

There is no evidence to indicate that enterprises located on an industrial estate have a higher productivity per worker than those outside. The available data suggest that the capital-output ratios of estate firms are less satisfactory than the national average for the manufacturing sector. The data, however, are distorted by the large number of rice mills which on account of their low investment in plant and buildings have a high capital-output ratio.

There is no indication that the existence of an industrial estate has given rise to additional enterprises, facilities or amenities in its neighbourhood.

The estate administrations do not provide any housing for management or labour. Recreational facilities were provided at the Hetauda and Balaju estates, but have been discontinued at the latter. Medical facilities are available, at first-aid level, at Balaju, Patan and Hetauda.

There is no organized trade union in Nepal. In the event of an industrial dispute the Department of Labour has legal powers to intervene. The Government has power to declare a strike illegal if the national interest is affected. All disputes so far have been settled through conciliatory action by the Labour Department.

VIII. Nigeria

Background

Nigeria is one of the largest and industrially most advanced countries of the African region. The "World Bank Annual Statistics" gives its 1973 population as 71,262,300. In 1963, the economically active population was 32.9 per cent of the total. The percentage probably has not changed significantly since then. The country, prior to the discovery of petroleum, was an exporter of such primary products as cocoa beans, palm-oil, ground-nuts, cotton, rubber, timber, tin and columbite. It is estimated that some 80 per cent of the people get their livelihood from agriculture. Such large-scale industry as there was in the 1950s and early 1960s was concentrated in the Lagos area.

Petroleum is now the major export. It accounted in 1974 for 93 per cent of export earnings, valued at $8,765 million. The GDP grew from $8,645 million in 1970 to $14,410 million in 1975. In the same period the contribution of the agricultural sector fell from 36.0 per cent to 23.4 per cent, while that of manufacturing increased from 6.2 to 7.2 per cent (all at constant 1974/75 prices).

The number of manufacturing establishments employing 10 or more workers increased from 704 in 1970 to 1,054 in 1972. There was a fall to 1,010 in 1973 followed by a rise to the 1972 level in 1974. The number of persons engaged in manufacturing paralleled this pattern up to 1973: from 128,519 in 1970 to 167,626 in 1972 and 169,940 in 1973. The 1974 figure is not available.

In 1972 there was an estimated 3.2 million employed in 1 million small businesses, of which 60,000 were factory enterprises that formed the core of the small-scale industrial sector and provided employment for 200,000 workers. While this is not impossible, it shows that the factory type of unit employed fractionally fewer workers per unit than the average for the rest of small business.

The group of manufacturing establishments employing 10 or more workers, in 1972, was dominated by the food (including beverages and tobacco) and textile (including spinning, weaving and made-up garments) industries. Between them they made up 58 per cent of the establishments and provided 77 per cent of the employment. The engineering industries (metal products, machinery, electrical machinery, transport equipment and motor vehicles) represented only 12 per cent of the enterprises and employment. A breakdown of the activities of the group with less than 10 workers is not available.

Policy

The basic policy legislation relating to industry stems from the Nigerian Enterprises Promotion Decree of 1972. This instrument, among other things, provides for the establishment at the national level of a Nigerian Enterprise Promotion Board and a Nigerian Enterprise Promotion Committee in each state. It specifies fields of industry and commerce which, from the effective date (31 March 1974) are to be reserved exclusively for Nigerians, and certain other commercial and industrial activities in which foreign participation may be prohibited in certain circumstances. Furthermore, it makes it an offence for:

(a) An alien to be the owner or part owner of an enterprise in which the paid-up share capital or turnover does not exceed £200,000 or £500,000 respectively;

(b) An alien enterprise of the foregoing category to be established after the effective date;

(c) Any company with a paid-up share capital or turnover exceeding the above amounts to have a Nigerian participation of less than 40 per cent.

The range of undertakings absolutely or conditionally prohibited is very wide. Two important features are the total ban on aliens in the retail trade and the conditional prohibition in wholesale distribution. In both these fields foreigners had been greatly over-represented. An effect of these restrictions has been to direct aliens into manufacturing, usually as joint ventures with Nigerians. Another has been to create opportunities for nationals to establish manufacturing enterprises, particularly in the small-scale sector.

A legal minimum wage code has been introduced. Under this the minimum wage for any worker is to be not less than 60 naira (N) ($96) per month. It is believed the code is observed in the cities and towns by the larger firms, but by no means universally in the small-scale sector.

The importance of the small-scale manufacturing sector in the national economy has been officially recognized in a policy that has as its objectives:

(a) The creation of substantial employment opportunities;

(b) The mobilization of local resources of capital and skill;

(c) The dispersal of industries, especially in rural areas, to reduce migration to the cities;

(d) The development of Nigerian entrepreneurship.

The policy is implemented by Small-Scale Industry Credit Schemes (SSIC) and Industrial Development Centres (IDC). Both of these have been in existence for several years. The function of an SSIC is to provide credit, mainly in the form of long-term loans for equipment, to existing and prospective entrepreneurs. The number of SSIC is to be increased to provide one in each state. The two existing IDCs provide industrial extension, managerial and technical training services throughout the northern states from the Zaria Centre, and the eastern states from the Owerri Centre. A third IDC has recently been established, with UNIDO participation, at Oshogbo to cover the western, mid-west, Kara and Lagos states. It will specialize in non-traditional industries of the mechanized and semi-mechanized types.

The Minister of Industries of the Government of Nigeria has set up a Small Industries Division to monitor implementation throughout the country. In each state Ministry of Trade and Industry a similar division has been created to deal with the promotion of small-scale industry within the state. A National Advisory Committee on Small Industry Development, composed of representatives of the federal and state

Governments, chambers of commerce and industry, investment promotion and institutional financing agencies, and universities with an industrial research unit, has been formed to co-ordinate the programme.

Industrial estates programme

The federal Government proposes to build a model industrial estate in each state. At present there are only two: Yaba estate at Lagos and Enugu estate at Enugu (Anambra state). Both are very small. There are several industrial areas which do not in all respects correspond to industrial estates. These are located mainly near Lagos, but are to be found also in other states.

The Yaba estate (1.75 hectares) was built in 1957/58 to provide job opportunities for some of the tenants of a nearby recently constructed government low-cost housing scheme. It was hoped the estate would provide accommodation for artisan enterprises until such time as they developed into small-scale establishments, when they were expected to seek more commodious premises and be replaced by new artisan ventures. It was intended strictly to be a "nursery" estate. It was constructed with 43 work-sheds, varying in size from 182 square metres to 486 square metres, a well-equipped central workshop and an administration block. There is no space for further expansion. To attract tenants the units were, and still are, highly subsidized. An additional subsidy is provided inasmuch as repairs and alterations to work-places are carried out by the estate administration at nominal cost to the tenants.

Over the years a few firms have been evicted for non-payment of rent, and replaced by others. Competition for places on the estate is keen. Some of the enterprises are very successful and have greatly increased their employment. One or two have acquired work-places in the neighbourhood, but still retain their estate premises. It has been found impossible to persuade tenants to leave when they have outgrown their accommodation. Nowhere else could they find premises at a comparable rent.

The estate is fully occupied by 21 firms, varying in size from two to 10 workers, providing employment for 400 persons. Some enterprises occupy more than one unit. The central workshop has little relevance to the operations carried on in the tenant establishments; it is engaged mainly in outside contracts. The estate is under the control of the Lagos State Ministry of Trade, Industry and Co-operatives and administered by a staff of 69 somewhat excessive for so small an area.

The Enugu estate (1.8 hectares) was established in 1964 by Eastern Nigeria Industrial Estates Ltd, a government agency, and administered by a staff of nine under the Anambra State Ministry of Trade, Industry, Co-operatives and Transport. It consists of 12 work-places (nine of 485 square metres and three of 729 square metres which have been divided to make six units), a central workshop run by a contractor, and a small administration building. The rents charged are N 60 ($96) per month for the smaller units and N 100 ($160) for the double units. These rates are approximately half of the prevailing rents for similar accommodation in the town, where two years' rent must be paid in advance of occupancy.

Fifteen firms, ranging in size from a single to 37 workers, are in occupation. The largest enterprise assembles television sets from imported components. It is owned by the Government, and civil service wage rates are paid. One firm, at least, pays an adult worker one naira per day, less than half the legal minimum. The majority of the firms were engaged in business in Enugu before moving to the estate.

There are plans to build two more blocks of work-sheds on the site when funds become available.

The first industrial area was created in the 1950s by the Lagos Executive Development Board (LEDB) near the docks at Apapa. This was followed by industrial areas at Iganje and Amuwo-Odofin. The Apapa area is fully occupied with 60 factories. Similar information on the other two areas is not available.

For many years it was the policy of the Government to clear the slums and industry from central Lagos, to permit rebuilding and to relieve the appalling traffic congestion on its single road link with the mainland. To this end various local authorities were set up to plan the operation. One of these, the Ijeka Planning Authority, in 1963 built its first housing estate at Ilupeju, seven miles from central Lagos. To attract and accommodate industry 200 hectares of land were purchased in 1965. This became the Oshodi Industrial Area. It now contains 50 factories, mainly large and medium establishments employing tenants of the housing scheme.

In the years that followed areas were reserved for industry near housing projects at Ilupeju (61 factories), Isolo/Ilasamaja (57), Matori (43), Gbagada (18) and the most recent Ogba (70 plots allocated). There was reluctance on the part of entrepreneurs at first to move to these areas on account of their distance from central Lagos and the docks. However, because of the slum clearances that were proceeding and the ever-increasing congestion, many firms were forced to seek new premises.

The significant movement of industry to these areas is attributable to the inflow of foreign major manufacturers consequent to the oil boom, the prohibition on aliens participating in the retail and distribution fields, and the sheer lack of alternative sites.

In 1972, the Lagos State Development and Property Corporation (LSDPC) was formed by the merger of the LEDB and the Ikeja and Epe Town Planning Authorities. It continued the work of these bodies in clearing the slums from central Lagos, developing housing estates to accommodate those evicted from the slums, and acquiring land on which factories could be erected to provide work for the displaced persons.

The industrial areas are in fact merely zones reserved for industry. They are provided with metalled roads, several of which have become part of the national highway network, and electricity. None has a main water supply; an occupier is required to drill his own bore-hole well. There are no security arrangements or street lighting. The relationship between the LSDPC, as owner of the ground, and the occupier is strictly as between lessor and lessee. It is not the policy of the LSDPC to encourage industry, except insofar as it forms part of the plan to remove it from central Lagos and re-site it near a housing estate. It envisages its role as one of maintaining the roads and the amenities of the housing scheme.

Comments

While the Yaba estate has been successful in raising the status of a small number of artisan enterprises, its impact on Nigerian industrial development has been minimal. Even so, it has had a greater effect than the Enugu estate, which appears merely to provide cheap accommodation for firms that existed before they obtained work-places on the estate. It remains to be seen what effect the series of model estates will have.

There clearly appears to be a need for more industrial accommodation: first, to provide premises into which enterprises that have outgrown the nursery estates can move; and secondly, to reduce the crippling capital outlay to prospective entrepreneurs in having to pay two years rent in advance demanded for property in private hands.

It cannot be said that the industrial estates have had any significant effect on the creation of employment. It is not possible to assess the operations of the SSIC scheme and the IDCs in this respect, but while they are unlikely to have been substantial, they have had local significance. The two industrial estates can have had no effect on dispersing industry to rural areas since both are in urban locations. Again the SSICs and IDCs may have had some effect in this direction. A considerable effort has been made to develop Nigerian entrepreneurship, by the IDCs at the small industry level and by the Nigerian Centre for Management Development at higher levels.

IX. Pakistan

Background

Pakistan, formerly known as West Pakistan prior to the secession of Bangladesh, is still predominantly agricultural. The contribution made by this sector to GDP fell from 33.3 per cent in 1971 to 30.6 per cent in 1974. Manufacturing, which is second only to agriculture, increased its share from 14.1 to 15.2 per cent over the same period. Viewed in terms of percentage the latter change is undramatic, but in absolute terms it represents a rise in contributions from 7,615 million Pakistan rupees (PRs) to PRs 16,618 million.

In the fiscal year 1971/72, the total population was 62.2 million, unequally divided among the four provinces: Punjab (37.4 million), Sind (14.0 million), North-West Frontier (8.4 million) and Baluchistan (2.4 million). In the same year, a survey gave the labour force as 18.4 million, of which 14.3 million resided in rural areas. The number of persons engaged in manufacturing was 2.3 million (12.5 per cent), almost equally divided between urban and rural areas. Owing to the use of different definitions of small-scale industry by government departments, there is some uncertainty about the numbers employed in large and small-scale establishments. The former varies from 300,000 (1.63 per cent of the national labour force) to 427,410 (2.33 per cent). Consequently, the equivalent employment in small-scale industries varies from 2 million (10.87 per cent) to 1.87 million (10.12 per cent). The number of establishments employing 10 or more persons and using mechanical power (regarded as large) was 3,549 in the year under consideration. The figure is not available for the small-scale sector, but if artisan units are included, it must be about 400,000.

In absolute terms the contributions of the small- and large-scale manufacturing sectors rose between 1971 and 1974, but the share of the former tended to decline. The total annual investment in industry rose over the period by 12 per cent, but investment in small-scale industry increased by 75 per cent. There are indications that the value of the gross output of the small-scale sector and its contribution to GDP may be underestimated.

In respect of the 3,549 large establishments mentioned above, the average employment per unit was 120. Food processing (including beverages and tobacco), textiles (including spinning, weaving and garments) and other chemicals (mainly fertilizers) made up 45.6 per cent of the units and accounted for 87.6 per cent of the employment. In contrast, metal products, machinery (including electrical machinery) and motor vehicles (including repairs) accounted for 24 per cent of the establishments and 9.6 per cent of the employment.

Policy

Pakistan at the time of securing independence (1947) possessed virtually no large- and medium-scale industry. The influx of refugees from India made it essential to create job opportunities on an extensive scale. Such industry as existed was predominantly in private hands. It was the basic policy of the Government to leave industrial development to the private sector, but to control its direction by licensing and allocation of foreign exchange. The Government was prepared, however, to take initiatives if private interests failed to do so, and did so in the fertilizer, jute, sugar, shipbuilding and paper and board industries. No industry was specially reserved for the Government. It was conceived that government-sponsored industries would be financed from public and private sources through the (then West) Pakistan Development Corporation.

It was not until the second five-year plan (1960-1965) that much attention was paid to small-scale industry. The plan envisaged an increase in production of 60 per cent in large-scale and 25 per cent in small and cottage industries. PRs 75 million was specifically allocated for industrial estates to accommodate the small-scale sector.

The objectives of the industrial estates programme were:

(a) The economic development of comparatively backward areas by encouraging the establishment of new industries by small investors with all the economic benefits of a planned unit, including roads, water, power, sewage facilities and social services such as a bank, post office and dispensary, for the care of industry and the needs of its workers;

(b) The modernization of existing industries by advice and example through the provision of technical advisory services;

(c) Slum clearance with the ultimate possibility of appropriate town planning and the prevention of haphazard mushroom growth;

(d) Employment and training possibilities for the labour force in a healthy environment;

(e) Adequate common facilities to equip the industrial units to achieve specialization and modernization;

(f) Testing facilities to enforce and maintain standards;

(g) Greater ease in the provision of technical and managerial counselling and training services as well as central processing and surveying facilities;

(h) The provision of conditions favourable to a healthy development of the internal and foreign markets;

(i) The provision of the necessary supporting industries for the production of spares as well as repair facilities;

(j) The creation of new industries for which the necessary skills and know-how are not available by making entry into business easier through reduced capital requirements and the provision of technical guidance.

The (then West) Pakistan Small Industries Corporation (PSIC) was founded in 1969 to implement the industrial estates programme. In 1962 it was merged with the (then West) Pakistan Industrial Development Corporation as its Small Industries Division. In 1970 the four constituent provinces were established, but centralized control of development and industrial estates was retained by the Industrial Development Corporation. Each province in 1972 set up its own organization to be responsible for existing and new estates in its territory. These were: the North-West

Frontier Province Small Industries Development Board, the Punjab Small Industrial Corporation, Sind Small Industries and Handicrafts Corporation and Baluchistan Small Industries Corporation. They are still in operation.

Industrial estates programme

To provide work in Karachi, which was the town most affected by the refugee problem, it was decided to set up an estate on the lines of one of the trading estates of the United Kingdom. In 1948 the Sind Industrial Trading Estate Ltd (SITE) was formed for this purpose. SITE is a registered public company. It had no initial capital, but was financed by loans from the Government. The board of directors was made up of government officials and industrialists. Land (approximately 1,850 hectares) was given to the company on a long, free lease. SITE was to undertake the development, which was to be phased over 20 years, and to lease serviced plots to entrepreneurs. The company was expected to operate on a no-profit/no-loss basis. The development was virtually completed in 1962, and by 1969 a total of 712 plots had been leased and 672 factories were in operation. There is no special provision for small-scale establishments. Almost all units are in either the large- or medium-scale category.

On account of increasing pressure on the social infrastructure in Karachi, the Government granted a tax holiday to new firms establishing their factories outside the Karachi area. In 1952 SITE commenced the construction of an estate of about 504 hectares at Hyderabad. The following year approval for an estate of about 62 hectares at Tando Adam was obtained and construction commenced soon after. In 1963 SITE undertook the establishment of another estate of about 381 hectares at Kotri. All three estates are not far distant from Karachi and were intended for large- and medium-scale establishments. The total estimated expenditure by SITE up to 1969 for all but the Kotri estate (for which information is not available) was PRs 48.3 million.

The success of the Karachi estate encouraged the Government to set up more estates for large-scale industry throughout the country. Preliminary work was done in 1961 and 1962 and on projects for six estates, one each at Peshawar, Sargodha, Jhelum, Multan, Sukkur and Ratimyar Khan at an estimated total cost of PRs 43.5 million. At that time there were few constraints on the availability of foreign exchange, and an abundant flow of foreign aid. The Provincial Industries Department was directly concerned with the allocation of foreign exchange loans to parties desirous of setting up industrial units. Approval for the projects was given in 1963, but work could not commence until 1965. By that time Pakistan was at war with India and the foreign exchange resources had greatly diminished. Foreign exchange loans could no longer be given by the provincial governments to industrialists. Work was started on only the Peshawar (about 357 hectares), Multan (about 585 hectares) and the Sukkur estates (about 439 hectares). The estimated cost of these three estates to date is PRs 22 million. All have at present a low occupancy ratio. The Sukkur estate recently was taken over by SITE.

The programme of construction of industrial estates for small-scale industry initiated by the PSIC and continued by the Provincial Small Industries Corporations went on from 1961 through 1974. Table 6 gives data on estates that were built in this period. The dates and employment are only approximate.

TABLE 6. DATA ON ESTATES BUILT FOR SMALL-SCALE INDUSTRY, 1961-1974

Estate	*Year*	*Approximate area (ha)*	*Number of plots*	*Number of plots allotted*	*Units in production*	*Estimated employment*
Gujranwala (P)	1961	43	305	301	116	2,735
Sialkot (P)	1963	41	330	135	48 (?)	2,246
Gujrat (P)	1962	29	398	195	40	603
Bahawalpur (P)	1964	21	197	94	8	155
Lahore 1 (P)	1967	4	33	31	6	151
Lahore 2 (P)	1974	21	276	80	4	89
Sukkur (S)	1964	46	301	77	13	272
Larkana (S)	1964	24	313	31	4	47
Karachi 2 (S)	...	1			12	...
Peshawar (NWF)	1962	23	295	186	19	508
Quetha (B)	1961	18	104	...	...	...
Total		271	2,552	1,130	270	6,806

Note: P = Punjab; S = Sind; NWF = North-West Frontier; B = Baluchistan.

Artisan work-sheds have been erected at the following of the above estates: Gujranwala (50 work-sheds), Sialkot (50), Gujrat (24) and Sukkur (5). All have been allocated. The Karachi 2 estate consists entirely of artisan work-sheds.

The total approved expenditure by the Punjab Small Industries Corporation on estates for small industries was PRs 15.15 million. This does not include capitalization charges and operational expenses of the Lahore 2 estate which comes under the Housing and Planning Department of the Punjab government. The cost per hectare of factory plot is PRs 161,861.

New industrial estates are planned in all four provinces, three in the Punjab, seven in the North-West Frontier province, eight in Sind and two in Baluchistan. The estates in the Punjab will be relatively large (21-42 hectares). All but two in the North-West Frontier province will be under 14 hectares. The Sind Small Industries and Handicrafts Corporation is planning to set up mini-estates of about 2.1 hectares in each district of the province. The estimated cost of the estates approved to date is PRs 44.7 million.

No information is available on common service facilities, other than the basic infrastructural requirements that have been provided on the estates in Sind and Baluchistan. In the Punjab, a ceramics institute has been set up on the Gujrat estate, a sports goods service centre and a rubber and plastics cell on the Sialkot estate, and a light engineering service centre on the Gujranwala estate. There are also a metal industry development centre and a model tanning and footwear centre at Sialkot and Gujranwala, respectively. In the North-West Frontier province a wood-working centre has been established in Peshawar.

Comments

The industrial estates can be divided into three classes: those intended to accommodate large- and medium-scale establishments, small-scale enterprises and artisan workshops. There is, of course, a degree of overlap; artisan workshops are included in some small industry estates, and some medium-scale enterprises are to be found on the small industry estates. The occupancy rates for the large industry estates are not known, except for the SITE estate in Karachi which is approaching 100 per cent. The artisan workshops, as far as is known, are all occupied. The occupancy ratios for small industry estates generally is low; there are three exceptions: Gujranwala, Lahore I and Peshawar estates. With two exceptions (Gujranwala and Sialkot), the rate of occupancy was very slow at the start. However, industrialists there were in receipt of considerable foreign exchange loans.

There is some doubt about the employment currently provided by the small industry estates since seasonal and casual workers are sometimes not included. An estimate of the total employment in the 11 existing estates (1975) has been given as 8,000. This represents approximately 0.4 per cent of the work force in the small-scale sector of the manufacturing industries.

Most of the small-scale industry estates were developed in a single unphased operation. Not only has this resulted in unprofitable investment, but the facilities provided in the unoccupied areas are deteriorating.

It is estimated that there is a high element of subsidy in the prices charged for leases, ranging from 15.1 per cent in Peshawar to 43.3 per cent in Lahore I. No subsidy is involved at the Bahawalpur and Sialkot estates. However, difficulties arose at Sialkot in renegotiating prices when it was realized that the actual lease price would be considerably higher than that originally calculated.

The total investment, including that of the industrialists in the Punjab estates, is estimated at PRs 138 million, and the total employment, when all units under construction are operational, as 11,000. The investment per worker will be PRs 12,600. The majority of the workers will be those already employed in industry in the area.

As of mid-1975, foreign exchange loans amounting to PRs 76 million had been made to the small-scale manufacturing sector. Of this amount PRs 24 million of the principal were not yet due, but the remaining PRs 52 million were in arrears. This reflects the poor financial position of the establishments in the sector. The loan portfolio covers 400 projects, 291 of which are in the Punjab.

The objectives of the industrial estates policy have been realized only to a very small extent. In general, the estates have not been successful in attracting new industries. They accommodate a small fraction of the establishments that operate in industries already existing in the area. There is little subcontracting between estate firms. The numbers involved are too small to have any significant effect on town planning. The small-scale industry estates have absorbed financial resources incommensurate with the results achieved.

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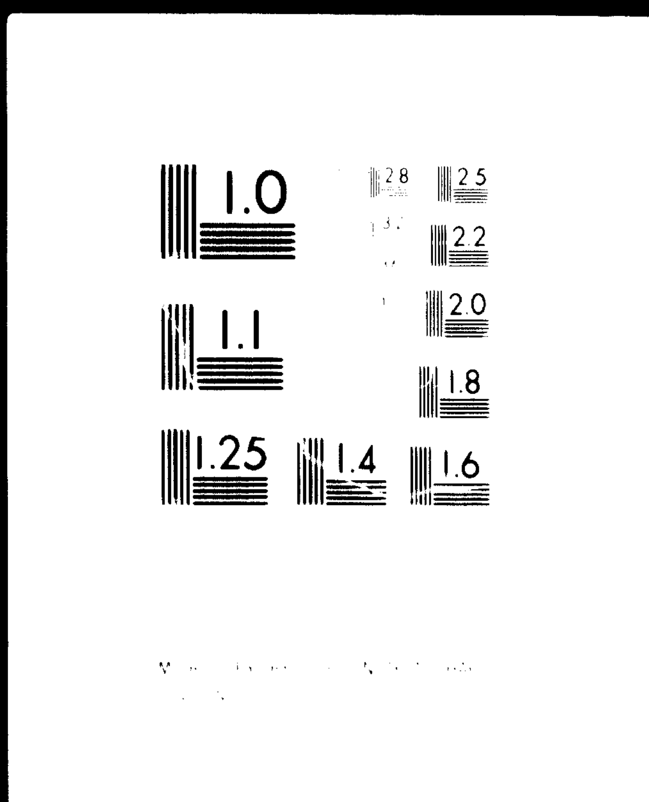

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X. Senegal

Background

In 1970 Senegal had a population estimated at 3,922,920, of which 1,647,800 (42 per cent) were economically active. The vast majority were engaged in agricultural pursuits, and many of them outside the monetary economy. Between 1970 and 1973 GDP increased from 230 billion CFA francs (CFAF) ($828.2 million) to CFAF 346.7 billion ($1,575.2 million). The contribution of agriculture during the period rose from 28 to 37 per cent, while manufacturing increased its share from 11.3 to 11.7 per cent. Over the years 1965 to 1973, the manufacturing industries increased their contribution by only 12.4 per cent as against 34.7 per cent for agriculture.

Statistics from different sources do not always agree, but taken together there is an indication that the number of manufacturing establishments and the employment they generated have decreased significantly in recent years. This does not necessarily apply to artisan and small-scale enterprises; of the former it is reported that there are about 6,000 registered units in the Dakar area alone.

Recent information on the composition of (presumably larger units in) the manufacturing sector is not available, but in 1967 the food industry (including beverages and tobacco) accounted for 33 per cent of the establishments and 40 per cent of the sectoral employment. This was followed by a composite group, made up of various branches of the textile and leather industries, with 11 per cent of the establishments and 28 per cent of the employment. The engineering industry (metal products) had 25 per cent of the establishments and accounted for just under 10 per cent of the employment.

The total number of establishments was only 204. A survey carried out by a mission of the European Economic Commission (EEC) in 1970 put the number at 190. According to another source, the number of persons engaged in manufacturing in 1970 was 15,000 (0.91 per cent of the economically active population). All of the foregoing information is indicative of a country in the very early stage of an industrialization process that has little momentum.

Policy

The industrial policy of the Government is not known in detail. It would appear that among its objectives are: the promotion of indigenous entrepreneurship; the "Africanization" of the small-scale sector; and more equable regional distribution of industry. The responsibility for all aspects of industrial development throughout the country has been given to an official institution, the Société Nationale d'Etudes et de Promotion Industrielle (SONEPI).

The principal objective of SONEPI is to assist African entrepreneurs in creating small- or medium-scale industrial enterprises. To this end it provides assistance in the following fields: training in the techniques of management and administration;

feasibility investigations of potential projects; financing of projects; the management and product disposal of newly formed enterprises; and technical assistance in workshop practice and the development of new products.

The principal factor restraining the establishment of new enterprises is lack of capital. It is not possible to obtain a medium-term loan from a Senegalese bank unless the prospective entrepreneur can provide 35 per cent of the total cost of his project from his own resources. In most cases this cannot be done. To overcome this, SONEPI has established two funds, Fonds de Participation and Fonds de Garantie. These funds are financed by the Government, the Caisse Centrale de Coopération Economique and the Central Bank with aid from France and the Federal Republic of Germany.

The Fonds de Participation permits SONEPI to invest in the equity of a project to the extent necessary to raise the entrepreneur's resources to the 35 per cent required by the lending agency. The conditions attached to such participation are that the majority of the capital (entrepreneur's plus SONEPI) and the effective management must be Senegalese, and that the entrepreneur commits himself to take over the share of SONEPI as soon as the bank loan has been repaid. The Fonds de Garantie enables SONEPI to guarantee loans for the purchase of equipment. Up to March 1975, the application of these funds had helped to establish 34 new enterprises. An involvement of about CFAF 50 million ($230,000) had initiated investments totalling CFAF 1,050 million CFAF 582 million for medium-scale and CFAF 468 million for small-scale industries.

It is part of the policy of SONEPI, particularly in relation to the development of Senegalese entrepreneurship and the equable distribution of small-scale industry, to construct industrial estates. Indeed, in 1969 the Government urged SONEPI to build an industrial estate in each province of the country.

The Government, on its part, besides providing duty-free importation of machinery, equipment and raw materials, grants newly established industrial enterprises a five-year exemption from taxes on profits if they are located in the Dakar region (Cap Vert), or an eight-year exemption from taxes on profits if they are located elsewhere in the country. The same benefits are available to small-scale enterprises, provided that more than 60 per cent of the capital and the management is Senegalese. There is no special fiscal benefit exclusive to estate-based enterprises.

Industrial estates programme

In Senegal an industrial estate comprises, at the least, developed and serviced plots and advance work-places. It is reserved exclusively for small-scale and artisan enterprises and is known as a *domaine industriel*. An organized concentration of medium- and large-scale establishments is a *zone industriel*.

The procedure in setting up an industrial estate *(domaine)* is first to form a company – *société de gestion* in order to finance and manage it. The capital of the company is subscribed by the Government and/or SONEPI, the local chamber of commerce, large public companies, private individuals and (a nominal amount) by the enterprises selected to become tenants.

At present there are only two industrial estates, the Domaine industriel de Thies (DITH) and the Domaine industriel de Ziguinchor. The latter is hardly functioning.

The Domaine industriel de Thies is located some 70 kilometres from Dakar on the site of a former French military camp. Three hectares of the land and the buildings thereon were donated to SONEPI by the Government in 1967. There are 5,000 square metres of covered space, of which 500 are occupied by the administration. The estate is administered by SONEPI on behalf of the Société de Gestion de Thies, which has a capital of CFAF 13.6 million. The total investment in the estate, including that of the tenants, has risen from CFAF 11.16 million in 1970 to CFAF 57.53 million in 1975. The Société received foreign loans from the United States and Belgium amounting to CFAF 9.6 million. Almost 75 per cent of the new investment in the period was self-generated.

Nine enterprises are accommodated on the estate. The total employment provided rose from 75 in 1971 to 138 in 1975. Five of the undertakings increased their turnover substantially over these years. The remainder are still at the artisan level. At best they break even; some work only sporadically. None has left the estate.

The management of the estate is carried out on a part-time basis by an official of SONEPI. Three appropriately qualified officials from SONEPI provide instruction and advice two days per week. In addition there is a UNIDO adviser on product planning and sales promotion, and three rather inexperienced volunteer instructors *(Volontaires de progrès)*.

The sole income of the Société is its rent roll. The rent charged is CFAF 30 ($0.14 per square metre per month) about one fifth the prevailing rate in the private sector. Despite this and rent waived for the first year of occupancy, rent arrears amount to CFAF 2 million. The estate must rely on support from SONEPI.

In anticipation of the intention of the Government to create an industrial estate in the province, the chamber of commerce of Ziquinchor (the capital, some 300 kilometres by air south of Dakar and considerably farther by road) in 1970 purchased a parcel of built-up land at nearby Katenta. The Société de Gestion de Ziguinchor was formed in 1973 with a capital of CFAF 8.27 million. It was found to be impossible to use the buildings as work-places on account of their size and poor structural condition. As adaptation was considered to be too expensive and funds were insufficient to construct new premises, nothing was done.

A religious organization, the Centre Professionel de Nema, a major shareholder in the Ziguinchor Société, operated a printing works and a well-equipped mechanical workshop. The priest-in-charge was anxious that the Société should take over the equipment of both units and install it in the new buildings of the industrial estate. As there was no new building this was impractical. SONEPI was not interested in the printing presses, but appears to have favourably considered the workshop equipment. The workshop machines passed into the ownership of the Société. Although the equipment remains installed at the Centre Professionel de Nema (for which the Société pays a small rental and takes any profit from its operation), it forms the nucleus of the estate. The workshop is in the hands of two trained Senegalese. In order to foster the Africanization of small-scale industry the Centre Professionel de Nema has transferred to each shares in the Société valued at CFAF 100,000 as an incentive.

In 1974, Société de Gestion de Ziguinchor purchased an additional piece of land (1.25 hectares) at the exact spot where a bridge was to be built over the Casamance River. The Italian firm that has the contract for the construction has leased the land as a base from the Société for CFAF 100,000 per month for the period of its operation about four years. A condition of the lease is that all buildings and facilities erected by the contractor shall become the property of the Société. It is expected that this site will become the Domaine industriel de Ziguinchor. It is somewhat anomalous that a Société de Gestion with a virtually non-existent estate should now be able to declare a dividend.

Industrial estates are being planned for Dakar, Kaolack and St. Louis. The Dakar estate will be constructed with bilateral aid from the Federal Republic of Germany. Land to the extent of 32.4 hectares has been acquired. The estate will be developed in several phases. The first of these will have an area of 7 hectares and is estimated to cost DM 7,780,000, of which the Federal Republic is to contribute DM 6,460,000. Because of price increases it is expected that this contribution will be nearer DM 8 million. It is anticipated that there will be a period of about six years between the start of preliminary work on the site and the occupation of work-places.

The project has been thoroughly investigated by the Gesellschaft für Organisation, Planung und Ausbildung (GOPA). A large number of artisans has been screened by GOPA in the selection of possible tenants of the estate. Finally 26 have been chosen.

The preliminary research on the proposed estate at Kaolack carried out by SONEPI has reached the stage at which the Government of Brazil has agreed to provide assistance and financial aid. Final details have yet to be worked out between Brazilian experts and SONEPI. The site chosen has an area of 2.3 hectares. An investment of CFAF 221 million (about $1 million) is involved.

The proposed estate at St. Louis is still in the early planning stage. A piece of land with an area of 1.8 hectares has been selected. There does not appear to be any firm arrangement for financing. The Government hopes to receive aid from the Federal Republic of Germany.

To cater to the needs of medium- and large-scale establishments, two industrial zones have been created in Dakar. One, which is virtually inside the city, is fully occupied. The other, near the harbour, contains mainly fish-processing enterprises. A site of 18 hectares at Thiaroye on the road to Thies has been acquired by SONEPI which it is in the process of developing for the accommodation of medium-scale industry; two factories are under construction.

The Government proposes to construct a free-trade zone adjacent to the harbour and airport of Dakar. A total area of 600 hectares is envisaged, of which 200 has already been purchased. For the promotion of this project a company, the Société d'Aménagement et de Promotion de la Zone Franche Industrielle, has been formed with an initial capital of CFAF 71 million.

Comments

The impact of the estates at Thies and Ziguinchor on the industrial development of small-scale industry has been negligible. In all, only 10 enterprises have been involved, and at least four of these have failed to break out of the artisan class.

The promotional efforts of SONEPI, particularly the use made of the Fonds de Participation and Garantie, have been successful in stimulating new investment. Again the number of enterprises is very small compared with the scale of the problem. That, however, may be inevitable in the very early stages of industrialization.

There has been as yet no success in dispersing small-scale industry throughout the country by the use of industrial estates. The number of enterprises in Thies has not increased, nor has any left the estate to seek larger premises. Some of the successful units may have prospered because they were cosseted by the estate.

Only 56 small firms will be affected by the construction of the proposed estates at Dakar (first phase) Kaolack and St. Louis. There are about 6,000 such enterprises registered in Dakar, and 5,000 more in Kaolack. Any results that may be achieved, therefore, must be insignificant in relation to the overall situation. With the possible exception of Dakar, the expenditure of funds, manpower and expertise in developing these estates does not appear to be justified.

XI. Sri Lanka

Background

The economically active population in 1975 was 4,480,000, of whom 343,400 (7.4 per cent) were engaged in manufacturing enterprises either on their own account or as paid and unpaid workers. In view of the relatively small size of the sector, its contribution to GDP cannot have been a major item.

To establish even a small industrial unit requires the approval of the Ministry of Industries and Scientific Affairs (MISA). While several aspects of a proposed venture are taken into consideration, the most important and probably the *raison d'être* for requiring approval is the commitment of foreign exchange that may be involved. About 61 per cent of the materials used in manufacture are imported.

The total number of approved industrial units in mid-1975 was 3,376, of which three industries (ready-made garments, leather and rubber, and pulp and paper) accounted for 40 per cent. It is estimated that around 90 per cent of the approved establishments were small-scale units (investment in plant and equipment not exceeding 500,000 rupees (SRs)). To the above must be added some 2,000 small units not registered with MISA. The small-scale sub-sector is a very important component of the manufacturing industries; it is believed to account for 85 per cent of the employment and 65 per cent of the total output. Even if hand-loom and handicrafts, which are likely to be cottage industries, are neglected, the organized sub-sector provides 71 per cent of the employment and 40 per cent of the gross output or about 15 per cent of the total industrial investment.

An estimate, based on a sample survey carried out by the Central Bank of Ceylon, placed the value of industrial production in 1975 as SRs 5,966 million by 1,489 establishments having a total employment of 107,944. The value of total production was comparable to that of 1974 (SRs 4,349 million), but the number of establishments and workers appeared to be too low (2,344 and 114,583 respectively).[6]

The distribution of manufacturing establishments is very uneven. In respect of small-scale units, 66 per cent are in the Colombo District and 18 per cent are in the districts of Jaffna Kanda, Kalutara and Matara, while the remainder (16 per cent) is spread over 17 other districts.

Policy

The general industrial policy of the Government, as proclaimed in the five-year plan, has as its objectives:

(a) Creation of employment opportunities;

(b) Expansion of production of essential commodities of mass consumption to meet the increased demand from low income groups;

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[6] *Yearbook of Industrial Statistics, 1975 edition* (United Nations publication, Sales No. 77.XVII.7).

(c) Establishment of basic industries capable of providing inputs for other industries;

(d) Bringing industry to the rural areas to provide employment and to better utilize raw materials in the rural areas;

(e) Minimization of the foreign exchange in investment and raw materials;

(f) Gearing industrial growth to the export market.

In pursuance of these aims, it is proposed that heavy and capital goods industries and other appropriate basic industries be reserved for the public sector.

The proposal to make use of industrial estates as a means of promoting industry, of mobilizing private capital and of reducing the rural-urban drift of population was raised as long ago as 1936. The necessary industrial base, however, was lacking at that time. The matter was not seriously considered again until the late 1950s, by which time the industrial base had expanded and there was a clear need for industrial accommodation in the Colombo area.

Industrial estates programme

In 1960 the Industrial Estates Corporation was established to build an industrial estate. There appears to have been no suggestion at this time for a network of estates. The Corporation was given as capital a non-interest-bearing grant, fixed initially at SRs 2.5 million. Loan capital could be secured by borrowing from the Treasury at 4 to 4.5 per cent interest. By arrangement with the Government the United States Operation Mission made counterpart funds available equal to the paid-up capital of the Corporation, and provided technical experts to assist the Corporation in its work. Some 70 acres (29 hectares) were acquired at Ekala, near Colombo, for the estate. Construction started on the first stage in 1962 and the first units were in operation in 1963. Development of the second stage was started in 1966. Forty-three factory units (varying in size from 96 square metres to 100 square metres) have been built, all of which are occupied by 26 firms employing 1,218 workers. There are plans to extend the estate to include another seven factories.

In 1966 the Industrial Development Board was created to provide assistance to small-scale industry and to co-ordinate programmes relating to its growth. In 1969 the Corporation was merged with the Board which took over the operations of the former, which at that time consisted only in running the Ekala estate. The Board sought and obtained the permission of the Government to expand the industrial estates programme by constructing estates at Kandy, Jaffna and Galle.

At Pallekelle, near Kandy, an estate of 75 acres (31 hectares) was planned. The first phase of development was 17.2 hectares. The construction of work-places was commenced in 1969, and the first tenant started operations in 1972. The utilities and services were not completed until 1975. The estate contains at present 34 factory units of which 27 are occupied (not all by industrial firms). One textile firm occupies eight units, while two other tenants have two units each. Only four of the tenants are genuine small-scale undertakings.

In 1972 the construction of buildings was begun on a third estate at Atchuvely, near Jaffna. Sixty-five acres (27 hectares) of land had been acquired and 25 acres (10.4 hectares) were developed. Thirty-six work-places each of 127 square metres in area have been erected. Fourteen of the units have been allocated, but only three firms occupying 10 units are in operation. Seventy-five acres (31 hectares) were taken over at Boossa, near Galle, for development as an industrial estate. Construction started in 1970 with the administration block and the superintendent's quarters. There was a change of opinion on the desirability of proceeding with the estate in the form originally planned. All but 10 acres (4 hectares) has been handed over to a public sector agency.

The Industrial Development Board of Sri Lanka has under consideration proposals to build estates in three other locations.

Comments

Only rented accommodation is available on the industrial estates. Rentals are based on amortizing, over 40 years at 5 per cent, the cost of establishing individual units on the estate. Owing to various factors (cost of land, type of factory construction and inflation) the rentals charged at Pallekelle and Atchuvely, both in rural or semi-rural areas, are higher than those at Ekala, close to the metropolitan area of Colombo. Furthermore, the rentals at the first-mentioned two estates are higher than those for which equivalent accommodation can be obtained in their neighbourhood. The reverse is true of Ekala. This situation may explain why there is a waiting list for premises in the Ekala estate, while the other two estates are not fully occupied, and the relatively high occupancy by government agencies at Pallekelle estate.

The rental-only policy may be restricting expansion of enterprises. The Board has no arrangement to permit the extension of existing premises. If a firm outgrows its present work-place, it may be compelled to seek quarters elsewhere. The Board has agreed in principle to institute a hire-purchase scheme, but only for the Pallekelle and Atchuvely estates and not for Ekala where the need is greatest.

The Ekala estate was not specifically intended for small-scale industry and there is no unit of the nine-and-under-workers classification on it. The other two estates were built for small industry, but there are only two representatives in Pallekelle and none in Atchuvely. Indeed, there is no admission policy operating on any of the estates.

There are few common facilities on the estates. All have a first-aid post and canteen. None has a bank, post office, warehousing or a common-user workshop. There is a conference hall in the administration block at Pallekelle and Atchuvely, and premises to house a workshop facility. There is no workers' housing on any estate. There is no industrial extension service operating on or serving any of the estates. A school is to be set up at Pallekelle to provide training for management and technical personnel.

Both the Pallekelle and Atchuvely estates are badly located. The former was intended to provide the industrial area of a new satellite town, the development of which was abandoned. In consequence, the estate is isolated, with poor transport and telephonic communication with Kandy, seven miles away. Water was available only long after the estate was operational. Atchuvely has poor road, rail, and as yet no telephonic connections.

There is some evidence that local materials are being used in production at Ekala and Pallekelle. The handicraft skills that abound in the region of Kandy are not reflected in the operations performed in the latter estate. Neither estate has given rise to ancillary industries or amenities in its neighbourhood. At Ekala a new township has grown up and two multinational companies have established their plants adjacent to the estate.

The only estate products that are being exported are canned fruits and leather goods from Ekala. The value of exports is only about 3 per cent of the total value of production on the estate. Some inter-trading takes place between a few (nine) firms on the Ekala estate; it does not amount to subcontracting *per se*. There is no intra-estate trading at Pallekelle or Atchuvely.

The total employment provided in all three estates by the 37 tenant enterprises at the date of reporting was 2,199 (Ekala 1,218, Pallekelle 875, Atchuvely 106). This represented only 1.9 per cent of the labour force and 1.6 per cent of the establishments in the manufacturing industries. The cost per job created, based on the investments of the government and of the tenants (the latter for plant and machinery only) was SRs 13,670 ($1,580) and SRs 24,700 ($2,852) for Ekala and Pallekelle, respectively. The figures are not strictly comparable on account of the rise in prices of machinery during the interval between the start of operations of the estates.

The industrial estate programme cannot be said to have contributed significantly to the attainment of the objectives of the Government's industrial policy. There has been limited success in the creation of new jobs and the use of local resources. The Ekala estate may be claimed a success: only three of the tenant enterprises failed, but 15 of them moved away to larger premises. The rural estates have had a negligible effect on rural industrialization.

XII. Turkey

Background

Turkey emerged as a modern state in the early 1950s. Since then strenuous efforts have been made to transform the structure of the economy to provide a higher standard of living. A considerable measure of success has been achieved. The per capita GDP has risen from the equivalent of $230 in 1950 to $822 in 1975. It is still the lowest in Europe, however. The high annual increment of population (2.4 per cent) and the rapid rate of increase in urban population have imposed a severe strain on the resources of the Government to provide the necessary social and economic infrastructures; indeed, both are inadequate

In 1975, out of an economically active population of 16,350.000, some 1,243,000 (7.6 per cent) were engaged in manufacturing. Statistics from independent sources give widely differing numbers employed in industry. The situation is further complicated by the enumeration of insured workers only, in certain cases. The number of establishments also varies greatly. A census of industries in 1970 gave the following figures:

Size by number of persons engaged	*Number of establishments*	*Number of employees*	*Persons engaged*
10 or more	4,415	443,401	449,301
5-9	7,701	30,840	47,160
3-4	28,732	42,001	95,465
2	46,803	21,753	94,023
1	86,887	3,631	88,259
Total	174,538	541,726	774,209

It is not known if the entire manufacturing sector was covered; the evidence suggests it was not. One fact is indisputable, and that is the overwhelming majority of small-scale establishments.

The availability of manpower will not be a constraint on development. It is estimated that out of an average of 440,000 persons entering the labour force each year, not more than 150,000 are able to find employment.

In the field of manufacturing, in 1972, the food-, beverage- and tobacco-processing industries accounted for 37 per cent of production, and textiles for 16 per cent. However, during the 1960s the less traditional industries (basic metals, machinery and petroleum products) started to develop rapidly; they now account for 40 per cent of manufacturing production. The contribution of the sector to GNP increased from 9 per cent in 1950 to 18 per cent in 1973 (at 1968 prices). Changes in the composition of production were:

	1950	*1963*	*1968*	*1972*	*1977 (plan)*
			(percentage)		
Consumer goods	67.8	50.2	50.1	46.6	38.3
Intermediate goods	21.3	31.6	38.1	39.4	44.2
Investment goods	10.9	18.2	11.8	14.0	17.5

The numerical preponderance of small-scale establishments (nine or less engaged) may be noted. In Turkey a great many, perhaps the majority, are scattered throughout business and residential areas in urban centres. Even where an industrial quarter has grown up it is now engulfed by the spread of the town. The small businesses are housed in premises that are cramped, ill-lit and often unsanitary. There is no room for expansion. A great deal of the activity that should be carried out within the buildings takes place on the public thoroughfare, with consequent obstruction to the flow of traffic. Not only is a public nuisance created, but the undertakings are restricted in their growth by the sheer lack of physical space.

As early as 1954 in Konya a group of small-scale entrepreneurs, dissatisfied with their work-places and their inability to find satisfactory premises within the town, formed a committee to build their own accommodation. The committee, later converted to a co-operative, purchased with its own funds 20 hectares of land and engaged consultants to plan the layout and buildings. They received advice from the Ministry of Reconstruction, which is responsible for town planning. Construction began in 1959, but in 1965 the co-operative ran into financial difficulties. An appeal for assistance was made to the Ministry of Industry and Technology, which by this time had an industrial estates policy. The Ministry tried to modify some of the features of the estate, but the work was too far advanced. However, as a precondition of providing assistance, it forced members engaged in service trades (retailers, restaurateurs) to leave the co-operative. The estate was completed in 1968. It (Maram estate) now has 537 industrial buildings and a labour force estimated at 3,500, rising seasonally to 4,500. The total cost to date is 16 million Turkish lire (LT), of which LT 7 million was loaned by the Government.

This is not the only instance of the construction of an industrial estate by private initiative prior to the inauguration of a government policy on industrial estates.

Policy

In the first five-year development plan (1963-1967) the Government adumbrated its policy of accelerated industrial development by promoting industrial estates. The principal objectives were:

(a) To provide better and safer working conditions for small industries;

(b) To promote a spirit of co-operation among small firms in various fields;

(c) To bring scattered firms and small workshops together in order to be able to provide common facilities and encourage complementarity, thus setting a basis for their development and integration;

(d) To develop an instrument of decentralization of the industrial base to produce more balanced development, with special emphasis on the development of backward areas;

(e) To promote and facilitate subcontracting by large to small firms;

(f) To promote existing small entrepreneurs rather than to encourage the establishment of new firms;

(g) To enable various extension services provided by the Government to be more rapidly and effectively channelled to small firms;

(h) To relieve increasing congestion and dislocation of traffic in cities, where most small firms are located, with a view to implementing a town-planning programme.

The policy is essentially one of relocating small-scale industry. Indeed, several municipalities had previously passed by-laws requiring industrial establishments to move from urban areas. The by-laws, by and large, were ineffectual. The reason for promoting only existing enterprises was the opinion held by the Ministry of Industry and Technology that there was sufficient underutilized capacity in the small-scale sector to provide the desired growth for some time to come.

Subject to compliance with certain defined procedures and criteria, the Ministry is prepared to make credit available for the construction of work-places and common facility buildings on an industrial estate. In normal areas the loan is scaled to cover 60 per cent of the building costs; in special areas up to 80 per cent; and in certain exceptional circumstances 90 per cent, or even 100 per cent. Interest accrues at 5 per cent per annum (3.5 per cent in special areas). The term of the loan is 10 years with a grace period of one year. Credit is available only to an executing agency set up for the purpose of constructing the estate, which is required to remain in existence until the loan is repaid. Loans are not available to individuals for the purchase of land and equipment or for the development of the infrastructure.

The first essential condition to be met is the creation of an executing agency. In the small-scale sector this normally is a municipality or a co-operative (in the case of an industrial area for large-scale enterprises credit may be granted to a chamber of commerce). Other criteria relate to the types of industry it is proposed to accommodate on the estate (specifically excluded are those of food processing and leather footwear); the existing accommodation and working conditions in small-scale industry in the locality; the rate of unemployment; the demonstrable existence of entrepreneurial potential; the marketability of the products made; the possibility of increased utilization of raw materials; and the possibility of improved relations with larger industries. If these are met satisfactorily, the Ministry conducts a survey involving the obtainment of information on the economic and social structure of the small-scale sector in the area; existing infrastructural facilities in the area; details of the trades and credit rating of the members of the co-operative or the applicants for places on the estate; the proposed site; the possibility of alternative locations; and the central facilities proposed. If there are alternative sites, the cost of land, availability of infrastructure, possibilities of pollution, soil structure, transport facilities, and the availability of adjacent land for future expansion are taken into account.

If the officials of the Ministry are satisfied, a team comprising an economist, mechanical engineer and architect meet the board of the executing agency. The final project is the outcome of discussions, sometimes involving compromises between the board, its consultants and the team. The executing agency is now in a position to negotiate for the purchase of the land and the development of the infrastructure. The Government regards the use of the board's own funds for these purposes as evidence of its earnestness to proceed with the project. The Government then enters into arrangements with the executing agency to provide credit in step with the building programme. The security against the loan is the developed land.

Industrial estates programme

It probably is incorrect to credit the Government with an estate programme in the usual sense of the term. The initiative to establish an industrial estate comes from either a co-operative, a municipality or, in the case of a large industrial area, a chamber of commerce. The Government is able to impose its priorities by approving or withholding financial assistance.

At the end of 1975 the industrial estate position was:

All estates		*Government-assisted estates*
Completed	29	27
Under construction	44	39
Under consideration	13	13
Total	86	79

In addition there are two "industrial areas" (i.e. industrial estates for medium- and large-scale undertakings on which each industrialist is required to arrange for the construction of his own premises) at Bursa and Manisa.

The number of estates recorded as beginning construction in a particular year fluctuates considerably, probably because the commencing date is taken as the date on which application for assistance was approved. Over the years 1962-1975, the rate of building on a three-year moving average rose progressively, except for a slight fall in the early 1970s. In respect of assisted estates, at the end of 1975 there were 5,762 work-sheds on the completed estates and 12,948, built or under construction, on the unfinished estates.

The cost of the 27 completed assisted estates amounted to LT 234,175,229 million ($15.61 million), made up as follows:

	Turkish lire
Total cost of buildings	203,630,634
Land and infrastructure at 15 per cent	30,544,595
	234,175,229
Government credit allocated for the assisted estates under construction	96,328,098
Total cost of buildings	1,362,985,920
Land and infrastructure at 15 per cent	204,447,888
	1,567,433,808
Government credit allocated	395,662,400

The cost per work-shed on the completed estates works out at LT 40,897, and on the estates under construction at LT 121,056.

The maximum credit allowed in normal areas is 60 per cent of the building costs which would amount, respectively, to LT 122,178,380 and LT 818,391,552 for the 27 completed and 39 uncompleted estates. It is apparent, therefore, that the estate executive agencies did not find it necessary to take advantage of all the credit available.

Comments

There is no published information on the number of insured workers and persons engaged in establishments on industrial estates. If the one-worker category is disregarded, the average number of persons engaged in the nine-workers-and-under category is 2.84 per establishment. It is reported that within two years of settling on an estate an undertaking doubles its labour force. Assuming, as was done in Evaluation Report No. 1 (see annex II, ID/WG.231/1), that the average estate firm employs four persons, the potential for employment of the completed assisted estates is 23,048 (5,762 x 4), of which 6,684 (5,762 x (4 – 2.84)) will be new jobs. Equivalent figures for the estates under construction would be 51,792 and 15,020. Tne total labour on the assisted estates would be 74,840 when all those under construction are completed. If this occurs in 1978 when the economically active population might be expected to be about 18 million, the percentage employed on assisted estates would be approximately 4.2. Assuming that the employment in the manufacturing industries increases by 5 per cent per annum, the number of persons engaged would be 960,328 (disregarding one-worker units). The assisted estates would then accommodate about 8 per cent of the manufacturing industry.

The majority of the trades occupying estate premises are connected with the repair of automobiles and farm machinery. With so many operating in the same lines, specialization has developed which has resulted in a significantly large volume of intra-estate trading. Some estate firms have gone into the manufacture of spare parts for cars, trucks and tractors so successfully that they have become accredited suppliers.

The question remains, how far may the industrial estates policy be regarded as having achieved its objectives, bearing in mind that about 22 per cent of the small-scale manufacturing sector units (nine-workers-and-under less single-worker units) will occupy estate premises?

(a) It undoubtedly has resulted in better working conditions, but has had little or no effect on the reduction of industrial hazards;

(b) A better spirit of co-operation has developed between firms. Intra-estate trading and subcontracting are evidence of this;

(c) Workshops and firms certainly have been brought together, but common facilities have been very slow to develop;

(d) A roughly north-south line through Samsun and Gaziantep divides the country into two approximately equal parts. The western half, which always has been the more developed, contains all but four of the completed estates. Only seven of the 39 estates under construction, and five of the 19 estates under consideration, are in the eastern half. There has been limited success in the redistribution of industry between the advanced and backward areas;

(e) Subcontracting has developed to a remarkable degree;

(f) The policy of promoting only existing small-scale enterprises was inspired by the large underutilized plant capacity in this sector. Most entrepreneurs moving on to an industrial estate increase their inventory of equipment. There is still much underutilization of plant;

(g) The various extension services are conspicuous by their absence. They exist only on the model estate in Gaziantep. A scheme to create a national extension service is temporarily in abeyance;

(h) In so far as firms have moved to an estate from an area with a problem of traffic congestion, the policy has been successful. Premises so vacated are not permitted by the municipality concerned to be used for industrial purposes.

An overall assessment is that the industrial estates policy has been reasonably successful in achieving its objectives, and at virtually no cost to the Government.

Annex I

GUIDELINES FOR CONSULTANTS CONDUCTING THE STUDY

Outline

1. A large number of industrial estates are today operating in a variety of developing countries. However, it is known that in these countries, only a few of the industrial enterprises, and in some cases very few, are located on these estates. The aim of this evaluation study is to find out in what circumstances investment in industrial estate programmes has proved justifiable and what factors influence the successful outcome of these projects. What type of enterprises fit into the industrial estate programmes? What is the optimal size of an industrial estate under different conditions?

2. The prime objective of the study is to use the results and conclusions as a guide to policies in relation to support programmes for industrial estates, in particular programmes for the promotion of small- and medium-scale industries. The data, therefore, should be collected in such a way that the impact of the industrial estate programme can be evaluated, in particular, its contribution, successful or otherwise, to the development of industry in the country and more specifically in the region and locality being studied.

3. The necessary information for the analysis should be collected at different levels and from different sources. These should include:

(a) Central or national government departments and ministries;

(b) Local and regional government officials;

(c) Regional government development agencies, institutions or corporations;

(d) Specialized agencies or institutions such as those responsible for the establishment of specific industrial estates or for the promotion of small-scale industry;

(e) Industrial estate managers and local staff or international experts assisting in the industrial estate project;

(f) Factory owners, managers and employees.

4. Industrial estates have been used to further two main objectives:

(a) The promotion of new industries, mainly small- and medium-scale;

(b) The relocation of industries because of inadequate facilities resulting from limitations on expansion or urban renewal programmes.

Detailed statistics are required to find out to what extent different estates contribute to these two objectives, bearing in mind that the process of relocation usually includes expansion and modernization.

5. In evaluating industrial estate programmes it is important to analyse the costs incurred in establishing such estates. These investment costs in infrastructure, factory buildings and services are known to differ widely from one estate to another, and from one country to another. It is important also to differentiate between planned costs and the real costs incurred. Other costs that should be established are: costs of industrial estate programmes in relation to various possible locations, and per unit such as factory output or employment created; costs of industrial estates compared with alternative programmes that can have similar objectives; and costs of different estates classified according to the number of facilities made available. As regards the latter costs, three categories of estates may be considered, although in some respects one would be designated only as an industrial area. The nomenclatures used should be those of the country concerned, and if these are described as industrial estates they should be included in the study, even though in an international classification they might not be considered estates as such.

6. The three types of industrial estates may be described as follows:

(a) Tracts of land with suitable infrastructure, of which plots are sold or allocated to entrepreneurs and on which they build their own factories, usually according to some building code and regulations;

(b) Land with infrastructure divided into lots which are either offered for sale or rental to entrepreneurs to construct their factories or on which standard factories are constructed by the estate authority and offered for sale or rental;

(c) Land divided into lots on which standard factory buildings are constructed for rental and on which services are provided.

7. It is important to investigate the comparative success of each of the types of estate project mentioned above, particularly in relation to costs and speed of occupancy, and the extent to which each has satisfied the functional requirement and financial resources of the entrepreneur. Detailed data on sale, cost of land lots, factory space and rentals, where applicable, are needed.

8. Industrial estates endeavour to offer different services. In fact it is claimed that one of the prime advantages of estates is that they are able to offer such support services in a concentrated form to help the small enterprises. The services offered are wide and differ greatly from one case to the other. In some estates they are confined to such utilitarian services as a petrol filling station, a worker's canteen, or a bank. In others, they include common facility workshops, extension or marketing services or possibly a technical design office and/or laboratory. The technical service function should be evaluated with regard to efficiency in relation to cost, usage or any other relevant measurements. It might be of interest to measure also the degree of utilization of the services by clients outside the estate, if this should be the case.

9. The data should be collected on two levels: national data and data for specific estates. While data should be collected from a number of estates in each country where possible, the focus of the inquiry should be on individual estates rather than on the national estate programme as a whole. Although every effort should be made to collect information in a quantified form, some qualitative descriptions of situations that cannot be quantified should also be provided.

10. Sources of information should be identified by name, address and telephone number where possible, to indicate where the information was acquired and where, if necessary, additional information could be obtained or checks made.

National data

11. The following steps should be taken in compiling national data:

(a) Identify the number and, if possible, the locations of industrial estates in the country; when they were established and since when they have been fully occupied. It is important to obtain data on the time lags between planning the estate, its construction and its full occupancy. What incentives were given for settlement on the estates?

(b) Quantify financial resources allocated to the estate programme, indicating sources of financing, whether foreign or domestic. In indicating the resources, these should be separated into funds for construction or land purposes and financial costs for technical expertise, whether foreign or domestic;

(c) On the basis of the sizes of firms of 1 to 5, 6 to 10, 11 to 50, 51 to 200, and over 200 employees, specify the distribution of industrial enterprises throughout the country and their distribution on the different industrial estates;

(d) Describe the types of industries from the point of view of sectors set up on the industrial estates;

(e) Specify the total employment in industry throughout the country in industrial estates only;

(f) Specify the geographical distribution of industrial estates, giving number of enterprises and workers in large urban centres (over 200,000 inhabitants), in smaller urban centres (20,000 to 200,000) and in rural areas (less than 20,000);

(g) Quantify the structure of enterprises occupying the estates (according to size, relocated industries and new industrial units);

(h) Quantify the rate of turnover of enterprises, indicating the number of enterprises that have left the estate, reasons for so doing and the major factors that have affected the rate of turnover. Indicate also the planned and actual number of enterprises in each estate, describing the selection criteria;

(i) Determine the return on investment in the estates, indicating the total revenue in rents or sales of factory space and technical services. Where appropriate, infrastructural costs and those for factory premises should be separated. A return on investment on technical services only should be calculated as well.

Plans for new estates

12. The following factors should be taken into account in planning for new estates:

(a) Number of new estates planned and expected number of factories and employment;

(b) Total costs and sources for financing;

(c) Schedule of estate expansion programme.

13. Describe the geographical location of the estates and whether they are primarily designed for relocation or new industrial development. Some indication should be given of the criteria used for selection of sites for new estates.

14. Describe the secondary and tertiary industries and services that have arisen from the estate programme, quantifying the estimated employment in such cases.

15. What infrastructure, local or regional, has developed that can be attributed directly or indirectly to the industrial estate programme? This should include roads, electrification, water supply, sewerage, urban housing etc.

16. Has any subcontracting developed on the industrial estate, i.e. inter-relationship between large industries and smaller ones as suppliers? If so, indicate the products and estimate the production value of such subcontract orders. Where applicable, describe the future potential for such subcontracting relationships.

17. Has the industrial estate programme contributed to the growth of exports? If so, estimate the total export earnings of each estate. Identify the major export products with some indication of future possibilities.

18. To what extent have small-scale industries developed outside the industrial estates? Have these been more, or less, successful than those on the estates? Indicate the types of enterprises and product categories of those industries that have developed mainly outside the industrial estates. Indicate main reasons for success or failure.

19. What social development, if any, has resulted from the industrial estate programme (in particular, housing projects or improved social amenities that may have been developed on the estate) in the locality or in the region?

20. Have trade unions developed on the industrial estates? Give details.

21. Identify the main environmental problems affecting the estates. Mention special points with regard to the supply of electricity, gas or water, or the disposal of refuse or effluents.

Data required on specific estates

22. In gathering data on individual estates:

(a) Identify the costs of establishing the estate and the sources of financing, foreign or domestic;

(b) Describe the type of estate management. Is it publicly owned, private or co-operative? Comment on the efficiency of the organization, in particular in relation to the allocation of space;

(c) Specify details of the physical facilities available in relation to factory space, storage areas, services and/or technical service centres, financial services, marketing services, including product exhibition, and promotion facilities. Are there any problems with regard to provision of services and estate-client relationships?

23. Give details on the use of services on the estates, particularly of any technical services centres or extension services.

24. What is the return on the investment, relating revenues to capital investment (separating total investment into investment in infrastructure, factory premises and technical services)?

25. By what principles are prices determined for factory space, for rental or for use of services? Identify any changes in prices or in pricing principle that have taken place during the history of the estate.

26. Identify the major industrial sectors on the estates and the products they produce. Furnish details on employment.

27. Quantify exports and export earnings of factories on the estate (volume and value). Identify major export products and future potential.

28. To what extent is subcontracting prevalent on the estate? Give approximate value, and identify the major items involved in the subcontracting relationship. What are the prospects of expanding the volume of subcontracting?

29. To what extent have local raw materials been used in the manufacturing processes of the factories on the estate?

30. What potential is there for further factories based on the local processing of local raw materials?

31. To what extent are the estate's products sold locally? Are products or services offered that satisfy local needs and that were previously imported from other regions?

32. Has any form of advisory or extension services or training programme been provided for the industries on the estate? What effects have such programmes had?

33. Are the estate's enterprises:

(a) Foreign-owned?

(b) Owned by nationals of the country, but outside the region?

(c) Owned by local entrepreneurs?

34. How many of the estate's factories (give size distribution of enterprises) are:

(a) Relocated from inadequate local urban premises?

(b) New industrial units?

(c) Transferred from other parts of the country?

35. How many of the factories established on the estate have left? Because of:

(a) Business failure?

(b) Transfer to larger premises?

(c) Other reasons?

36. Identify social and economic background of entrepreneurs by describing previous occupations. This information should, if possible, be separated for the relocated units and for the new industries.

37. What is the general financial situation of the enterprises? If possible, quantify the number of enterprises making a profit and those breaking even or losing. What are the main problems of those enterprises that are not succeeding? To what extent have small-scale industries outside the industrial estate developed in the same locality? Identify the types of enterprises and their product categories. Have enterprises outside the estate made any use of the services of the estate?

38. What social effects, if any, has the estate had on the community? Describe any community developments that have taken place, directly or indirectly, as a result of the establishment of the industrial estate.

Annex II

DOCUMENTS PRESENTED AT THE MEETING

Symbol	*Title*
ID/WG.231/1	Evaluation report on industrial estates No. 1–Turkey *C. R. Wynne-Roberts*
ID/WG.231/2	Evaluation report on industrial estates No. 2–Cuba *F. C. Helm*
ID/WG.231/3	Evaluation report on industrial estates No. 3–Ecuador *C. R. Wynne-Roberts*
ID/WG.231/4	Evaluation report on industrial estates No. 4–Pakistan *J. Sigurdson*
ID/WG.231/5	Evaluation report on industrial estates No. 5–Senegal *C. R. Droesch*
ID/WG.231/6	Evaluation report on industrial estates No. 6–Iran *D. Wall*
ID/WG.231/7	Evaluation report on industrial estates No. 14–India (Mysore State) *N. Somasekhara*
ID/WG.231/8	Evaluation report on industrial estates No. 9–Malaysia *A. Neilson*
ID/WG.231/9	Evaluation report on industrial estates No. 10–Nepal *A. Neilson*
ID/WG.231/10	Evaluation report on industrial estates No. 12–Sudan *C. R. Droesch*
ID/WG.231/11	Evaluation report on industrial estates No. 7–Nigeria *C. R. Wynne-Roberts*
ID/WG.231/12	Evaluation report on industrial estates No. 13–India *M. V. Hogg*
ID/WG.231/13	Evaluation report on industrial estates No. 11–Sri Lanka *R. K. Vepa*
ID/WG.231/14	Evaluation report on industrial estates No. 8–Argentina *C. R. Wynne-Roberts*

DOCUMENTS PRESENTED AT THE MEETING *(continued)*

Symbol	*Title*
ID/WG.231/15	Consolidated survey *C. R. Wynne-Roberts*
UNIDO/IOD.16	Report on the industrial estates programme in six countries *UNIDO and Swedish International Development Authority*
	Major issues in planning and design of industrial estates in the least developed countries *United Nations Development Programme*

N. Somasekhara, *The Efficacy of Industrial Estates in India* (Delhi, Vikas, 1975)

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