



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

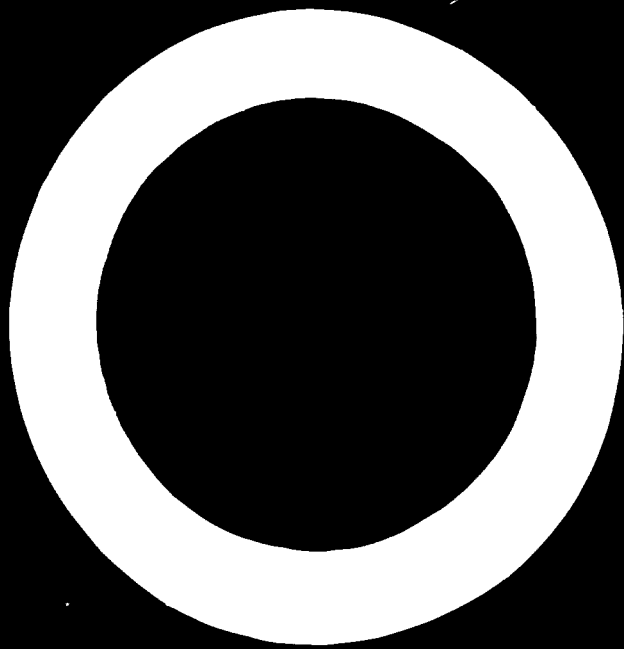
*Industrialization
of Developing Countries:
Problems and Prospects*

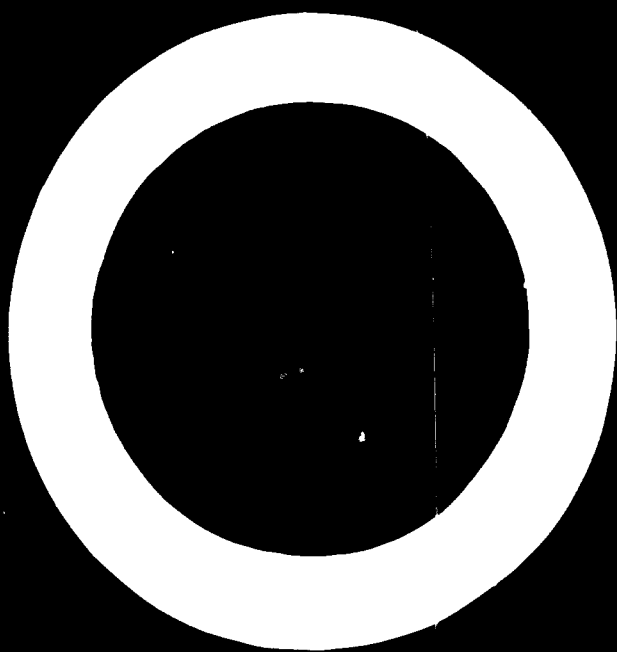
**SMALL-SCALE
INDUSTRY**

D 01172

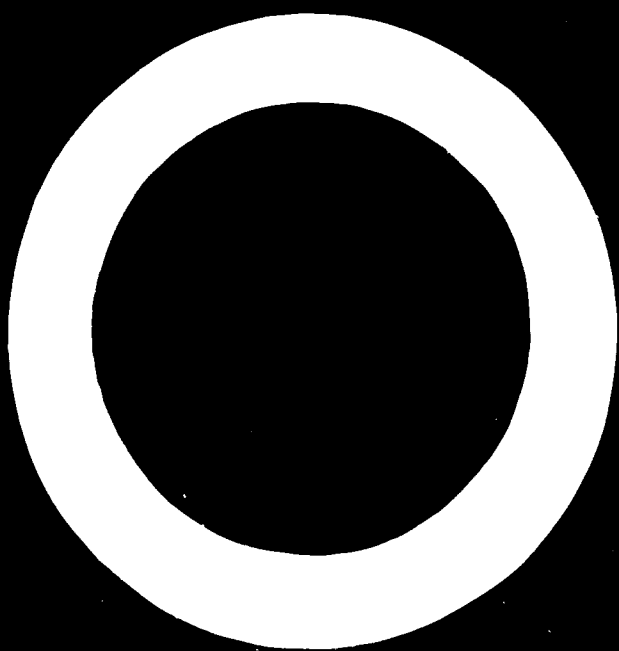


UNITED NATIONS





SMALL-SCALE INDUSTRY



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
VIENNA

UNIDO MONOGRAPHS ON INDUSTRIAL DEVELOPMENT

*Industrialization of Developing Countries:
Problems and Prospects*

MONOGRAPH NO. 11

SMALL-SCALE INDUSTRY

Based on the Proceedings of the International
Symposium on Industrial Development
(Athens, November-December 1967)



UNITED NATIONS

New York, 1969

Material in this publication may be freely quoted or reprinted, but acknowledgment is requested, together with a copy of the publication containing the quotation or reprint.

ID/40/11

UNITED NATIONS PUBLICATION

Sales No.: E.69.II.B.39, Vol. 11

Price: \$U.S.0.50 (or equivalent in other currencies)

Printed in Austria

Foreword

The International Symposium on Industrial Development, convened by UNIDO in Athens in 1967, was the first major international meeting devoted exclusively to the problems of industrialization of the developing countries. It followed a series of regional symposia on problems of industrialization held in Cairo, Manila and Santiago in 1965-1966 under the sponsorship of UNIDO and the United Nations regional economic commissions, and a similar symposium held in Kuwait in 1966 under the sponsorship of UNIDO and the Government of Kuwait.

The Athens Symposium was attended by some 600 delegates from 78 countries and by representatives of various United Nations bodies, international organizations and other interested institutions in the public and private sectors. It provided a forum for discussion and exchange of views on the problems and prospects of the developing countries which are engaged in promoting accelerated industrial development.

The Symposium devoted special attention to possibilities for international action and for co-operative efforts among the developing countries themselves, and explored the scope, means and channels for such efforts.

Studies and papers on a wide range of problems relating to industrialization were presented to the Symposium—by the UNIDO secretariat and by participating Governments, international organizations and observers. An official report, adopted at the Symposium, has been published by UNIDO.¹ Based on this documentation and the discussions in the meeting, the present series of monographs is devoted to the 21 main issues which comprised the agenda of the Symposium. Each monograph includes a chapter on the issues presented, the discussion of the issues, and the recommendations approved by the Symposium. Some of the

¹ *Report of the International Symposium on Industrial Development, Athens 1967* (ID/11) (United Nations publication, Sales No. : 69.II.B.7).

monographs deal with specific industrial sectors, some with matters of general industrial policy; and others with various aspects of international economic co-operation. An effort has been made to make the monographs comprehensive and self-contained, while the various economic, technological and institutional aspects of the subject matter are treated within the context of the conditions generally prevailing in the developing countries.

Since economic, technological and institutional aspects are described with particular reference to the needs of the developing countries, it is felt that the monographs will make a distinct contribution in their respective areas. They are intended as a source of general information and reference for persons and institutions in developing countries concerned with problems of industrialization, and particularly with problems and issues of international co-operation in the field of industrialization. With this in view it was considered that an unduly detailed technical presentation should be avoided while at the same time enough substantive material should be offered to be of value to the prospective reader. For a more elaborate treatment of the subject, the reader is referred to the selected list of documents and publications annexed to each monograph.

The annexes also contain information on the areas in which UNIDO can provide technical assistance to the developing countries on request; a selected list of major UNIDO projects in the respective fields; and a list of meetings recently organized by the United Nations.

It is hoped that the monographs will be particularly useful to Governments in connexion with the technical assistance activities of UNIDO and other United Nations bodies in the field of industrial development.

This monograph was prepared by Mr. P. C. Alexander, Joint Secretary, Ministry of Foreign Trade and Supply, Government of India, as consultant to UNIDO, in co-operation with the secretariat.

CONTENTS

	Page
INTRODUCTION	1
Chapter 1	
SPECIAL PROBLEMS OF SMALL-SCALE INDUSTRY DEVELOPMENT	5
Economic problems of small-scale industry	5
Problems of management	7
Chapter 2	
OBJECTIVES OF PROMOTING THE DEVELOPMENT OF SMALL-SCALE INDUSTRY	9
Social objectives of promoting small-scale industry	9
Economic objectives of promoting small-scale industry	11
Economic and technological problems	12
Chapter 3	
PROGRAMMES FOR THE DEVELOPMENT OF SMALL-SCALE INDUSTRY ...	13
Role of the Government	13
Elements of a development programme for small-scale industry	15
Chapter 4	
THE INTERNATIONAL SYMPOSIUM ON INDUSTRIAL DEVELOPMENT: ISSUES, DISCUSSION AND RECOMMENDATIONS	25
The regional symposia	25
The issues presented to the International Symposium	27
The discussion	30
Recommendations approved	34

Chapter 5

**UNITED NATIONS ACTION FOR THE DEVELOPMENT OF
SMALL-SCALE INDUSTRY**

Typical assistance projects 3
Future developments 3

ANNEXES

**ANNEX 1 UNIDO ASSISTANCE IN THE FIELD OF SMALL-SCALE
INDUSTRY** 40
 A. Areas in which UNIDO can provide assistance 40
 B. Selected major technical assistance projects 40
**ANNEX 2 SEMINARS, SYMPOSIA AND WORKING GROUPS ORGANIZED
BY UNIDO OR BY THE UNITED NATIONS PRIOR TO THE
INCEPTION OF UNIDO** 44
**ANNEX 3 SELECTED LIST OF DOCUMENTS AND PUBLICATIONS ON
SMALL-SCALE INDUSTRY** 46

INTRODUCTION

The focus of this monograph is the small factory and what must be done to modernize it and make it more competitive with other manufacturing enterprises. The sector made up of small factories is generally referred to as "small scale industry", but the term is often applied also to any small manufacturing concern in which a relatively small amount of capital is invested, whether it uses factory methods of production or not. Non-factory industry includes both the traditional and modern artisan establishments. The term "small scale industry" is invariably used to define all types of establishment operated on a small scale. It is neither possible nor desirable to attempt to establish uniform international criteria to define the sectors of "small" or "small scale" industries. Factory industry can generally be distinguished from non factory industry by the degree of specialization of labour. Small factories can generally be distinguished from large factories by the smaller amount of capital employed and the absence of a middle management group.

The importance of small scale industry in industrialization is gaining increasing recognition in developing countries. Many of them have studied the handicaps of small establishments and have introduced special programmes to help existing enterprises and to promote new ones. They have obtained guidance and assistance from the United Nations agencies, including the United Nations Industrial Development Organization, in implementing such assistance programmes. From the discussions on this subject held at the International Symposium on Industrial Development in Athens and the regional symposia held earlier in Manila, Kuwait, Santiago and Cairo, it was clear that developing countries and several industrially advanced countries attached special importance to the development of competitive small-scale industry. In the majority of countries which sent delegations to the International Symposium, small-scale industry represented an appreciable proportion of the total number of manufacturing enterprises, the employment and the value added in industry. However, in countries in an early stage of development, there are generally a few large-scale enterprises on the one hand and a large number of artisan and handicraft workshops on the other.

The problem in many countries is to establish a new industrial sector consisting of small factories which are sufficiently modern to be viable. Other countries which already have small scale industry are seeking to increase the efficiency of existing enterprises.

Chapter 1 discusses the problems of small scale industry in developing countries. All factory enterprises, large and small, suffer from the basic handicaps that they lack technical skills and access to technological information and capital. The small factory, because of its inherent economic weakness, suffers from some additional handicaps. For example, large enterprises often provide for themselves at least some of the infrastructure required, such as electric power. The smaller enterprise is generally dependent upon the existing infrastructure. The smaller enterprise is less likely under present conditions to persuade foreign firms to make licensing arrangements or to provide technical assistance or capital. Larger enterprises find it less difficult to acquire and develop land. The industrial development policy instruments used by the Government are more likely to be designed to deal with large than with smaller enterprises. Thus the position of the small enterprise in many developing countries is particularly difficult.

Chapter 2 describes the aims of Governments in promoting small scale industry in developing countries. The following are the more important of these:

- Small industrial enterprises provide an effective means of stimulating indigenous entrepreneurship;
- They can channel the skills of traditional craftsmen into new lines suited to modern economy;
- They help with the unemployment problem since many small industrial establishments lend themselves to capital-saving methods;
- They make it possible for the growth of industry to be less concentrated geographically;
- They assist in diversification of the industrial structure.

While small enterprises, both factories and artisan workshops, have some distinct advantages, they also have limitations. For example, they may suffer from the diseconomies of small-scale operations and may be wasteful of capital; they require a larger number of capable entrepreneurs and managers to achieve a given amount of production and employment; and they are less able to attract or to train the skilled workmen required.

In some cases, in spite of their inherent disadvantages, small-scale

enterprises are competitive with large-scale ones. The main objective in promoting small industry should be to encourage enterprises of this type.

The assistance programmes best suited to small-scale industry, and the role of the Government in development of such industry are discussed in *chapter 3*. Governments in developing countries have to assume certain responsibilities for providing the services and facilities urgently required.

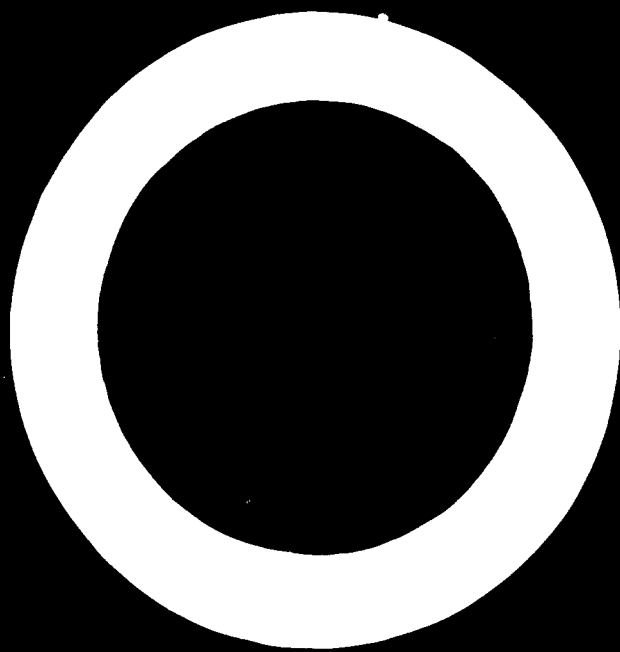
In the first place, Governments can adopt an industrial policy to encourage the healthy development of enterprises of all sizes which complement each other closely. Secondly, they can arrange pre-investment studies and surveys in order to help prospective entrepreneurs to make the right choice of industry and location. Thirdly, there should be a workable definition of the term "small industry" in each country so that those who are to be the beneficiaries from a special development programme can be distinguished from others; and Governments should enforce such a definition through statute or administrative instructions. Finally, Governments should co-ordinate and integrate the different services and facilities provided for small-scale industry so that they are as efficient as possible.

It is not desirable that the Government should directly provide all the services and facilities required. Its role should rather be to provide leadership and to co-ordinate the various agencies concerned. The Government may, however, have to shoulder the responsibility through government-established agencies for certain services in the initial stages until private agencies come forward to provide them.

The important services and facilities required are: a sound industrial advisory service, including training schemes for entrepreneurs and managers; credit on reasonable terms; and factory accommodation with supporting services and utilities. These are discussed in *chapter 3* under the subheadings "Industrial Extension Services", "Financial Assistance to Small-scale Industry" and "Industrial Estates".

Chapter 4 gives an account of the issues presented to the International Symposium, the discussions held and the recommendations approved relating to small-scale industry. It also summarizes the main conclusions and recommendations on this subject of the four regional symposia which preceded the Athens Symposium.

United Nations action for the development of small-scale industry is discussed in *chapter 5*, which also outlines possible future developments in UNIDO's activities in this field.



SPECIAL PROBLEMS OF SMALL-SCALE INDUSTRY DEVELOPMENT

A lack of indigenous entrepreneurial initiative for industrial development is a characteristic of most developing countries. Limited resources of capital and of skilled labour, a lack of technological and managerial knowledge and limited markets are important handicaps to the acceleration of industrial development.

For large industrial establishments, certain of the handicaps can be alleviated, if not removed, by foreign collaboration or assistance. This is less likely to apply to the smaller enterprises, so that their development must depend almost entirely on indigenous entrepreneurs. Herein lie their special problems.

There are two broad categories of small-scale industry. The first is the industry carried on by traditional craftsmen and artisans, some of whom may need assistance to modernize their skills, tools and techniques of production. The second is the industry carried on by the group of small manufacturing enterprises which produce a variety of consumer and simple producer goods as well as components and parts required by large industry. In both categories, the scale of operation is generally too small to be of interest to a foreign entrepreneur.

ECONOMIC PROBLEMS OF SMALL-SCALE INDUSTRY

Special credit facilities

The difficulty in obtaining credit is probably the most serious handicap of a small entrepreneur, as it limits his ability to obtain the services necessary to operate his enterprise. A small entrepreneur needs capital to acquire machinery, equipment and factory premises and for the day-to-day management of his business. His trouble is that there are seldom institutional credit agencies to take care of his needs. Even in countries

in which such credit facilities exist, a small industrialist may find it difficult to obtain financial assistance. He may fail to satisfy the strict criteria for eligibility generally used; he will have neither a bank account nor assets that enable him to qualify for a loan. Often, therefore, he has to depend on the loans that middlemen or moneylenders may be willing to offer. The terms of interest, security and repayment in such cases are much more exacting than those of the normal banking institutions. The small entrepreneur is often obliged also to pay higher prices for raw materials or accept lower prices for finished products as he may be financially dependent on the suppliers of raw materials or middlemen. He may go without an item of equipment which would have reduced the cost of his products or improved their quality merely because he cannot raise the money to acquire it. He is handicapped in selling his products as he may not be able to offer the credit terms given by large producers to the distributing agencies. Thus, financial difficulties are a handicap to the small enterprise at every stage of its operations and help to keep it weak.

Acquiring machinery and raw materials

It is difficult for small enterprises to purchase machinery, equipment and raw materials. In most developing countries, machinery and equipment have to be imported. The small entrepreneurs are the worst sufferers from the shortage of foreign exchange. Large industrial establishments may qualify for credit from foreign Governments or suppliers of foreign machinery and therefore suffer less. Small industrialists generally have to make do with second-best alternatives. They are also sometimes discriminated against in the official allotment of scarce raw materials. Preference is given to priority industries or to those that are specially categorized as industries important to national interests. Such priority industries are often large establishments, and small establishments find themselves at the end of the queue. Even in purchasing other raw materials, small industrialists are handicapped. Since their requirements as well as resources are limited, they cannot get the benefits of discounts and other concessions that go with bulk buying.

Factory accommodation

Acquiring suitable factory premises is another problem of small-scale industry. There is an acute shortage of rented accommodation in most developing countries and entrepreneurs are therefore obliged to pay

for the construction of their factory buildings. Apart from the difficulty in raising capital, the small entrepreneur has to face several other problems. The procedures for acquiring a suitable plot and getting utilities, such as water, power, gas etc., are generally more difficult for a small than for a large entrepreneur.

Trained manpower

A shortage of trained manpower is a common feature of all developing countries and presents special difficulties for small enterprises, which have to compete with large industry for the services of skilled workers but often fail to attract or retain such workers at the wages and terms of service they can afford to offer. They are therefore obliged to recruit unskilled workers and train them on the job. This may lower productivity. Small firms have limited training facilities and the skill of the workers therefore remains low.

PROBLEMS OF MANAGEMENT

Technological and managerial knowledge

Lack of technological and managerial knowledge is characteristic of small entrepreneurs. The managers of small establishments have to combine in themselves all the responsibilities and functions of management which in large industrial enterprises are a group responsibility. They are likely to lack experience or formal training in many of these functions. If they have any experience, it has generally been limited to one or two specialized aspects. Some entrepreneurs may have experience of the production line, but no knowledge of finance or marketing. In some cases, small enterprises are started by merchants with experience in marketing who may be quite ignorant of the techniques and tools of efficient production. The average small entrepreneur is uninformed about the right choice of industry or product lines, the amount of capital needed, the economic size of plant, the best equipment and materials, and the most efficient production processes. If he is already operating a business, he is ignorant of the advantages of new tools, raw materials and production techniques. A large industrialist can engage technical and management consultants to make innovations and adaptations to suit the changing requirements of the industry. But a small entrepreneur cannot afford such services and his enterprise therefore remains weak and backward.

Marketing

Small-scale industry also suffers from special difficulties in marketing. The entrepreneurs, as already stated, have to combine a variety of functions and it is often clear that they lack both the resources and the qualifications for efficient marketing. They cannot afford the cost of maintaining show rooms or display windows. Nor can they keep up contacts with distant markets or distribution agencies. Very often they are obliged to sell their products to middlemen who advance them credit at high interest rates. They have no way of knowing the changing market trends and making appropriate adaptations in their products. They may find themselves suddenly caught out by changes in demand and incur heavy losses because they are too slow in adjusting their production accordingly. For products that require after-sale services, small-scale industry is at a particular disadvantage compared with large industry.

Quality and standards

Small entrepreneurs are generally unaware of the importance of quality. Apart from their lack of knowledge about standards, they may not have the facilities. Their machinery and equipment are not always the best and they often lack the equipment for quality control and testing. In packaging, small enterprises are backward compared with the large firms. They also lack the resources and training needed to present their wares with proper consumer appeal.

OBJECTIVES OF PROMOTING THE DEVELOPMENT OF SMALL-SCALE INDUSTRY

Small-scale factory and artisan enterprises have been assigned a very important role in the economic development plans of most developing countries. Governments think that attempts to surmount the inherent difficulties in promoting them are justified because of the important social and economic objectives served by their promotion.

SOCIAL OBJECTIVES OF PROMOTING SMALL-SCALE INDUSTRY

Stimulation of indigenous entrepreneurship

In the developing countries, small factories are one of the most effective means of stimulating indigenous entrepreneurship. Individuals may develop a potential for entrepreneurship in large enterprises. However, owing to a shortage of capital, they may be able to realize this only through the establishment of a small company. Similarly, individuals from all walks of life can realize their drive toward entrepreneurship through the establishment of small companies. In general, one finds a much larger relative participation by the indigenous population in the management of small companies than in large ones.

Transformation of traditional industry

The development of the skills of traditional artisans is also an objective of small industry development. Certain traditional artisans may need only to improve their marketing ability as increased purchasing power improves the market, domestically and abroad, for their traditional artistic products. Other artisans should be encouraged to undertake new lines of service and manufacturing activities to fit in with the requirements of a modern economy.

In many developing countries, the majority of manufacturing establishments are of the traditional type—cottage or household industries, handicrafts etc. Modern technology and industrial processes are fast making many of these traditional crafts obsolete and uneconomic.

The introduction of electricity and of modern means of transport and communications, the emergence of new techniques and new products, and the rapidly rising standards of living have resulted in making many of these crafts surplus to the needs of the present-day economy. Modern factories are competing with the traditional craftsmen in supplying items like furniture, footwear, textiles and agricultural tools which were once their monopoly. A small-scale industry development programme offers some positive solutions to the problems created by the displacement of traditional crafts and skills by modern processes. The main solution lies in the modernization of the traditional crafts themselves.

One important objective of a small-scale industry programme should be the modernization of the skills of those traditional craftsmen who can no longer compete; they should be assisted to survive in competition with other types of industrial activity. Another objective would be to identify those skills and crafts which can be transformed into modern manufacturing activities and to help to assure a smooth transition from one to the other. The skill of the traditional cobbler, the carpenter and the blacksmith can be effectively used in the modern economy, and a promising line of development is to transform these traditional crafts into modern construction and service trades. There is a growing demand for repair services in the rural areas for a variety of goods such as irrigation pumps, tractors and diesel engines, and this need can often be met by proper retraining of the traditional craftsmen. Similarly, in urban areas, there is a steadily increasing demand for plumbers, electricians, mechanics etc.; here again the traditional craftsmen with proper training and tools may be able to play a useful role.

Creation of employment

Many small industrial establishments lend themselves to the use of capital-saving methods and small-scale industry is therefore recognized as one effective means of tackling the problem of unemployment. The effectiveness of small-scale industry in providing new employment opportunities should not, however, be exaggerated. On the one hand, since small-scale industry may be essentially modern in tools and techniques of production, with the advancement in technology and management

it is inevitable that the proportion of labour will be progressively reduced. However, with the growth of small enterprises, new opportunities for employment are created, and in view of the fact that small enterprises are dispersed, they provide employment opportunities in many different areas and thus reduce the flow of unemployed labour to the large towns.

ECONOMIC OBJECTIVES OF PROMOTING SMALL-SCALE INDUSTRY

Dispersal of industry

In most developing countries the essential facilities for the establishment of industry are available only in large cities where industry tends to concentrate. The establishment of additional enterprises in urban areas may overstrain their limited infrastructure and affect the economics of production for all types of industry. One remedy is to direct industrial development to areas outside the metropolis and in this respect small scale industry has some special advantages. Small enterprises can make use of smaller concentrations of raw materials and serve limited markets. They may be able to utilize lower-cost labour to manufacture components under subcontracting agreements with large enterprises in urban centres. On the whole, small-scale industry has greater locational flexibility and can be more easily used therefore to achieve industrial dispersal.

Diversification

Small-scale industry is particularly useful in the diversification of the industrial structure. Where the size of the demand for a particular product is limited, production on a small scale is often the only alternative to imports and thus small scale industry facilitates the process of import substitution. Similarly, large-scale industry may require components and parts which may be uneconomic for production on a large scale, but quite feasible on a small scale. This type of ancillary development of small-scale industry eventually contributes to the strength and stabilization of both large- and small-scale industry.

Utilization of resources

Small-scale industry helps to tap resources which would otherwise remain unused and thus accelerates capital formation. Very often the capital invested comes from family savings which would otherwise remain

idle, or from diversion of funds from luxury or non-productive expenditure. Small enterprises can often make use of raw materials available in certain localities or by products of large enterprises which would normally have remained unused.

ECONOMIC AND TECHNOLOGICAL PROBLEMS

It must not be inferred from the special advantages of small-scale industry outlined above that small factories can be started by anyone, anywhere, without reference to economic and technological considerations. For certain products, production on a small scale can be comparatively advantageous. For others, manufacture on a small scale will be a positive disadvantage and care should be taken to avoid small scale industry development in these areas.

Broadly, two groups of small enterprises should be encouraged. They are: industries where production on a small scale presents definite competitive advantages over production on a large scale; and industries where the disadvantages arising out of smallness are only temporary and the units concerned can be expected to overcome such disadvantages or grow larger in due course.

One of the major tasks of small scale industry development is to identify the types of industry which satisfy these criteria and help their development.

PROGRAMMES FOR THE DEVELOPMENT OF SMALL-SCALE INDUSTRY

ROLE OF THE GOVERNMENT

Owing to the basic weakness and handicaps of small-scale industry, and to the shortage of institutional agencies to provide the services and facilities needed, Governments in developing countries may wish to assume certain special responsibilities for its development.

Industrial establishments of all sizes are in need of support and assistance from the Governments of developing countries, but, as described in chapter 1, the need is greater in the case of small-scale industry, not only because of the special handicaps arising out of the smallness of the enterprises, but also because of the limitations of the individuals who normally own them.

The most important contribution Governments of developing countries can make towards the development of small scale industry is to adopt the policies and programmes which will facilitate the healthy growth of enterprises in this sector. Experience in some countries has shown that the special development measures which were adopted to promote large industry on the one hand and preserve traditional industry on the other, have militated against the growth of a healthy middle group of small factories. For example, in some developing countries, special financial incentives and protection are given to large industry and traditional crafts only. The result may be a disincentive to modernize crafts and an absence of positive incentives to establish small factories. The primary responsibility of the Government should be to work out a policy and programme for industry of all sizes—large and small factories as well as traditional and modern crafts—so that they can coexist and complement each other, enjoying full facilities for development.

A prerequisite of any special programme for the development of small-scale industry is that the group of enterprises justifying assistance should be identified. Herein lies the importance of an official definition

of small-scale industry based on precise and tangible criteria. It is obvious that there can be no uniform international definition, for the size of the establishments to be covered by the definition will vary from country to country depending on special circumstances.

In some countries which have introduced programmes for the development of small factories, the latter have been grouped with traditional crafts on the strength of one common factor, namely a relatively small scale of operation. But the two are entirely different types of industry: one uses highly productive specialized labour, the other a less productive artisan-apprentice type of labour. The two types therefore require different programmes and agencies for their promotion.

Different criteria for example, the number of employees, the capital investment, the volume of sales, or the consumption of power-are used in different countries to define the size of industrial establishments. Investment in fixed capital is generally accepted as a sound criterion though the amount of capital regarded as marking the dividing line varies considerably. It is generally recognized that the fixed capital ceiling should be sufficiently high so as not to discourage small factories from equipping themselves with modern machinery and tools. If the ceiling is fixed very low for purposes of definition, small enterprises may be reluctant to acquire even essential items of equipment for fear that further investment may bring them outside the scope of the development programme and that they will have to forego its benefits.

Some developing countries have statutory definitions for small-scale industry, while others have laid down such definitions through administrative instructions. In some countries, different criteria and ceilings are followed for different programmes of assistance. For example, there may be a lower capital ceiling for receiving loans and a higher one for admission to industrial estates or for enjoying technical services and facilities. Any definition should be flexible enough to allow easy adjustment to cope with the changing needs of industrial development. A good definition should be precise and clear without being rigid, and the adoption of it should be one of the first steps taken by a Government interested in the development of small-scale industry.

Another important role of the Government is to organize integrated programmes of assistance and to co-ordinate them with other measures of promotion. As has already been pointed out, small enterprises suffer from various handicaps and need a wide variety of services and supporting measures to overcome their difficulties. But the usefulness of these services lies in their being provided in an integrated manner. Isolated meas-

ures of assistance may remain ineffective unless they are supported by complementary action in other areas. For example, it will be of little value to provide financial assistance unless the entrepreneur is also given advice as to the efficient use of capital. Similarly, provision of good factory accommodation will not be useful unless the industry has also the requisite machinery and equipment for efficient production. Trained workers will not of themselves improve productivity unless the management is also adequately trained. The approach in small-scale industry development should be therefore to provide a "package" of all the essential services and facilities.

In order to provide assistance in an integrated manner, it is not necessary that the Government assume responsibility for organizing all the services. There is scope for organizing assistance through semi-public or private institutions. Government should try to induce such agencies to enter small-scale industry development, and the role of the Government should be limited to providing the programmes of assistance that other agencies may not be willing to undertake in the initial stages.

As private institutional agencies are organized for providing services and facilities to small-scale industry, the public agencies can progressively withdraw from such responsibilities. Similarly, assistance for individual units should be given only for the time it is needed. The success of a development programme is shown by the speed with which a weak unit is able to outgrow the stage of needing assistance from it.

The essential ingredients of a sound development programme are discussed in the following paragraphs.

ELEMENTS OF A DEVELOPMENT PROGRAMME FOR SMALL-SCALE INDUSTRY

Industrial extension services

One of the basic programmes of assistance required by small enterprises in the developing countries is a programme providing industrial extension services to transmit knowledge and skill to persons engaged in industrial activities. Such assistance is required in four main areas: economic, technical, management development and product improvement.

Economic assistance starts with the counselling required for pre-investment appraisal: for example, assessing the prospects of particular

industries, selecting a location, and estimating capital requirements and potential markets. After an enterprise has started, small entrepreneurs will continue to require assistance with credit, raw materials, labour, factory space, marketing etc. Existing firms are also in need of such counselling to diversify their production and improve their efficiency.

Technical assistance covers principally: guidance on the choice of raw materials, machinery and tools, and their most productive utilization. It includes advice on the installation of machinery, on plant lay-out, and on techniques of production, maintenance, and repair and testing.

Management development covers advice on all aspects of business, such as obtaining finance, production planning and control, marketing of products etc. It includes advice on sources of credit, tools, costing, book-keeping, advertising and publicity, subcontracting etc.

Product improvement covers improvement of design and quality and standardization.

Industrial extension work may take the form of individual counselling by a visit to the enterprise, a service providing information through pamphlets and publications, and regular courses of training. Training courses are generally organized for workers, supervisors and managers already engaged in small business with the object of upgrading their knowledge.

Industrial research is an essential supporting activity for an industrial extension service. Those who are engaged in technical counselling come across problems involving technological adaptation and innovation in respect of materials, processes and products; they must try to solve such problems themselves or refer them to special institutions of industrial research.

Industrial extension services are normally financed by the Government through special institutes which may combine the functions of an extension service with industrial research and training.

In industrially advanced countries, such services are generally available to enterprises of all sizes from a variety of institutions, private or semi-public, and the need for government initiative to organize a special agency to provide them will not usually arise. The absence of agencies to provide such services is a characteristic of most developing countries, and the Government may therefore have to step in to fill this role. The Government may wish to establish such institutions as

autonomous agencies serving all industry or, if justified, limited to small-scale industry. In view of the multifarious functions expected of an institution for the development of small-scale industry, and the speed and promptness with which services are expected to be rendered, it will be advisable to give such institutions maximum freedom and flexibility in their operation.¹

Institutions for the development of small-scale industry that are organized as part of a government department are not able to make adjustments and adaptations in their programmes of work as promptly as can autonomous or private agencies. Government rules and regulations regarding the recruitment of staff, their transfer, promotion etc., are generally too rigid to suit the type of work expected of an industrial extension agency. When, however, government initiative is essential for the establishment of such institutions, the better course may be to organize it as an autonomous agency.

Such extension institutions should receive policy guidance and even some financial assistance from chambers of commerce and of industry, industrial associations, commercial and development banks etc. The institution should organize programmes in co-operation with such agencies and thus enlarge and improve the services available.

The extension institution described above would generally serve all types of small-scale industry in the area. There is a limited scope for specialized institutions providing services for a single industry in the region, such as ceramics, textiles, woodworking etc.

Another special institution related to the industrial extension agency is the common service facility centre. Such centres may provide processing or manufacturing facilities for one single operation which will assist a number of enterprises of the same type, for example, electroplating, heat treatment etc. In many cases, such facilities can be made available by encouraging and assisting investors to establish such a small enterprise.

The training of industrial extension workers is one of the most important tasks of an industrial extension service. The shortage of trained personnel for industrial extension work is an acute problem in all developing countries. An extension worker has not only to be technically qualified but must also be trained in industrial service work and

¹ For further discussion of this subject, see Monograph No. 10, *Industrial Research*, in this series.

communication. An equally important requirement is that his knowledge should be kept up to date. Developing countries which have introduced development programmes for small industry must also, therefore, have programmes for training a cadre of extension workers. In-service training programmes and refresher courses in industrially advanced countries are useful methods for upgrading the skills and knowledge of extension personnel. Institutions providing extension services can also engage foreign consultants to provide training for the national staff. Where the number of persons engaged in industrial extension service is sufficiently large, there should be special national training institutions.²

In countries where industrial extension services are provided by government-assisted agencies, the question often arises whether they should be provided free or not. Small-scale industrialists are frequently not even aware of the need and value of obtaining such guidance; industrial extension agencies may have first to educate the industrialists to seek their help. It may be advisable to provide services free in the early stages of the development programme. However, as and when the small enterprises acquire efficiency and strength, the system of payment for services can be introduced. Payment may be introduced even at an early stage for certain services such as common service facilities.

Financial assistance to small-scale industry

There are broadly three problems in providing credit facilities for small-scale industry. The first is the shortage of credit institutions. The second is the handicaps of small enterprises which make them ineligible for credit from the normal institutions. The third is the inability of the small industrialists to make effective use of whatever credit facilities may be available to them.

Most developing countries lack special financial services for small enterprises. Their requirements of capital have traditionally been met by professional moneylenders or middlemen at very high rates of interest.

Even in countries where institutions exist for providing industrial credit, small units find it difficult to obtain credit because of their handicaps and weaknesses. Small enterprises are generally inefficient in their accounting and book-keeping and often find it difficult, therefore,

² For further discussion of this subject, see Monograph No. 15, *Administrative Machinery*, especially chapter 4, and Monograph No. 10, *Industrial Research*, in this series.

to satisfy the lending conditions of commercial banks. Since small enterprises are often owned by persons with limited resources, they are not in a position to satisfy the security requirements of banks. In general, commercial banks tend to adopt a conservative attitude in assessing the credit-worthiness of small enterprises and are inclined to impose stricter conditions on advances to them.

It may be necessary for the Government to give inducements to credit institutions to advance loans on more liberal terms to small enterprises. In fact, this would be a more useful and effective arrangement than for the Government to assume direct responsibility for credit assistance. Financial institutions are often unable to undertake the work of scrutinizing applications from small enterprises in order to assess their technical competence and eligibility for loans. They therefore adopt the easier and safer course of rejecting them. Since this is the case, the agency for small-scale industrial extension services might also assume responsibility for the technical scrutiny of applications.

One form of government support to commercial banks would be a government guarantee covering the risks of credit to small enterprises. Commercial banks would be encouraged to liberalize the terms of credit to small companies and to extend it to a larger number if they had the assurance from the Government that the extra risks they took in making such loans would be covered.

Providing credit on liberal terms is not in itself an adequate form of assistance to small enterprises in developing countries. The small entrepreneur is in need of guidance and counselling on the proper use of the credit. He needs information about what machinery or materials he should buy and where and what type of building he requires. He needs to know how large an inventory to keep, and on what terms and in what manner to sell his products. It is in such circumstances that supervised credit becomes important. Under this scheme, credit is integrated with technical and management assistance so that the small entrepreneur is able to obtain the maximum advantages from the loan he receives.

A very successful form of supervised credit is the supply of machinery on a hire-purchase basis, which has been introduced in several developing countries. The small-scale-industry promotion agency arranges to supply equipment on hire-purchase terms and assists the entrepreneur to improve the production processes so as to achieve more economical operation. He is often able to pay the instalments on the equipment out of the additional earnings from the new machine. This form of

supervised credit ensures that the capital made available for a small entrepreneur is used for the purpose intended.

Supervised credit may also take the form of assistance in the purchase of raw materials, the construction of factory buildings and the sale of finished products. Success lies in the effective co-ordination of the various services providing assistance and support to small enterprises.

Industrial estates

Industrial estates have proved to be an effective method of encouraging the establishment, expansion and modernization of small-scale industry in developing countries. An industrial estate is a planned group of industrial enterprises offering factory buildings and a variety of services and facilities to the occupant. Grouping facilitates some of the economies of scale and contributes to efficiency of specialization which usually obtains only in large industry. Efficient division of labour is possible in an estate through inter-trading and inter-servicing among the occupants. The grouping of industrial units in one place also facilitates co-operation in the purchase of raw materials, the sale of finished products, the organization of transport facilities etc.

There may be justification in many estates for providing a variety of services and facilities. The availability of standard factories on a rent or hire-purchase basis is an inducement to firms of limited financial means. Even when a small entrepreneur has the financial means to construct his own factory building, he encounters difficulties in acquiring a suitable plot, getting the building plans approved by municipal and other local bodies, arranging power, gas, water, transport etc. In a developing country these difficulties are so formidable that a small entrepreneur is often obliged to carry on production in whatever premises are available to him. Apart from reducing the efficiency of production, such unplanned growth of small enterprises leads to the creation of industrial slums, which affect the economy of the region as a whole. An industrial estate solves for the entrepreneur many of his pressing accommodation problems and helps in the planned relocation of industries in a region.

The availability of an industrial extension service on an estate is another important inducement to the small entrepreneur, providing him with day-to-day guidance. Further, the organization of an extension service can be arranged more efficiently and economically in an industrial

estate where a large number of small units are located. Common service facilities, such as a maintenance and repair shop or a testing laboratory, can operate more successfully on an estate where there is a concentration of factories requiring their services. An industrial estate is also ideally suited to the operation of supervised credit schemes. Commercial banks often find it convenient to locate a branch on the estate. Scrutiny and quick assessment of the eligibility of applications for loans, and proper supervision of the use of such loans, are easier when industrial enterprises are located on an estate.

An industrial estate may also be useful in helping the growth of ancillary relationships between small-scale industry and large industry. A large industrial unit may require a variety of components, parts and spares on a subcontracting basis; it is easy to organize their production when the units are located together in an estate which also provides land for large enterprises.

Industrial estates play a useful role in regional development programmes and in the planned dispersal of industries. In most countries, balanced regional development is one of the objectives of industrial development. Governments offer special inducements to steer industries away from over-populated and over-industrialized centres to relatively less developed areas. These incentives generally take the form of concessions on tariffs and taxes and the granting of special subsidies and loans. Provision of factory accommodation with supporting facilities through industrial estates has proved a successful means of encouraging industrial decentralization.

Industrial estates are also useful in programmes for planned urban development. The problem of rapid urbanization is acute in most developing countries: the tendency is for manufacturing activities to concentrate in one or a few urban centres. In the absence of even the minimum infrastructure in other areas, industrial estates help in maximizing the use of land and achieving economies in the provision of urban services and utilities. When new suburban sectors or towns are developed, industrial estates help to provide an industrial base and to diversify opportunities of employment. They assist in regulating how people settle in industrial and non-industrial zones and in using the facilities of the area economically for production purposes.

In view of the promotional role which industrial estates have to play in the development of small-scale industry, it may be necessary for the Government to take the initiative and responsibility in the planning, establishment and management of at least the first estate. This will be

all the more necessary since in the early stages of industrial development there may be no special agency to undertake such responsibility.

Some Governments offer factory accommodation at concessional rents in the early stages; losses involved in such operations are borne by the Government as part of the promotional responsibilities.

Industrial estates may be sponsored by co-operatives or associations of industrialists, chambers of commerce or local bodies such as municipalities or corporations. The Government may wish to encourage non-government agencies to undertake such ventures by giving them financial support or by providing technical services on the estates. Even when the estates are started by the Government, adequate inducement should be offered to the occupants to take over responsibility for them in due course. Factories may be offered on hire-purchase terms or for outright sale to the tenants, and those who rent factories may be encouraged to take them over on a hire-purchase basis when they are able to afford it. An early transfer of the estates to the occupants would enable the Government to recover the investment for use on other projects.

Various types of industrial estates have been established in industrially advanced and developing countries and since the estate suited to a particular area would depend on the special local needs and circumstances, it is not possible to lay down uniform criteria for them.

An industrial area is a modification of the industrial estate. The industrial area is a tract of land developed for the use of a group of industrial enterprises according to a comprehensive plan. An enterprise which is allotted a plot in the area is responsible for constructing its own factory building. Providing a developed plot is in itself a service to an industrialist but it may not prove adequate to stimulate the growth of indigenous enterprises. Small industrialists in particular would need ready-made factory buildings and other supporting services; it may, therefore, prove necessary to adopt the policy of building factories to meet demand.

The need for thorough surveys and feasibility studies to assess the economic, engineering and physical factors involved in siting and planning an estate can hardly be exaggerated. Experience has shown that, in developing countries, industrial estates which were started without proper feasibility studies have turned out to be failures.

The factory accommodation provided on industrial estates may be either general purpose or custom-built. The general purpose or standard type of factory can meet satisfactorily the requirements of the majority of tenants. The special advantage of estates with the standard type of

factories is that standardization leads to certain economies in construction.

In industrially underdeveloped countries, the existence of the standard type of factories serves to create a demand for better accommodation. Custom built factories are provided in special cases when the manufacturing operation requires a special building. The most flexible arrangement would be to combine in an estate both general purpose and custom built factories.

The most common estates are those which provide factory accommodation to all industries, subject to the usual restrictions on "obnoxious" industries or on very heavy consumers of power, water etc.

Specialized industrial estates include: "single trade estates", which provide accommodations exclusively for units in the same industry group; "functional estates", in which the functions of the industry are subdivided among a number of small units, "nursery estates", which are devised to offer more space to small units as they grow; "ancillary estates", for small units working as subcontractors to large industry, "free zone estates" for small-scale export industries, and "flatted factories" or multi-storeyed factories for small units located in urban areas where land suitable for industrial use is scarce.

An estate will be most effective if it forms an integral part of an over-all development programme for the region where it is located. Industrial estates require good transport and communication facilities and economic arrangements for supplies of water, electricity, gas and other utilities. The existence of facilities such as residential accommodation, schools and hospitals in the immediate neighbourhood is an important factor affecting the success of the estate. The authority responsible for establishing an estate may not be able to provide such supporting facilities from its own resources; co-ordination is required with other plans for regional development so that they can complement each other.

The limitations of the industrial estate should not be overlooked. It will not by itself be able to provide the essential facilities required for industrial development. Industrial estates can accommodate only a small proportion of all the small enterprises in a country. An industrial estate can be established only in selected locations, while there is scope for the establishment of individual small enterprises in many locations. Even after an industrial estate programme is fully implemented in a country, the majority of small enterprises will remain outside but they

will still require promotional services and support. It will therefore not be possible for the small scale industrial extension services to confine their activities to industrial estates. The establishment of industrial estates should, therefore, be viewed as a part only of the general programme to promote small scale industry and not as a substitute for it.

THE INTERNATIONAL SYMPOSIUM ON INDUSTRIAL DEVELOPMENT: ISSUES, DISCUSSION AND RECOMMENDATIONS

The issues, the discussion, and the recommendations approved by the Symposium are presented in this chapter. The regional symposia which preceded the Symposium also devoted considerable attention to the development of small-scale industry, and a review of the regional discussions is given below.

THE REGIONAL SYMPOSIA

The Asian Conference on Industrialization, held in Manila in 1965,² stressed the importance of identifying those trades and crafts which had scope and potential for transformation into efficient modern small factories. The conference considered that the development and promotion of small-scale industry in the region faced problems of technology, management, finance, marketing, raw materials and factory accommodation. It identified four major fields in which countries of the region could be assisted in the development of small-scale industry: formulation of suitable industrial policies; formulation of an integrated programme; planning and establishing suitable institutions and strengthening existing institutions to implement policies and programmes for small-scale industry development; and provision of experienced experts to improve the technological and managerial levels of various branches of small-scale industry. Based on the experience of some of the countries of the ECAFE region, the conference recommended that the main types of assistance to small-scale industry should consist of industrial advisory services, management training, industrial research services, development financing, industrial estates, common facility services, marketing aids and facilities for ancillary development.

² United Nations, *Report of the Asian Conference on Industrialization, Manila, Philippines, 1965*, New York, 1966, ID/CONF.1/R.R./2.

The Symposium on Industrial Development in Arab countries, held in Kuwait in 1966,⁴ recognized the importance of a precise definition of modern small-scale factory industry in order to distinguish this sector from traditional crafts on the one hand and medium- and large-scale industry on the other. It recommended that the Arab States encourage the exchange of information on industrial statistics and technical experience relating to small-scale industry and on legislative and other measures adopted by several States to promote such industry. The Kuwait Symposium recommended the establishment of industrial zones, the granting of credit facilities on reasonable terms, the training of workers, technicians and managers and the provision of technical services as being specially important for the development of small-scale industry in the region.

The Symposium on Industrial Development in Latin America, held in Santiago in 1966,⁵ noted that the economic and social framework within which small-scale industry had developed in Latin America differed from that in the developed countries. The starting point had been an artisan sector concerned mainly with the production of products requiring simple manufacturing methods to meet the needs of regions far from the main centres of consumption and of inhabitants with low incomes. The Symposium agreed that future industrialization policies must reckon with the important role that small-scale industry had to play from the social standpoint by making it possible for a substantial proportion of the labour force to take part in manufacture, particularly of articles which could be produced efficiently with fairly small investment. The Symposium also recognized that, in countries where development was at an intermediate stage, it might be necessary to encourage small-scale industry to extend its activities by means of subcontracting in order to supplement the production of large industry.

The Symposium on Industrial Development in Africa, held in Cairo in 1966,⁶ recognized the special importance of small-scale industry in national economies and the need for rapid development. It was noted that small enterprises generated employment, increased the production of a number of consumer products, and required a relatively small capital investment. Owing to the use of comparatively simple techniques,

⁴ United Nations, *Report of the Symposium on Industrial Development in the Arab Countries, Kuwait, 1966*, New York, 1967, ID/CONF.1/R.R./4.

⁵ United Nations, *Report of the Symposium on Industrial Development in Latin America, Santiago, Chile, 1966*, New York, 1966, ID/CONF.1/R.R./3.

⁶ United Nations, *Report of the Symposium on Industrial Development in Africa, Cairo, 1966*, New York, 1966, ID/CONF.1/R.R./1.

small enterprises were considered to be particularly suitable for African entrepreneurs. Small enterprises could contribute to the decentralization of urban areas and provide employment opportunities for displaced traders. The information that some countries in Africa were planning to establish small enterprises as adjuncts to schools was welcomed as facilitating practical industrial training concurrently with formal education.

THE ISSUES PRESENTED TO THE INTERNATIONAL SYMPOSIUM⁷

In nearly all developing countries, Governments provide, in their industrialization policies and programmes, for the promotion of small-scale industries. The extent of resources allocated to the development of small industry on the one hand, and of large-scale and medium-sized industry on the other, may vary considerably from one country to another. There are also wide variations in the range of services and measures of promotion included in national development programmes. In a few countries, comprehensive programmes have been adopted, integrating all or most of these measures: stimulation of entrepreneurship; technical, managerial and financial assistance; industrial estates; common service facilities; training; and various incentives and measures of protection. In others, measures are introduced piecemeal, without being supported by complementary programmes, and their effectiveness is frequently impaired. In some cases, incentives are calculated to favour either large industry or artisan workshops and in either case small-scale industry is neglected. While the amount of resources to be allocated to small industry development out of total resources for industrialization is a matter for each country to decide, any country adopting a development programme for that sector should see to it that the main components of the programme are complementary to each other. To implement such a programme, one or several appropriate institutions, such as a special department of the Ministry of Industry, or of an industrial development corporation or bank, a small industry service institute, an industrial extension centre etc., should be set up. It is suggested that the discussion on small-scale industry be concerned with the extent of resources to be allocated to small industry development, the formulation and implementation of integrated policies, the establishment of national promotion and assistance institutions and the assistance required from the United Nations for all these areas.

⁷ From *Issues for Discussion: Small-scale Industry, 1967, ID/CONF.1/A.23* (mimeo.).

The following points are proposed for discussion:

- (a) Industrial extension services;
- (b) Financing;
- (c) Industrial estates;
- (d) Co-operative action and subcontracting;
- (e) Regional and subregional centres.

Industrial extension services

A major element in small industry development programmes should be the provision of industrial extension services similar to those which have been successfully applied for the promotion and modernization of agriculture. Industrial extension services are aimed at providing guidance and assistance in all aspects of the planning, construction, operation and management of a small industrial enterprise; they are often aimed at stimulating entrepreneurship and improving the operation and modernization of existing enterprises. The agencies providing extension services have an active promotional role: they should not only provide consultations and advice to all comers, but also take action on their own initiative and undertake field work. Of particular effectiveness are intensive promotion campaigns and intensive modernization campaigns, jointly organized and carried out by extension workers, officers of financing institutions and government officials. Especially in countries at early stages of industrialization, the provision of industrial extension services—closely related to financing—should be the first step for promotion of small-scale industry. It is suggested that the discussion be concerned with the programmes and centres of industrial extension and the international assistance required in this field.

Financing

The obstacles to the financing of small-scale industries are well known. Besides the general scarcity of financial resources, which affects industries of all types and sizes, commercial banking institutions are reluctant to grant loans because the risks of lending to small and weak enterprises are relatively high; the security offered is often inadequate, the loans are modest in size, and the cost of processing them is relatively high. The means of overcoming these difficulties are either to create public financial institutions with sufficient resources and liberal lending policies or to ensure the co-operation of commercial banks through credit guarantee and insurance schemes, or both. In either case, the condition for effective operations is that technical and managerial

assistance must be closely linked to financial assistance, both at the stage of applications for loans and at the stage of use of funds. To remedy the shortage of national resources for small industry financing, consideration has been given in recent years to channelling resources from international and regional development banks to national financial agencies. It is suggested that the discussion be concerned with measures for making funds available from international, regional and national sources for the financing of small industries and with co-ordinating international and national technical assistance for the formulation and implementation of supervised credit programmes.

Industrial estates

In the past five or six years, the United Nations Secretariat has encouraged, through direct advisory services to Governments, technical co-operation projects, seminars and publications, the establishment of industrial estates as one of the most effective means of stimulating entrepreneurship and modernizing small industries, facilitating industrial decentralization and regional development, and regulating urban planning. A number of developing countries have set up industrial estates and areas but some of them have experienced difficulties in planning, constructing or operating them; in other countries, projects are at various stages of planning and construction and progress is sometimes hampered by financial and technical obstacles. There is evidently much scope for increased technical and financial co-operation in this field and it is proposed that the discussion at the Symposium be concerned with means of intensifying technical co-operation projects and of expanding financial resources for the establishment of industrial estates and areas.

Co-operative action and subcontracting

Because of their handicaps, small industries are usually unable, especially in countries at early stages of industrialization, to formulate and carry out self-help programmes and their promotion should to a large extent be the responsibility of the Government. In countries having reached a higher level of industrialization, some assistance may also be provided by industrial associations, chambers of commerce and industry or co-operatives, and by large industries for which small units work as subcontractors. Since in all countries government promotion is aimed at supporting small industries through the initial stages and leading them towards effective management, high-quality, low-cost production and self-sustained growth, the scope for complementary assistance,

self-help and co-operative action is bound to increase: such action should be encouraged and facilitated by the Government. It is suggested that the discussion be concerned with measures for stimulating the participation of private agencies in facilitating co-operative action among small enterprises, and promoting subcontracting relationships between large and small industries.

Regional and subregional centres

In recent years, active consideration has been given in certain regions, especially in Africa, Latin America and the Middle East, to the establishment, with assistance from UNIDO, the regional economic commissions and offices, UNDP (Special Fund) and other organizations, of regional and subregional centres for the development of small-scale industries. The principal functions of such centres would be: to provide technical assistance to member countries in the formulation and implementation of policies and programmes; to train officials of service, promotion and financing institutions in small industry development techniques; and to undertake research, in the form of feasibility studies and pre-investment surveys, on which technical assistance and training action would be based. It is suggested that the discussion be concerned with the establishment of regional and subregional centres, the international action required and assistance needed from the United Nations.

THE DISCUSSION

It was apparent from the discussion in the Symposium that some countries had laid down criteria for distinguishing small-scale factory industry from large industry. The criteria were often based on capital investment and employment, but they varied considerably from country to country. While no consensus emerged as to what constituted the best criteria for defining small-scale industry, there was general agreement that small enterprises that are in need of special measures of promotion and assistance should be distinguished on the basis of a pragmatic definition. At the same time, the Symposium was clearly of the view that the policy should be to develop small-scale industry side by side with large industry and not instead of, or in preference to, large-scale or medium-sized industry. The scope for development of industry of different types and size varied according to: the national and human resources of the country; the capital available for investment; the size

of the market and its prospects of development; and other considerations, both economic and social. Small enterprises were, no doubt, in need of help in all aspects of their establishment, operation and management, but the various measures of promotion and assistance should be part of an integrated development programme which, in turn, should be part of the over-all industrial development programme of the country.

There was general recognition of the importance of selectivity in government promotion policies. The efforts of Governments should not be aimed at artificially maintaining inefficient establishments, and care should be taken to avoid promotion measures that would result in conferring certain advantages on enterprises merely for remaining small. The role of the Government should be limited to the extent and time needed to help small enterprises to stand on their own. The identification and selection of suitable small-scale industrial projects was, therefore, of great importance in any programme of development of small-scale industry since the ultimate objective should be to develop a group of viable enterprises.

There was general agreement on the advantages of securing foreign experts to supplement the national extension services. However, the limitations and difficulties of providing extension services through foreign experts were also recognized. Foreign advisers often had difficulties in communicating effectively with small entrepreneurs in developing countries. They also needed considerable time and effort to appreciate the problems and working methods of small entrepreneurs.

One practical suggestion made was that UNIDO should initiate a programme of rotating its experts among countries in the same stage of development and facing the same types of problem.

Another proposal was that industrialized countries should organize and finance training programmes for qualified personnel from developing countries, including fellowships for observation and study abroad for small entrepreneurs and extension service personnel.

It was also proposed that industrially advanced countries should provide associate experts to serve with the experts provided by the United Nations agencies. It was noted that some Governments have already sent such associate experts to the field at their own expense or through the United Nations. In this connexion, the Symposium noted with interest that one industrially advanced country was providing training for experts who might be sent to developing countries for small-scale industry promotion work.

There was a suggestion that preference should be given by UNIDO and other United Nations agencies to experts from developing countries as such experts would have direct knowledge of the problems of developing countries. Another suggestion was that the services of universities should be enlisted in providing advisory services to small-scale industry and in solving problems requiring research. There was general recognition of the importance of the role of industrial associations and chambers of commerce in providing industrial extension services.

The Symposium noted the importance of management development in small-scale industry promotion and recognized it as one of the important objectives of industrial extension services. At the same time, it was observed that industrial extension centres should function only in an advisory capacity and should not encroach on the managerial responsibilities of the entrepreneurs.

On the question of financing, the Symposium recognized that small-scale industry suffered from two interrelated handicaps in developing countries. The first was the general scarcity of financial resources which affects industries of all sizes; the second was the well known reluctance of commercial banks to lend to small enterprises. The first obstacle could be overcome in part by channelling financial resources from international and regional financial institutions, such as the regional development banks, to national financial agencies. The second could be solved by linking technical assistance and management guidance to financial assistance.

The Symposium noted that liberalized credit facilities were being offered to small enterprises by several Governments. There was a suggestion that the International Bank for Reconstruction and Development (IBRD) and other such international institutions should help the developing countries in setting up development banks to serve small-scale industry. However, the general view was that in most countries there might be no need to establish special new institutions for that purpose. Existing financial institutions should be given the necessary assistance to extend credit facilities to small enterprises on liberal terms. In that connexion it was observed that the co-operation of commercial banks for the financing of small-scale industry could be ensured through credit guarantee schemes administered by the Government.

The Symposium evinced great interest in industrial estates as an instrument of small-scale industry development. It was noted that a number of developing countries had established industrial estates and industrial areas and that UNIDO had an active technical assistance

programme related to the planning and establishment of such projects. There was a suggestion that UNIDO should assist developing countries in meeting the foreign exchange costs of establishing industrial estates and workshops.

There was general recognition of the need to provide comprehensive assistance including technical guidance, credit facilities, management counselling etc., to the units on estates in order to maximize their productivity.

The Symposium also noted the limitations of industrial estates. The mere provision of an industrial estate would not be adequate to promote the development of small-scale industry. There was, however, general agreement on the usefulness of industrial estates, supported by other schemes of assistance, in stimulating entrepreneurship and modernizing small enterprises. They also had a useful role in facilitating industrial decentralization, regional development and urban planning.

It was recognized that, under certain conditions, industries of all sizes and types could be grouped, and a variety of facilities and services could be effectively and economically provided. Such grouping of enterprises made it possible to achieve economies in development and building costs, flexibility in land use, efficiency in administration, and rational urban planning. It also facilitated inter-industry relations, especially in the form of subcontracting between large and small undertakings.

The Symposium considered the role of regional and subregional centres for the promotion of small-scale industry. It was noted that active consideration had been given in certain regions to the establishment of regional and subregional centres for providing technical assistance to member countries in formulating and implementing policies and programmes for developing small-scale industry, training of extension personnel, and undertaking research, feasibility studies and pre-investment surveys. There was scope for extending such centres to other regions or subregions, but their establishment called for the closest co-operation between the countries concerned, the United Nations regional economic commissions and other United Nations organizations. While Governments might set up their own national institutions for the development of small-scale industry whenever they found it necessary, it was felt that, in view of the shortage of trained personnel and other resources, the establishment of such institutions on a regional basis would prove to be more economical and efficient. They would also be useful in providing much needed technical support to national institutions.

Attention was also focused on the scope for co-operative action among small industrialists. It was felt that in countries which were in the early stages of industrialization small enterprises might not be able to organize self-help programmes, but the policy of the Government should be to encourage co-operatives and associations of small-scale industry to undertake such responsibilities progressively. Considerable interest was expressed in the possibilities of assisting small enterprises to become subcontractors for large establishments. A healthy development of such relationships presupposed the existence of large and small plants manufacturing complementary products and an effective machinery for bringing together supply and demand. The Symposium noted with keen interest the working methods of subcontracting exchanges in some of the industrially advanced countries of Europe. These exchanges were clearing houses for information about the parts and components and processing and finishing operations required by large enterprises and about the products manufactured and the trade specializations of small enterprises. The information, which was obtained by regional surveys, was kept on card indexes and was continuously brought up to date.

It was suggested that UNIDO should arrange technical assistance to developing countries in setting up such exchanges. In their absence, industrial extension agencies should provide information on subcontracting opportunities, facilitate the negotiation of contracts, and help in the execution of orders, particularly as regards quality and prompt deliveries. Another method of encouraging subcontracting relationships was the organization of subcontracting fairs at which the parts and components required by large industries were exhibited. Ancillary industrial estates might also be set up in the vicinity of the large plants for small enterprises engaged in subcontracting.

RECOMMENDATIONS APPROVED^a

Governments should have recourse as they may judge appropriate to the UNDP for assistance in the establishment or strengthening of institutions for the promotion of, and assistance to, small-scale industries, such as special departments of industrial development corporations or banks, small industry service institutes, industrial extension agencies and industrial estates.

^a *Report of the International Symposium on Industrial Development, Athens 1967 (ID/11)* (United Nations publication, Sales No.: 69.II.B.7).

International financial organizations, such as the World Bank and the Industrial Development Association, and regional financial institutions, such as the Inter-American Development Bank and the African and Asian Development Banks, should be requested to review the possibility of increasing their support for financing industrial estates. They should also review the possibility of channelling funds towards national credit agencies for extending loans to small-scale industries.

Governments of requesting countries intending to establish or strengthen national credit agencies for small-scale industries or to adopt supervised credit schemes were recommended to have recourse as they might judge appropriate to technical assistance in these sectors also.

Within the framework of national priorities and situations, Governments should consider requesting technical assistance

To enable official industrial associations and official chambers of commerce and industry to provide extension services to small-scale industries;

To facilitate the establishment of co-operatives and other groups of small producers for common programmes such as marketing, export promotion and other self-help schemes, and for the establishment of subcontractors' exchanges.

Industrialized countries, in cooperation with UNIDO and other international institutions as appropriate, should review possible measures to increase the supply and improve the qualifications of experts in small-scale industry. These measures might include secondment of specialists by public agencies and large industries, organization of training programmes including study tours abroad, and increase in the number of associate experts.

**UNITED NATIONS ACTION
FOR THE DEVELOPMENT
OF SMALL-SCALE INDUSTRY**

The programme of UNIDO for the development of small-scale industry is financed under various United Nations operational programmes in which UNIDO participates. These programmes are: the Regular Programme of technical assistance devoted to industry and financed from the United Nations budget (RP), the Special Fund component of the United Nations Development Programme (UNDP/SF), and the technical assistance component of the United Nations Development Programme (UNDP/TA). UNIDO receives, in addition, voluntary contributions from Governments for the financing of the Special Industrial Services programme (SIS) a programme limited largely to urgent short term missions. Some projects may also be financed from Funds in Trust, deposited by Governments for specific projects, or other direct voluntary contributions. In all these programmes assistance is given only at the request of the Government concerned. Requests for regional projects have to be submitted by a group of Governments.

The technical assistance component of the UNDP is the broadest and most diversified of the assistance programmes organized by the United Nations and its agencies. Under this arrangement, the United Nations mainly provides expert services and fellowships for training, although some equipment may be supplied for demonstration purposes as part of the technical assistance programme.

When the services of a team of experts are required for a longer period on a major project, they are generally provided through the Special Fund component of the UNDP. Special Fund projects require a substantial contribution by the Government, often in the form of land and buildings, services of national personnel, indigenous equipment etc. The responsibility for implementing Special Fund projects in small-scale industry is normally that of UNIDO or the International Labour Organisation which serve as the executing agencies.

The regular programme of United Nations technical assistance is planned on an annual basis and is financed from the budgetary resources of the Organization. This programme usually covers the cost of experts on a short term basis. Assistance under SIS is available for the formulation of projects, for project evaluation, for enterprises whose production, management or marketing needs improvement, or for preliminary activities which might lead to a Special Fund project.

TYPICAL ASSISTANCE PROJECTS

Some of the typical projects for which assistance is available under the various programmes of the United Nations are described below. Annex 1 to this monograph gives a list of the areas relating to the development of small scale industries in which UNIDO is in a position to provide technical assistance, as well as a list of projects already implemented or being implemented with UNIDO help and others currently under discussion.

Policies, programmes and general promotion measures

Developing countries often require the advice of foreign experts in formulating policies and programmes for the development of small-scale industry. Sometimes assistance is needed in drafting legislation for small scale industry promotion. Such short-term services of experts are generally provided under the regular technical assistance programme and the technical assistance component of the UNDP.

Industrial surveys and feasibility studies

Most developing countries require the services of experts to conduct industrial surveys and feasibility studies and to train national personnel in this connexion. These studies may be directed to determining the scope and potential of particular industries or regions or to evaluating the usefulness of an assistance programme. Services of industrial economists or specialists in particular industries are obtained under the technical assistance component of the UNDP or under the regular programme of technical assistance.

Training of personnel for small-scale industry

Fellowships for training personnel engaged in small-scale industry development are available under the technical assistance component of the UNDP, the regular programme of technical assistance and the Special Fund component of the UNDP. The United Nations makes arrangements for the training to be provided in industrially advanced countries with the co-operation of Governments, training institutions or individual industrial units. The period of training varies in individual cases, but generally lasts about six months.

Institutions for small-scale industry development

The planning and establishment of institutions for the development of small scale industry may require the services of a team of international experts continuously for four to five years. Examples of such projects are the small scale industry service institutes, industrial advisory services, industrial research and development centres, and industrial estates. Assistance for such projects may be required at two stages—the planning and feasibility stage and the implementation stage. Often such projects are assisted through the Special Fund of the UNDP. The services of one or two experts may be made available for a short period in the initial stage to cover planning and feasibility studies. These experts assist the Government in determining the location of the project, drawing up the project report and, if required, in drafting a request to the UNDP for assistance. When the project is approved by the UNDP, the services of a team of experts under a project leader are made available to assist the Government in implementing the project and in training national counterparts.

Developing countries can also call upon the research and information programmes of UNIDO, which periodically organize regional and international seminars on important problems relating to small scale industry development, such as industrial estates, financing, technical services, subcontracting etc. Such seminars are attended by key personnel engaged in small scale industry development work in developing countries and provide an excellent means of training. UNIDO is also engaged in publishing a series of pamphlets on various subjects relating to small-scale industry development which are valuable sources of information for persons engaged in these tasks in developing countries.

FUTURE DEVELOPMENTS

UNIDO's activities related to small scale industry are expected to increase substantially in the future.

In the field, there will be an increasing number of major projects, such as industrial estates, industrial extension agencies, national and regional centres for small scale industry development, common service facilities, demonstration plants etc., which will be established or strengthened with the assistance of the UNDP/SF. Some of these projects will be planned and organized in close co-operation with the ILO and the United Nations regional economic commissions. New operations will be undertaken, such as assistance in establishing subcontracting exchanges, organizing supervised credit schemes and credit guarantees, and conducting intensive campaigns to promote the modernization of existing enterprises and the development of entrepreneurship.

Supporting activities such as promotional work, meetings and research may include projects under the following major programmes:

- Promotion of entrepreneurship,
- Industrial estates,
- Industrial extension services,
- Financing of small scale industry,
- Small scale manufacturing,
- Subcontracting between large and small industries;
- Common service facilities,
- Marketing and export promotion of small-scale industry products.

Annex 1

UNIDO ASSISTANCE IN THE FIELD OF SMALL-SCALE INDUSTRY

A. AREAS RELATING TO THE DEVELOPMENT OF SMALL-SCALE INDUSTRIES IN WHICH UNIDO IS IN A POSITION TO PROVIDE TECHNICAL ASSISTANCE

- Policies and programmes for the development of small-scale industries and industrial estates;
- Industrial surveys, feasibility and pre-investment studies;
- Promotion of new enterprises;
- Modernization of existing enterprises;
- Financing of small-scale industries;
- Establishment and operation of institutions and servicing facilities including research, marketing and extension services (assistance in technique and management);
- Training of entrepreneurs and workers;
- Planning, construction and management of industrial estates and industrial areas;
- Formulation of technical co-operation projects.

B. SELECTED MAJOR TECHNICAL ASSISTANCE PROJECTS

The projects listed below relate to the activities of the United Nations Industrial Development Organization since its establishment in 1967. The list excludes projects carried out under the predecessor organizations of UNIDO (the former Division of Industrial Development up to 1962 and the Centre for Industrial Development up to 1967). Since the projects are listed for illustrative purposes, the names of countries have been omitted. The respective programmes under which the projects are implemented are shown as:

SIS	Special Industrial Services of UNIDO
UNDP/TA	United Nations Development Programme, Technical Assistance Component
UNDP/SF	United Nations Development Programme, Special Fund
RP	Regular Programme

(1) *Projects implemented or under implementation by UNIDO in areas related to the development of small-scale industries*

AFRICA

- Small industries development programme and establishment of an industrial estate (UNDP/SF)
- Assistance in the operation of an institute of small-scale industries (UNDP/SF)
- Adviser on small-scale industries (UNDP/TA)
- Development and expansion of small-scale industries (UNDP/TA)
- Feasibility and pre-investment studies for small- and medium-scale industries (UNDP/TA)
- Formulation and implementation of policies and programmes for the development of small-scale industries (UNDP/TA)
- Advice on industrial policy and organization, and assistance in evaluating industrial projects (RP)
- Assistance in a survey of types of small-scale industries offering prospects of development (RP)
- Adviser on small- and medium-scale industries (RP)
- Feasibility studies for small-scale industries (RP)
- Development of industrial estates (RP)
- Development of small- and medium-scale industries (RP)
- Management of industrial estates and training programmes (RP)
- Establishment of a pilot industrial estate (SIS)
- Setting up of a workshop in an industrial estate (SIS)
- Programme for the transformation of artisan activities and the stimulation of new small-scale industries (SIS)

THE AMERICAS

- Adviser on policies and measures for the development of small-scale industries and handicrafts (UNDP/TA)
- Development of industrial estates (UNDP/TA)
- Development of small- and medium-scale industries (UNDP/TA)
- Small industry extension methods (SIS)
- Development of small-scale industries (SIS)
- Design and production of handicrafts (SIS)
- Furniture production methods and techniques (SIS)

ASIA AND THE FAR EAST

- Feasibility studies for the establishment of an industrial estate (UNDP/SF)
- Establishment of an industrial estate (UNDP/SF)

Assistance in a training programme for carpenters (UNDP/TA)
Development of small-scale industry (UNDP/TA)
Setting up of a handicraft centre (UNDP/TA)
Development of industrial estates (UNDP/TA)
Location of small-scale industry (UNDP/TA)
Evaluation of specific investment proposals related to an industrial estate project (SIS)
Feasibility study for establishing an industrial estate (SIS)
Small-scale industries and handicrafts marketing (SIS)

EUROPE AND THE MIDDLE EAST

Small industries development programme (UNDP/SF)
Fellowships in small-scale industries and industrial estates (RP)

- (2) *Projects in preparation or under discussion with Governments in areas related to the development of small-scale industries*

AFRICA

Four industrial estates (UNDP/SF)
Regional centre for small industries (UNDP/SF)
Development of small-scale industry and entrepreneurship (UNDP/SF)
Development of small industries (UNDP/TA)
Industrial estates (UNDP/TA)
Industrial extension services (UNDP/TA)
Industrial estates (RP)

THE AMERICAS

Centre for the development and service of small- and medium-sized industries (UNDP/SF)
Industrial estate (UNDP/SF)
Regional centre for the development of small-scale industries (UNDP/SF)
Small industries development (UNDP/TA)
Industrial estates (UNDP/TA)
Industrial extension services (UNDP/TA)
Subcontracting (UNDP/TA)

ASIA AND THE FAR EAST

Assistance to an industrial estate (UNDP/SF)
Small industries development (UNDP/TA)
Industrial estates (UNDP/TA)
Industrial extension services (UNDP/TA)

EUROPE AND THE MIDDLE EAST

Industrial estate (UNDP/SF)
Small industries development (UNDP/TA)
Industrial estates (UNDP/TA)
Industrial extension services (UNDP/TA)
Industrial estates (RP)

Annex 2

**SEMINARS, SYMPOSIA AND WORKING GROUPS ORGANIZED BY
UNIDO OR BY THE UNITED NATIONS PRIOR TO THE
INCEPTION OF UNIDO**

	<i>Location</i>	<i>Date</i>
Seminar on Industrial Estates in the ECAFE Region	Madras, India	November 1961
Seminar on Industrial Estates in the Regions of the Economic Commission for Africa	Addis-Ababa	December 1964
Consultative Group on Industrial Estates and Industrial Areas in Certain European and Other Countries in the Process of Industrialization	Geneva	October 1966
Consultative Group on Industrial Estates and Industrial Areas in Arab Countries of the Middle East	Beirut	October- November 1966
Seminar on Small Scale Industries in Latin America	Quito, Ecuador	November- December 1966
Interregional Symposium on Technical Services and Facilities for Small-Scale Industries	Vedbaek, Denmark	June- July 1967
Expert Group Meeting on the Development of Small-Scale Industries in the Arab Countries of the Middle East	Beirut	November 1968
Expert Group Meeting on the Role and Promotion of Subcontracting in Industrial Development	Paris	October 1969
Training Workshop on Extension Services for Small Industry in the West African Sub-region (in co-operation with ECA)	West Africa	<i>Proposed date</i> May 1970

	<i>Location</i>	<i>Proposed date</i>
Training Workshop on Extension Services for Small Industry in the East African Sub-region (in co-operation with ECA)	East Africa	June 1970
Expert Group Meeting on the Financing of Small-Scale Industry in Latin America (in co-operation with ECLA)	Latin America	November 1970
Group Training Programme for French-speaking Industrial Extension Officers	Brussels	1970
Expert Group Meeting on Small Industry Development in the Least Developed Countries	Vienna	1971
Training Workshop on Industrial Extension Services for Small Industry in the Central African Subregion (in co-operation with ECA)	Central Africa	1971
Meeting on Financing of Small-Scale Industry in Asia and the Far East (in co-operation with ECAFE)	New Delhi	1971
Group Training Programme for Spanish-speaking Industrial Extension Officers	Latin America	1971
Meeting on Marketing and Export Promotion of Small Industry Products	Vienna	1972

Annex 3

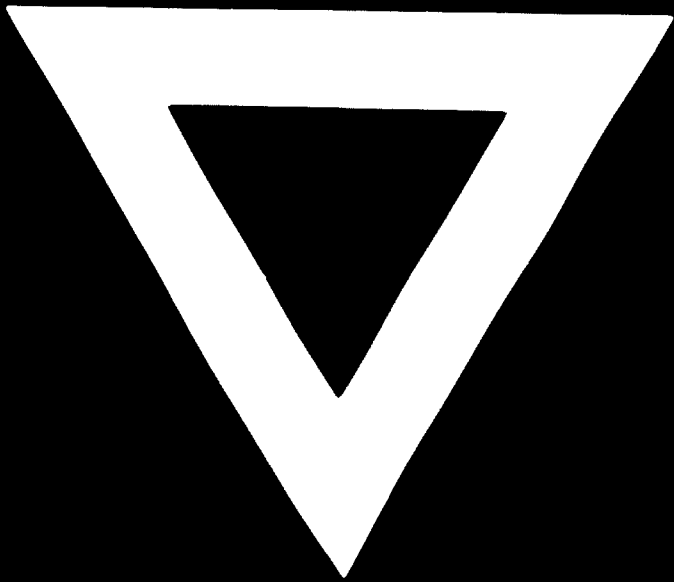
SELECTED LIST OF DOCUMENTS AND PUBLICATIONS ON SMALL-SCALE INDUSTRY

DIVISION FOR INDUSTRIAL DEVELOPMENT AND CENTRE FOR INDUSTRIAL
DEVELOPMENT (PREDECESSORS OF UNIDO)

- Management of Industrial Enterprises in Under-Developed Countries*, 1958, ST/ECA/58, E/3143 (Sales No. 58 II B 5)
- Establishment of Industrial Estates in Under-Developed Countries*, 1961, ST/ECA/66, (Sales No. 60 II B 4)
- The Physical Planning of Industrial Estates*, 1962, ST/SOA 45 (Sales No. 62 II B 4)
- Industrial Estates in Asia and the Far East*, 1962, ST/ECA 73 (Sales No. 62 II B 5)
- Industrial Estates in Africa*, 1965, ST/CID.5 (Sales No. 66 II B 2)
- Industrial Estates: Policies, Plans and Progress. A Comparative Analysis of International Experience*, 1966, ST/CID 10 (Sales No. 66 II B 16)
- Technical Co-operation for The Development of Small-Scale Industries*, 1966, ST/CID/16 (Sales No. 67 II B 3)

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

- Industrial Estates in Europe and the Middle East*, 1968, ID/4 (Sales No. 68.II.B.11)
- Small-Scale Industry in Latin America*, 1969, ID/27 (Sales No. 69.II.B.37)
- Small-Scale Manufacturing No. 1 Bicycles. A Case Study of Indian Experience*, 1969, ID/SER K/1 (Sales No. 69 II B 30)
- Policies and Programmes for The Development of Small-Scale Industry*, 1967, ID/CONF 1/6 (mimeo) (Annex III to this report contains an annotated bibliography of United Nations articles, publications and reports on small-scale industry.)
- Policies and Programmes for the Establishment of Industrial Estates*, 1967, ID/CONF 1/29 (mimeo) (The annex to this report contains an annotated bibliography of United Nations articles, publications and reports on industrial estates.)



74.09.12