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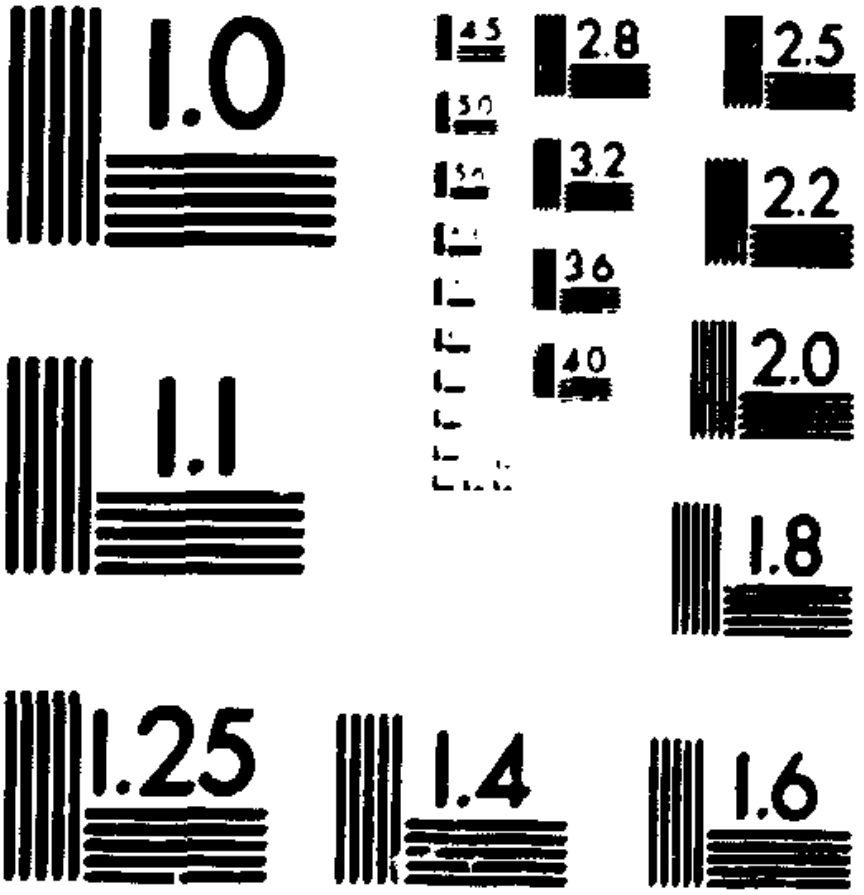

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THE ROLE OF SMALL AND MEDIUM-SCALE INDUSTRIES IN OIC MEMBER STATES*

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PREFACE

At the third meeting, April 1984 in Istanbul, of the Task Force of the First Conference of the Islamic Countries' Ministers of Industries it was proposed that UNIDO would contribute specific working papers for the Second OIC Ministerial Conference on Industrial Co-operation to be held 13-16 November 1984 in Turkey.

The working paper presented here is part of UNIDO's contribution to the Ministerial Conference. As the Regional and Country Studies Branch, Division for Industrial Studies, within its current work programme is undertaking research pertaining to small- and medium-scale industries, it readily accepted the responsibility to carry out this particular study. The study has been prepared in co-operation with the Institutional Infrastructure Branch, Division of Industrial Operations. Extensive use has been made of the available UNIDO in-house information.

The working paper was prepared by using staff resources and by drawing upon the services of two UNIDO consultants, Mr. Janos Fath and Mr. Martin Hogg. It is hoped that the study paper will be helpful as background information for the discussions at the Ministerial Conference and that it may contribute to new concepts or improvements of existing approaches relating to policy support measures in favour of small- and medium-scale industries.

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EXECUTIVE SUMMARY

The Second Ministerial Conference on Industrial Co-operation of the Organization of the Islamic Conference (OIC), to be held 13-16 November 1984 in Turkey, will, inter alia, also discuss the particular role of small- and medium-scale industries (SMI) for present and future industrialization efforts of OIC Member States. Following a proposal made by the Task Force of the First Conference of the OIC Ministers of Industries UNIDO has prepared a working paper on this issue a summary of which is presented here.

The role of small and medium-scale industries in OIC Member States

This working paper prepared as a background document for the Second Ministerial Conference on Industrial Co-operation of the Organization of the Islamic Conference (OIC) consists of three parts covering first an overview of the general contribution of SMI to industrialization in the 1980s, second recent evidence on the development of SMI in OIC Member States and third some policy considerations for the strengthening and promotion of SMI in these countries.

Evidently the OIC Member States represent a broad spectrum of countries at different levels of development, with a high diversity in terms of resource availability, role and structure of the industrial sector, basic orientation of economic policy, etc. Indeed, the OIC Member States can be seen as a group of countries which in its very diversity may represent the diversity of the Third World as a whole. To the extent that this would be a legitimate assumption, the economic co-operation of OIC countries in promoting SMI could then be taken as a starting point for similar broader efforts of other developing countries as well. On the other hand the diversity of development patterns of OIC member countries makes it difficult to identify a common basis for development efforts in the SMI sector. This paper therefore advocates a gradual and varied approach for a joint building-up and strengthening of SMI.

The enterprises engaged in SMI comprise a number of heterogeneous types displaying different characteristics. The focus of this working paper is on small and medium manufacturing enterprises engaged in organized and continuous

production of goods or provision of related services. These enterprises clearly represent the overwhelming majority of industrial capacity in most countries (including the developed countries). They have been given increasing policy attention in recent years partly because of growing disappointment with the results of development strategies focusing on large-scale, capital-intensive and highly import-dependent industrial plants. A second reason is their potentially significant contribution to basic development and industrialization objectives:

- SMI make a strong contribution to absorbing a still rapidly growing labour supply in most countries. On the average, SMI tend to use more labour-intensive technologies than larger enterprises.

- SMI are important as a major source of domestic capital-formation via the mobilization and productive channeling of private savings.

- A large share of SMI may also exercise positive influence on the income distribution both in functional terms (wages/profits) and in regional terms.

- The active promotion of SMI can serve as a means of decentralizing industry thereby not only accelerating rural development but also stemming urban immigration with all its related problems.

- The SMI sectors provide a good basis of effectively linking agricultural and industrial production, firstly because of their prominent role in the processing of agricultural goods, secondly because agricultural incomes are largely spent for those goods produced by SMI.

- SMI provide a training ground for the creation of indigeneous entrepreneurs in such important areas as the generation of technical, managerial and marketing know-how.

- SMI enhance the flexibility and diversification of industrial production because their output may be more easily adapted to changing market conditions and because they operate profitably even in very narrow markets with low purchasing power.

- Due to their specialized skills and cost advantages many SMI enterprises play an important role as manufacturer of parts and components for large-scale enterprises (subcontracting).

On the basis of this review of the contribution of SMI to development, the paper examines a particular issue of increasing significance. It concerns the impact of new micro- electronic technologies on the size distribution of industrial activities. This issue is of relevance above all for the more advanced OIC countries and for those SMI enterprises which are susceptible to

a broader range of technological options. The preliminary reflections presented in the study point to a large potential for the adoption of microelectronic technologies even for very small manufacturing enterprises. The readiness to actually introduce these new technologies has, however, so far been shown to be greater in large enterprises. This is partly due to behavioural determinants and partly due to firm economies of scale which become an important factor for recovering the high overhead costs associated with investments in these new technologies. It is therefore expected that apart from those areas where highly skilled and innovative SMI are involved the emergence of new microelectronic technologies will tend to strengthen the role of large-scale, capital-intensive enterprises and will provide incentives for their further backward integration unless SMI are actively induced to apply the new technologies. There is thus a convincing case to be made for policy support measures aimed at reducing at least the informational and managerial bottlenecks in the adoption of new technologies within SMI.

In a subsequent section of the paper SMI enterprises are analyzed from a micro perspective in order to derive policy recommendations from the very character of production and management in these manufacturing units. It is a common characteristic of most of these enterprises that the personal abilities and standing of one owner/manager as the key decision taker is the crucial ingredient for the enterprise's credibility and success. On the other hand a number of typical operational constraints can be singled out which confront most SMI enterprises:

- a shortage of capital which makes SMI vulnerable to fluctuations in supply and demand, prevents them from utilizing their existing resources efficiently and imposes additional costs when short-term credit has to be raised;
- a restriction in the size and area of markets to which they have ready access;
- a limited availability of information and knowledge about production know-how and about the range of technological options which are of particular importance in the process of an enterprise's growth and maturation.

Apart from the very important creation of a macroeconomic business environment conducive to the development of efficient SMI, some particular areas requiring selective policy support measures are subsequently identified. These include

- financial assistance: special credit facilities for the purchase of fixed assets, machinery and equipment; provision of seed capital to first time investors; supply of working capital; risk-sharing schemes between commercial banks and specialized SMI support institutions, etc.;

- financial planning and accounting procedures: building-up of an effective system of monitoring an enterprise's activities;

- identification and development of industrial projects: awareness and motivation campaigns geared to assisting SMI entrepreneurs in developing investment project proposals and in coping with procedural formalities;

- training and advisory services, e.g. on management issues, physical setting up of production facilities, choice of equipment etc.;

- infrastructure, essential services and industrial premises, e.g. through establishment of industrial estates;

- support for the development of established SMI.

As SMI tend to be more flexible and adaptable in their location requirements, they may well be used as an 'engine of development' in rural areas with a view to generating employment and supplying basic needs to the rural population particularly where local raw materials are readily available for processing. To this end, it is essential that the various services of supporting institutions be disseminated and made available particularly in remote areas in order to achieve a more balanced regional dispersal of industrial development.

In Chapter II it is attempted to provide some empirical information on the role of SMI in the industrial development process of the various OIC Member States and on some of the major policies and institutional measures actually being pursued to strengthen this role. This chapter presents statistical data and policy approaches at the individual country level. From this empirical evidence, some broad tendencies can be highlighted:

- SMI constitute in most of the OIC countries the overwhelming majority of industrial production in terms of the numbers of industrial unit as well as the employment opportunities provided.

- In many industrial subsectors they operate at least as efficient (concerning capital and labour productivity) as large-scale enterprises. This applies in particular to activities where perishable materials are preserved at source, bulky materials are reduced in weight and where face-to-face contacts with customers are required.

- SMI have proven to be also competitive in export markets where they often keep a larger market share than in the domestic market. Due to their flexibility they have in times of recession fared better than many large-scale enterprises.

- In many of the OIC countries policy-makers have in recent years put increasing emphasis on the promotion of SMI, partly within policy approaches aimed at the deregulation of economic activity.

In its Chapter III the study puts forward some policy recommendations conducive to the strengthening and promotion of SMI in OIC Member States. However, it is axiomatic that policies and programmes for enhancing the role of SMI have to be tailored to local circumstances, resources and skills and have to consider the quantity and diversity of individual enterprises when selecting a target group and organizing support and assistance.

Clearly the major share of responsibility for the development of SMI must lie at the national level where a government and its development agencies within the framework of a broader plan for economic development can set priorities, allocate resources and organize implementation appropriate to national circumstances. Here it should also be kept in mind, however, that governments' policies towards development of primary resources, education and training, savings, investment, foreign trade and public/private sector policies all will bear directly on the prospects of SMI.

From the empirical analysis of the role and constraints of SMI in OIC countries it has emerged that the unavailability of credit is normally the greatest single impediment to the growth and diversification of SMI enterprises. The provision of long and short-term credit would thus appear to be one key area of required support. Loan facilities to SMI do, however, carry with them the necessity of providing managerial assistance, e.g. to introduce or upgrade systematic accounting and control procedures; only few financial institutions in OIC countries are actually adequately equipped to fulfill these follow-up functions.

Besides financial assistance it is most essential for the growth prospects of SMI that their market horizons be extended beyond the narrow local market that they initially tend to serve. In this, governments can make a valuable contribution through improving SMI access to public sector

procurement. Only smaller changes in public sector procurement procedures would normally be required, and these could initially be complemented by special support in the field of quality control.

The development of production know-how is another key area for policy support. To this end governments should take measures to reinforce indigenous technological capabilities through the establishment of research and development institutions, test laboratories etc. in key technology areas according to the local resource endowment. Particular emphasis should be given to the establishment of networks of technical production information which meet the specific requirements of SMI.

As part of assistance to SMI in obtaining basic information, technical as well as market-oriented, regional information centres are of significant importance. They have a larger catchment area and can collate and distribute information concerning production and trade within a region or even with more distant international markets. Such centres can support national development agencies and strengthen their capabilities to gain access to more specialized and more up to date information and data.

Towards an OIC programme for SMI

In many OIC member countries there is already in place an extensive institutional framework and significant expertise and experience with industrial development in the small and medium scale sub-sectors. The priority for the immediate future is to upgrade the capabilities of these existing agencies so as to improve their effectiveness and mobilize their expertise. Areas of weakness in technical or commercial support services should be dealt with by means of appropriate assistance from the international agencies including UNIDO. However most of the countries now have much to learn from their own experience to date and from that of other OIC member countries. It is on this basis and on the basis of OIC member countries' recognition of the importance of the SMI sector as part of their industrialization process that a proposal is made to more systematically utilize the intra-OIC experience and resources for a supporting programme among the member countries. Through regular consultations, - possibly backed

up by international assistance - the national efforts could be significantly enhanced.

There seem to be four major areas for such regular consultations. First, the improvement of information flows on technologies, markets and other key economic factors for dissemination to national and regional bodies. Second, the recording of initiatives and progress in developing and refining development techniques and methodologies. Third, joint elaboration of innovative approaches to encourage the growth and efficiency of SMI. This may include the utilization of new information technologies to increase the presence of SMI at the market. Fourth and most important, the training aspect whereby skilled and experienced 'practitioners of development' learn from each other as well as being exposed to new concepts from external sources, so extending their capabilities and motivating the application of their skills. Priority should be given in OIC programmes to the training of trainers and the development and distribution of training materials.

It should be noted that obviously any joint OIC programme needs firstly to be built-up gradually and possibly involve, in the initial stages, only sub-regional activities (e.g. within the Gulf Co-operation Council Countries or between Northern African OIC Member States). Secondly, some priority issues of the outlined areas need to be singled out. Thirdly, a more systematic data base on SMI needs to be developed at the country level with the aims of creating a greater awareness of the prospects, constraints and trends of SMI. Such data would also enable better international comparison and joint OIC monitoring of developments.

The building-up and strengthening of a viable and efficient SMI sector is a common objective of all OIC Member States. There are major benefits to be reaped from enhancing the economic and technical co-operation between OIC countries in designing appropriate policy measures and programmes for which this working paper may be taken as a starting point.

INTRODUCTION

The working paper presented here deals with the development potential inherent in small- and medium-scale industries (SMI) in general and in the Member States of the Organization of the Islamic Conference (OIC) in particular.

The main emphasis of the paper is to provide a basis for policies towards the growth and diversification of SMI.

Chapter I gives an impression of the economic role and potential of SMI for economic development and industrialization. It proceeds with a functional analysis of typical management problems that smaller enterprises are facing. On the basis of the analysis presented in this chapter policy areas can be identified emerging from the economic potential of SMI and rooted in the particular behavioural pattern of SMI entrepreneurs.

Chapter II presents some empirical evidence of the role of SMI in OIC Member States as well as on the institutional framework of SMI promotion in some of the countries concerned. This chapter is not aimed at giving a comprehensive overview but rather some selective country specific illustrations complementary to the more general presentation given in Chapter I.

Chapter III finally puts together the major policy recommendations ensuing from the previous analysis and relating to such fields as financial, technical, managerial and marketing support measures. Apart from required action at the national level particular emphasis is put on those policy dimensions which lend themselves to regional co-operation between OIC Member States in order to further enhance the role of SMI in their economies.

The Annex of the working paper presents some recent policy approaches geared to the promotion of SMI which have been taken by countries outside of the OIC and which may be taken as point of departure for further discussions. In addition, information is provided on UNIDO's activities and projects relating to SMI.

CHAPTER I

THE CONTRIBUTION OF SMI TO INDUSTRIALIZATION IN THE 1980S

A. SMI as vehicles of industrialization and development: A macro perspective

1. Introduction

In recent years it has increasingly been recognized in many developing countries that small and medium scale industries (SMI) play a decisive role in expanding and diversifying industrial production as well as in attaining the basic objectives of development. Enterprises of the SMI clearly represent the overwhelming majority of industrial capacity in most countries, both in terms of the number of establishments and of employment. Economists and policy-makers in a broad range of countries are now giving increasing attention to SMI due to the following considerations:

- development objectives need to be broadened to include not only accelerated growth of GNP but also employment generation, poverty eradication, improving the distribution of incomes, fulfilling basic needs etc., all of which point to a stronger emphasis on SMI than was the case during the first two development decades;

- there is growing disappointment and disillusionment with the results of development strategies focusing on large-scale, capital-intensive and highly import-dependent industrial projects which more often than not failed to increase the rate of labour absorption in the industrial sector and to generate self-sustaining growth;

- even in the most advanced industrialized economies SMI are not being phased out but have remained strong competitors of large industrial concerns 1/ and have proved to be particularly innovative as far as the introduction of new products and processes is concerned. This clearly demonstrates that a large share of SMI cannot be associated with economic backwardness but that, on the contrary, SMI is seen as an important part of the dynamic process of industrialization.

Although a basic consensus regarding the overriding importance of SMI for an efficient and beneficial industrialization process has been acknowledged by

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1/ The share of SMI in manufacturing establishments and manufacturing employment has even increased in recent years in the United States, Japan and the United Kingdom. Cf. Sit, V.F.S., Strategies for the Promotion of Small-Scale Enterprises in the Developing ESCAP Region, in: Economic Bulletin for Asia and the Pacific, Vol. 33, No.1, June 1982, p. 73.

development researchers and policy-makers, there still is some uncertainties as to an adequate definition of SMI and a controversy as to the policy approaches to be chosen in order to further promote SMI. It is primarily these questions which this paper will examine.

2. Definitional problems

Small- and medium-scale industrial enterprises are homogeneous only as a notional construct whereas in reality they consist of numerous heterogeneous types and display different characteristics, comprising such diversely organized activities as household production, handicrafts, artisans, cottage production, small maintenance and repair units as well as fairly sophisticated, technologically advanced manufacturing enterprises. These activities are either located in rural or urban areas, are continuous or only temporary in nature and may be classified as belonging to either the formal or informal sector of an economy. This essential lack of even some basic uniformities of SMI makes it necessary for any study to focus on certain segments of this vast sector. This paper which is dealing primarily with the contribution of SMI to successful industrialization, thus focuses on small and medium manufacturing enterprises engaged in organized and continuous (as opposed to seasonal or temporary) production of goods or provision of related services. Traditional activities in the well-known forms of household and cottage production hence are not at the centre of this study's attention, although their important role as a longer-term potential and source of entrepreneurs should not be overlooked.

It is believed that it would be futile to attempt establishing any clear-cut quantitative border line between small, medium and large enterprises for the purpose of this study. The notion of SMI is essentially a relative concept being dependent above all on a country's level of industrialization[1/] so that any useful criteria (be it numbers of employees, capital invested,

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1/ In most developing countries the upper limit (taking the number of employees as basic criterion) is between 10 - 50 for small-scale and between 50 - 100 for medium-scale industries, whereas in many OECD-countries only firms with more than 500 employees are considered as large-scale production units. Cf. Kuivalainen, A., Possibilities of Promoting the Industrialization of Developing Countries by Means of Resource Transfers from Small and Medium Sized Industries, Helsinki 1982, p.7.

volume of sales, etc.) will lead to different threshold values in different countries. This is also true for OIC member states which find themselves at various levels of the industrialization process.

Notwithstanding these definitional difficulties there are, however, some common characteristics of smaller enterprises to be found in the way they are managed and operated, e.g. stemming from the fact that one owner/manager uses to assume the full responsibility for all long-term (strategic) and short-term (tactical) decisions. Chapter I.B. will concentrate on these funtional characteristics which will serve the double purpose of explaining the very nature of SMI and at the same time of identifying the functional areas to which supporting policy measures should be directed.

3. Determinants of sectoral distribution and overall role of SMI

The sectoral distribution of SMI seems to follow a fairly stable pattern across various countries. At least in the case of the ASEAN countries (including Brunei, Indonesia and Malaysia as OIC member states) empirical evidence has shown that "irrespective of the relative size of the small and medium industry sector, the small and medium industries tend to be concentrated in the same industries in all countries."1/ These include above all: leather, footwear, furniture, metal products (as industries using relatively simple, labour-intensive production techniques); food processing and wood processing (as industries processing spatially dispersed raw materials); printing and publishing (as industries being particularly dependent on proximity to the market). As soon as sub-contracting comes into the picture, there is a wider potential for small and medium-scale suppliers of components, particularly in transportation and communication industries.

Whereas the sectoral distribution of SMI is heavily influenced by technological aspects of the production process, their overall importance and role in a country's economy is largely dependent on the general development strategy pursued and the specific policy measures applied. If for example, as still is the case in most countries, industrial policy is biased towards urban

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1/ Hiemenz U., Growth and Efficiency of Small and Medium Industries in ASEAN Countries, in: Asian Development Review, Vol. 1 (1983), no.1, p.107.

centres resulting in increasing regional income disparities then the potential for market expansion will accordingly be reduced in rural areas. This aspect clearly points to the importance of the overall macro policy environment as major determinant of the size distribution of industrial activity. Furthermore, there is the impact of capital-oriented investment incentives (preferential interest rates, depreciation allowances) which tend to favour large-scale, capital-intensive enterprises as well as the impact of e.g. the rationing of import licenses or of bank loans which normally will have the same effect simply because larger enterprises have both the knowledge and the resources to cope with complicated administrative procedures. This implies that many policy measures which are not even directly aimed at influencing the size distribution of industrial activity will actually work to the disadvantage of SMI. This would be a strong argument for specific policy support measures in favour of SMI if the latter can be shown to make a positive contribution to industrialization and development objectives. This will now be examined.

4. Impact of SMI on development and industrialization

Among the central arguments which can be put forward in support of SMI is their strong contribution to employment. Not only is the vast majority of the industrial labour force to be found in small and medium-scale enterprises (for details concerning OIC member countries see chapterII), but also does empirical evidence clearly point to their using particularly labour-intensive technologies.1/ This makes SMI an essential tool for absorbing a still rapidly growing labour supply in many countries. Obviously the generation of additional employment opportunities must not be realized at the expense of production efficiency: promoting labour-intensive but inefficient industries would in the long run be a self-defeating development strategy. However, there is no evidence of any general inferiority of SMI as compared to the large-scale enterprises in terms of efficiency. On the contrary, in many countries SMI have proved to be highly efficient and have thus been

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1/ "This does not mean, however, that all small enterprises would use labour-intensive technologies and all large enterprises capital-intensive ones. It can be said, however, that, on the average, the smaller the enterprise, the less capital has been invested per worker." (Kuivalainen, op.cit., p.47).

competitive both on the local market and on export markets. Indeed, in a recent study on SMI in ASEAN countries it emerged that in many industrial sectors (above all in wood processing and metal products) SMI reach also a higher capital productivity than large-scale enterprises[1/].

A large share of SMI may also be expected to exercise positive influence on the distribution of income both in functional terms (wages/profits) and in regional terms. There is unanimity now that the typical growth path of many developing countries has in the past resulted in dualistic structures as policy-makers have tended to favour the urban centres at the expense of rural areas with the consequence of strong regional disparities in income levels. A large share of SMI are, however, located in rural areas[2/] so that the active promotion of SMI would, at the same time, serve "as a means of decentralizing industry thereby not only accelerating rural development but especially stemming urban imigration and the consequent problems of congestion in the cities."[3/] Furthermore, the promotion of SMI will provide opportunities of effectively establishing links between agricultural and industrial production. On the one hand, SMI figure prominently in the processing of agricultural goods, as well as in the production of machines and equipment for use in agriculture, on the other hand it has been shown that the demand elasticity of agricultural incomes is particularly high for those goods produced by SMI.[4/] This holds true also for the low-wage incomes of workers employed in SMI so that, to a certain degree, increasing the output of SMI

1/ Cf. Hiemenz, op.cit., p.111. The same study also concludes that in about half the industry subsectors, small and/or medium scale firms were more efficient than large-scale ones, even if capital and labour input coefficients are taken into consideration.

2/ The share of traditional rural industries in total manufacturing employment is 86% in Sierra Leone, 70% in Bangladesh and still 63% in Malaysia. Cf. ILO, Rural Small-Scale Industries and Employment in Africa and Asia, Geneva 1984, p.3.

3/ UNIDO, Small Industries Development Programme, Doc. UNIDO/IO.545, 14 June 1983, p.5.

4/ In the case of Sierra Leone it was estimated that a 10% increase in agricultural production leads to a 16% increase in demand for the products of small-sale firms. Cf. Bottomley, A., Government Actions for Promoting Small-Scale Industries with Respect to Final Outputs, Intermediate Activities and Primary Inputs, in: ESCAP, Small Industry Bulletin for Asia and the Pacific, No.18, 1982, p.17.

provides itself the very mechanism to increase at the same time the demand for this output.

Another benefit to be reaped from strengthening the role of SMI is their contribution to domestic capital-formation the importance of which needs no further elaboration in the face of culminating debt crises in many countries. Small-scale entrepreneurs are a major source of mobilizing private savings[1/] and of channeling them into productive uses instead of spending them for consumption purposes. In addition they are known to require only little infrastructural investment (partly because of their proximity to consumers) and to utilize even small sources of locally available raw materials which may contribute to reducing import dependency.

Apart from these general contributions of SMI to the main objectives of development they have further clear advantages for any industrialization process which is to be self-sustaining. Among these are:

- SMI provide a training ground for the creation of indigeneous entrepreneurs in such important areas as the generation of technical, managerial and marketing know-how. Hence they are an essential element in the cultivation of an overall business environment conducive to innovative and competitive behaviour.[2/] This is e.g. acknowledged by by the fact that even in many countries following a socialist pattern of industrialization SMI are operated by private entrepreneurs;

- SMI enhance the flexibility and diversification of industrial production because their output may be more easily adapted to changing market conditions (e.g. consumer preferences) and because they are often able to operate profitably even in very narrow markets with low purchasing power. The production flexibility of SMI makes them highly competitive in domestic as well as in export markets. Indeed, large-scale industrial enterprises have been hit hardest by the recent economic recession;

- SMI play an important role as manufacturer of parts and components for large-scale enterprises because of their specialized skills and cost advantages.

1/ "Data on the sources of funds for initial capital investments in very small firms in Africa consistently show that eighty percent or more comes from personal savings supplemented by loans or gifts from relatives." (Page, J.M.Jr./Steel, W.F., Economic Issues of Small Enterprise Development in Africa, World Bank, Industry Department, March 1984, p.7).

2/ Cf. Sit, op.cit., p.73 f.

5. Classification of SMI promotion measures

There is no doubt then that the existence of a large and efficient SMI sector is among the most essential prerequisites for successful and viable industrialization. Up to now, however, "in many developing countries small industry has developed regardless rather than as a result of government measures."[1/] It is, however, exactly the smaller manufacturing units, particularly in their initial stages, which are in need of very specific supporting policy measures in such diverse fields as knowledge about technological options, access to investment financing, securing of imported inputs, quality control etc.[2/] Systematically, it may be useful to distinguish between direct and indirect policy measures each of which can either be applied at the micro-level (i.e.oriented towards specific locations and/or products) or at the macro-level of economic activity. This systematic differentiation is illustrated in Table 1. It should be pointed out here that, notwithstanding the necessity of specific micro-level support measures, it is also the demand conditions generated by the general industrial policy approach at the macro- level which are decisive for developing the potential inherent in SMI.

Table 1. Classification of SMI promotion measures

	Micro-level	Macro-level
Direct support	- Technical services and information	
	- Establishment of industrial estates	- Fiscal and/or financial incentives/subsidies
	- Government purchases from SMI	
Indirect support	- Excise tax-variations favouring SMI products	- Improved income distribution, in particular raising of agricultural incomes

1/ Kuivalainen, op.cit., p.51.

2/ These various functional areas of supporting and promoting SMI are dealt with in some detail in Chapter I.B.

6. Controversial consequences of new technologies

The early 1980s have witnessed revolutionary technological innovations and breakthroughs, particularly in the field of microelectronics. The consequences of the emerging microelectronic technologies and new computer systems are still largely under discussion, e.g. in terms of their impact on comparative advantages and hence the international division of labour. The introduction of cost-saving microelectronic devices in manufacturing, be it directly in production or for management purposes, will, however, certainly also exercise substantial influence on the size distribution of manufacturing enterprises. Some preliminary reflections are therefore presented here.1/

It is pointed out by some observers that recent innovations such as numerically controlled machines, computer-aided design or microprocessor-based information and control devices "have made modern technology more potentially applicable to traditional producers"2/ and would "facilitate small-scale decentralized operations"3/ so that leapfrogging from traditional to the most modern and sophisticated technologies could become a realistic option. Reference is e.g. made to the fact that in many cases microelectronic technologies can be put together from standard, off-the-shelf components and can thus be adapted to the needs of individual producers.

Among the showcases of a successful blending of traditional and modern technologies in small-scale production is the Prato textile industry in

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1/ The question of the relationship between technological development and size distribution is dealt with at some depth in the study by the Sectoral Studies Branch, Division of Industrial Studies, entitled "Optimum scale production in developing countries: A preliminary review of prospects and potentialities in industrial sectors, UNIDO/IS.471, 12 June 1984.

2/ Report of the Panel, in: von Weizsaecker, E.U. et al. (eds.), New Frontiers in Technology Application. Integration of Emerging and Traditional Technologies, Dublin 1983, p.7.

3/ UNIDO, Prospects of Microelectronics Application in Process and Product Development in Africa (prepared by M. Radnor), UNIDO/IS. 331, 22 July 1982, p.1.

Italy[1] which provides employment to a total of 70,000 workers in several hundreds of small establishments. In recent years substantial electronic improvements in textile machinery were introduced above all in the fields of production process control and control of quality standards (e.g. controls of temperature and humidity of the products to reduce energy consumption). As a consequence the Prato textile industry has remained highly competitive even under severe pressure both from domestic large-scale producers and from low-cost import sources. It should be noted that the electronic improvements in textile machinery did not cause major investment expenditures (between 2-15 per cent of total investment in machinery) and that the labour force in Prato is known to be highly skilled and open to innovation.

There is, no doubt, a large potential for the adoption of microelectronic technologies existent even for very small enterprises. The realization of this technical potential depends, however, on economic and behavioural determinants. The scattered empirical evidence available does in fact point to a positive correlation between growing firm size and the readiness to introduce these new technologies.[2]

In many cases these new technologies require extremely high amounts of investment capital. As a broad range of products and processes within one large firm facilitates the recovering of high overhead costs, so-called firm economies of scale become a decisive factor for reducing unit costs of production: "The evidence available suggests that the new technology is diffusing more rapidly to multinational firms even in the developed countries, reflecting in part these firm-economies of scale. If this is the case the relative position of indigenous Third World firms is likely to be

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1/ Cf. Colombo, U./Mazzonis, D., Integration of Old and New Technologies in the Italian (Prato) Textile Industry, in: ILO, Blending of New and Traditional Technologies. A Portfolio of Experiments and Projects, Geneva 1984, p.107 ff.

2/ A recent study in the United Kingdom e.g. came up with the result of a perfect positive rank correlation between six size categories of firms and the proportion of firms in each category either using or developing uses for microelectronics. Cf. Microelectronics in Small/Medium Enterprises in the United Kingdom, in: ILO: Blending of New and Traditional Technologies, op.cit., p.99 ff.

undermined".1/ It should also be noted from empirical evidence that by and large wages are comparatively lower in small firms than in large ones. In this case the economic incentive to adopt labour cost-saving microelectronic technologies can be expected to be higher in large enterprises.

The impact of microelectronics on SMI as subcontractors is fairly ambigious. Microelectronic production techniques create the need for absolute reliability of inputs and components both in terms of delivery schedules and of quality standards. The objective of large producers to minimize working capital costs by 'last-minute', 'zero-inventory' systems (Japanese "Kanban") e.g. requires very close links between component suppliers and assemblers.2/ This may work to the advantage of SMI if they manage to punctually deliver highly specialized items that perfectly meet the required quality standards. If, however, sub-contractors in developing countries fail to meet these ambitious requirements, then a high premium is put on further backward vertical integration of large firms, be they indigenous or multinational enterprises. In computer manufacturing e.g. there is apparently already a tendency to increase captive semiconductor production capacities with the purpose of improving components reliability.3/

To sum up, our overall impression is that, apart from those areas where highly skilled, specialized and innovative SMI are involved the emergence of new microelectronic technologies will in the developing countries on the whole strengthen the role of large-scale, capital-rich enterprises. To the extent that this is either due to the information advantage of larger enterprises or to skill constraints of managers/workers in SMI there is a convincing case to be made for policy support measures aimed at eliminating these bottlenecks in the adoption of new technologies within SMI: "This is particularly important for small-scale industries where entrepreneurs are unlikely to undertake the

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1/ Kaplinsky, R., The International Context for Industrialization in the Coming Decade, Institute of Development Studies, Sussex 1984, p.13 (mimeo).

2/ Cf. Kaplinsky, op.cit., p.14.

3/ Cf. UNIDO, Restructuring World Industry in a Period of Crisis - the Role of Innovation (prepared by D.Ernst), UNIDO/IS.285, 17 December 1981, p.198.

risks of change without some infant industry protection and support services."1/

The acceptance and adoption of new technological options obviously is at least as much a problem rooted in individual behavioural characteristics as it is one of technical know-how and purely economic calculus. Openness to change and hence risk would be essential ingredients. It will thus be useful to look at small and medium-scale enterprises also from a micro-perspective, concentrating on their functional and behavioural characteristics, as will be done in the subsequent chapter.

1/ Report of the Panel, in: von Weizsaecker, op.cit., p.8.

B. Functional characteristics of production and management in SMI: Policy issues from a micro perspective

1. The character of small and medium industrial enterprises

Within most developing economies, including many of the Member States of the OIC, recent decades have seen the continuous and rapid growth of SMI, both by number of individual manufacturing units and by their combined output of industrial goods. This growth, as will be seen in Chapter III, has been so pronounced as to bring about a situation in many countries where SMI collectively constitute the majority of installed manufacturing capacity and employ the majority of the industrial work force. This growth has occurred partly in response to active government support and measures of encouragement for industrial development and partly in response to increasing demand for manufactured goods, particularly within the major concentrations of population. As governments have laid down specific policies to promote industrial development within their overall development plans and have established specialized agencies to implement these policies, particular measures of assistance have been introduced to help develop smaller industrial enterprises. Given the diversity of development strategy, environment, culture and resource endowment of different countries, however, the approaches to the development of the SMI subsector vary. Substantial variations also exist in terminology and classification.

(a) The management process within SMI

In this paper the enterprise is taken as the base unit for economic organization excluding the various forms of co-operative, group or dispersed production, which are often important in the more traditional cottage or craft industrial activities. Thus, our concern is with smaller manufacturing or processing enterprises where the manager is not a specialist in management but someone who is chiefly occupied in carrying out the main functions of the enterprise - that is the organization of production together with the procurement of inputs and the disposal of outputs. Frequently the manager will be the sole owner or partner within the enterprise and will be the chief source of production 'know-how'. His responsibilities will often extend to simple book-keeping, 'shopfloor' supervision of any employed labour, sales,

servicing of equipment, and coping with suppliers, buyers and any concerned officials. The limitations of such an owner/manager are readily apparent, the chief distinguisting characteristic of such a 'small' enterprise being that all important decisions connected with that enterprise are taken by one person. The numbers of people employed and the turnover of the enterprise are inevitably limited but may vary considerably with the aptitude of the individuals concerned, the size of market available to them, and the size of investment in the enterprise together with the value of the end product. Even where an enterprise manager employs some assistance as foreman or bookkeeper, its essential operational characteristics remain largely unaltered. Where an enterprise shows some division or specialization of management tasks, with personnel being employed for their qualification or skills rather than their financial interest in the enterprise, then much greater growth potential readily flows from the delegation of authority and the superior organization of a wide range of difficult and demanding tasks. These tasks include accounting, marketing, shop floor supervision, sales, after sales servicing etc. Specialization of organizational and managerial tasks distinguishes medium scale enterprises from their small cousins, although again wide variations in turnover, numbers employed, capital invested, size of market area served can often be observed within competing enterprises sharing the same market. Some overlap with 'small' and 'large' enterprises is also to be found, for in reality there is a continuum of variables which characterize the operations of industrial enterprises and which defy simple categorization.

The key 'personal' role played by individuals or limited numbers of decision takers within SMI directly influences the location of an enterprise and thus in large measure its relationship with its market. The personal standing of the owner/manager is a crucial ingredient in the enterprise's credibility both in the market place as a buyer and seller of goods and at the sources of financial credit. It also is apparent that within smaller enterprises the owner/manager's capabilities on technical, marketing or accounting aspects are significant to the success of the enterprise and are not easily altered to changed circumstances. Indeed, the very qualities which may well lead to the successful creation of a new enterprise, such as the identification of market opportunity, the attraction of finance and the creation of a production system etc., may well be required less frequently as the enterprise matures; growth of output, diversification or specialization in

production call for different skills or combinations of skills on the part of the owner/manager. For example the recruitment of managerial assistants requires interpersonnel skills and the willingness to delegate; competition will require supervisory skills and attention to quality control, cost structures, and competitive pricing; changed market situations require product development or adaptation; the long-term future of the enterprise will require improved financial planning and control. Growth or changes in the nature of output thus demand substantial changes in the role and skills of the owner/manager.

(b) Operational constraints of SMI

Smaller enterprises just like their larger counterparts, need finance, raw materials and other inputs, processing equipment and supporting services, premises for storage and production , customers, access to the market-place, information of many different types (concerning prices, technical know-how, sources of supplies, laws, standards, competition, etc.) and labour of varying types and degrees of skill. Out of these multiple ingredients of the production process three elements are of overriding importance to smaller enterprises; these are finance, customers, and production know-how. Each presents particular problems for the smaller enterprise.

(i) Finance

Most smaller enterprises have a shortage of capital. Although this may be partly symptomatic of other difficulties e.g. poor inventory control, high wastage, low levels of efficiency in production, etc., many smaller enterprises are undercapitalized, both in the early stages of establishing a new enterprise and during later periods of expansion. This may be because of the entrepreneur's inability to attract sufficient capital and/or credit for his turnover; or perhaps through an imbalance between fixed and working capital. A shortage of finance makes smaller enterprises vulnerable to the vicissitudes of supply and demand and may prevent an enterprise from utilizing its existing resources efficiently. The shortage itself imposes additional costs, when short term credit has to be raised. Smaller enterprises tend to have much more limited access to credit from normal banking or financial institutions. Their lower business credibility, limited security, higher risk

of failure makes it difficult to raise capital from these normal sources and often cause them to resort to family, friends or 'traditional' money lenders for loans at higher interest rates.

(ii) Customers

The process of identifying and maintaining contact with customers is a demanding one for most smaller enterprises, given their limited management resources and skills. It is the prime task of an owner/manager to match his output with demand in the face of all the production problems and of competition. In developing countries where economic infrastructure and communications are often insufficiently developed smaller enterprises tend to be restricted in the size and area of market to which they have ready access. This makes for difficulties in organizing continuity of production and to maintain consistent product quality over longer periods. The question arises if and how SMI could increase the transparency of their product supplies and thus develop towards larger and diversified markets.

(iii) Production know-how

Smaller enterprises tend to be created around the manufacture of very limited number of products. While volumes are small and continuity of output is difficult to maintain this specialization is both a source of strength and of difficulty. An owner/manager may well possess sufficient technical or production know-how to produce the products selected when the enterprise was first set up, but the longer term survival or growth of the enterprise depends on its ability to adapt and refine its production to changing market conditions. Inevitably smaller enterprises tend to produce simpler products and to utilize less complex or 'packaged' production processes. Their capability in production technology is closely related to the supervisory and production skills within the enterprise. The more complex the production process, the greater the need for higher standards of training of employers, and supervisors; similarly the greater the need for supporting servicing and maintenance skills within the enterprise, and the more adaptable the management of the enterprise must become. The majority of smaller enterprises tends to be imitators rather than innovators in terms of technology although some become very adept at product adaptation and serve limited segments of the

market very effectively. It is in the adaptation and the application of new technologies that SMI seem to require institutional support.

The entrepreneurs who establish, own or manage smaller enterprises display the ability to mobilize resources, and to take risks. By and large they lack any formal training in management and tend to have a narrow range of technical or production skills. Because the character and capabilities of key individuals influence the functions of smaller enterprises so strongly, such enterprises show large variations in their operations and their effectiveness.

Some SMI succeed over time to grow into larger, more sophisticated industrial companies. This is an important part of a dynamic industrial development process. Programmes of assistance need to support this process and to take into account the required changes in the SMI. To develop smaller enterprises into more organized and more efficient production units, with consequental increases in output in qualitative and quantitative terms the task involves changing attitudes in the behaviour of key decision makers as well as increasing their knowledge and skills.

2. Policies and measures for developing SMI

Small and medium scale industrial enterprises exist in substantial numbers in many developing countries and make a significant contribution to industrial output. Their encouragement and further development means utilizing significant industrial potentials.

Various approaches are being used by governments to develop SMI. In order to generate employment opportunities for their rapidly growing work forces, some governments have adopted protective policies towards smaller enterprises and have actively encouraged the supply of services to these enterprises. Promotional activities intended to facilitate the creation of new enterprises have been supported by supporting technical service or subsidies of inputs such as finance or equipment. In some countries attempts have also been made to assist through public procurement and subcontracting arrangements.

In other countries, small enterprises have been encouraged as part of national programmes designed to secure socially equitable growth and development. Policies and measures of assistance within such a framework though primarily oriented to certain regions, communities or economic subsectors have clearly had spin-off effects in terms of employment creation and the restraining of excessive concentrations of industrial activity in major metropolitan centres or conurbations. In some countries selective assistance for smaller enterprises has been used to further the interests of indigenous population against immigrant or expatriate communities. Elsewhere the particular needs of depressed or relatively undeveloped regions have been approached through selective assistance and special incentives.

In certain countries where greater reliance has been placed on market forces, governments have sought to create a favourable economic environment for industrial enterprises including basic infrastructure and essential services without discrimination as to scale or location. In such cases official policy towards encouraging development of the private sector through tax incentives and trade incentives has often been crucial in determining the impact of such policies on smaller enterprises.

Clearly measures to assist smaller enterprises must be designed in conformity with the larger economic framework for industrial development. At the same time the need to contribute positively towards the long-term viability of smaller enterprises should not be lost within broader policy objectives of employment creation and disposal of industrial development. Experience with industrial promotion schemes in many developing countries suggests that most measures focus on the supply of selective assistance to enterprises, often attempting to rescue those enterprises experiencing difficulties. It should be ensured that attempts to foster an economic and business environment should also encourage enterprises to help themselves. The development of the SMI subsector cannot be fostered by imposing ponderous bureaucratic procedures on the delivery systems which supply essential inputs to smaller industrial enterprises such as finance, imported raw materials, spare parts. It should be considered that smaller industrial enterprises are less well organized in making their representations to Government on issues of concern and much less effective than large scale enterprises at protecting or furthering their interests within the bureaucratic, institutionalized systems for fostering industrial development which most governments adopt.

(i) Financial assistance

In view of the importance of adequate financial resources and the need for access to credit facilities, this area of assistance is one of the most crucial for any industrial enterprise. In most developing countries a basic banking system has been established and a number of specialized lending institutions have been established in recent decades. Given the size of initial capital investment required even for a small industrial enterprise and the frequently limited funds available to would-be entrepreneurs, any increase in the supply and availability of credit to new enterprises helps to remove a significant obstacle to their establishment. Yet a number of practical difficulties remain. Many entrepreneurs are not able to collect even a minimum stake in their planned investment either from personal or family resources. They frequently are not able to provide adequate security for any loan or credit facility. Their background and previous experience may well make any assessment of their credit worthiness difficult particularly if they have no proven track record in a comparable business situation. The entire process of project identification, development and presentation is a demanding one particularly if the necessary minimum standard is to be achieved in order to attract institutional support.

These problems have in many cases led to the creation of special credit or financial assistance measures for smaller enterprises, particularly for the supply of term loans for the purchase of fixed assets, machinery and equipment etc. In recent decades much progress has been made in setting up specialized lending institutions for fixed capital loans. Arrangements, terms and conditions vary greatly but amongst the simplest and most effective have been the introduction of hire purchase schemes to facilitate the purchase of tools and equipment, where the fixed asset itself secures the loan. In general repayment records reflect the efficacy of loan appraisal procedures and the existence of appropriate follow up by the lending institutions, including the supply of supporting management-assistance where appropriate. Ready access to the lending institution and regular contact between lender and borrower also seem conducive to successful lending programmes. Some governments provide incentives to established financial institutions to accept higher risk proposals through the provision of credit guarantee schemes, effectively reducing or eliminating that risk. In addition some countries subsidize the

cost of loans to smaller enterprises, both as an incentive to investment and as a means of reducing the debt servicing costs for newly established enterprises in their early years.

In seeking to help entrepreneurs attract financial support from established institutions, some promotion schemes provide seed capital to first time investors, either in grant form or as long term, low cost loans. This type of facility can raise the proportion of total capital requirement obtained through special loan facilities significantly since it has a multiplier effect by attracting supporting finance. However the extent to which such a policy of high debt to equity ratios is merited is open to dispute. Where an entrepreneur has a proven business record then perhaps such extensive facilities may be warranted but then such credit worthy industrialists may not need such extensive facilities as much as other less experienced candidates. In general terms fixed capital loans have been a powerful expansion factor for smaller enterprises in developing countries although demand often exceeds the supply of credit.

Some countries have made similar attempts to assist with the supply of working capital for smaller enterprises. Since this is the area where shortages of capital are normally most serious, credit facilities and bank loans for working capital are perhaps the most important individual form of assistance for smaller enterprises. It is in the utilization of its working capital resources that the ability of most owners/managers of smaller enterprises are most severly tested; in many ways working capital requirements are derived from the sum total of management decisions within an enterprise and are an indicator of viability and efficiency. Established banks possess more of the necessary support skills which should accompany working capital loans than other agencies. The difficulty for commercial banks is the higher cost of servicing loans for smaller enterprises. Some governments have gone so far as to direct a significant proportion of bank facilities towards smaller enterprises but many more banking institutions have come to realize the common interest in the development of smaller enterprises given some initial encouragement by governments and concerned development agencies. Such a departure from traditional banking principles, dominated by security requirements, is a major ingredient of successful industrial promotion programmes, for it is <u>access</u> to credit facilities which is most crucial to

smaller enterprises rather than the cost of that credit. This is an area where larger well established enterprises have often had a significant advantage in the past.

(ii) Financial planning and accounting procedures

Accounting systems should function constantly as management information systems to assess and help analyse the current activities underway within an enterprise. The overriding objective of financial planning and accounting procedures must be to discover just how capital is being used or is expected to be used within an enterprise. Many owners/managers of smaller enterprises do not have an effective up to date system of monitoring their enterprises' activities in this manner. Moreover, many agents of development institutions lack relevant training and commercial experience and are therefore not able to help individual enterprises in practice also in respect of investment project planning. A major part of a manager's task is the anticipation or planning of future activities and requirements, and the balancing of the activities of the enterprise according to the resources available to it. Banks and lending agencies are in a unique position to help train entrepreneurs, not only to secure their loan, but also to become better planners and such technical support should be an integral part of industrial promotion programmes.

(iii) The identification and development of industrial projects

Entrepreneurial skills are obviously a crucial element of any industrial promotion programme. Various attempts have been made to develop such skills. Experience of industrial promotion programmes in developing countries suggests that even in countries at an initial stage of development significant numbers of people are willing to assume a risk taking role, but few are aware of the steps in developing an investment project proposal and an even smaller number can cope unaided with the procedural formalities. What is required is a series of awareness or motivation campaigns, involving concerned institutions and development agencies, with the opportunity of ready access to key decision makers or representatives of those agencies who would serve initially in an advisory role. If development agencies expect and actively encourage a response from local communities this is normally forthcoming.

The increasing involvement of industrial development agencies in project identification and project planning potentially should facilitate the emergence of 'bankable' projects. However all too often their activities result only in paper projects. There would seem to be two main reasons for this; in the first place with a development institution there is often little real commitment to any particular project since most proposals are prepared in a 'vacuum', remote from potential owners or managers and from the harsh realities of commerce or industry. Primarily this is because the public sector officials themselves have no such experience. Secondly most project identification exercises begin with the question 'what can be produced?', and go on to answer it adequately. It would perhaps be more incisive to begin with the question 'what can be sold?' and then ask 'how do we produce it?' rather than be left with the difficult question of 'how do we sell something we have made?'

Funding agencies and development instititions clearly have a responsibility to advise and preferably train prospective clients in project preparation and presentation so as to help overcome procedural formalities and also improve the effectiveness of the preparatory investigations. At this point it is appropriate to consider the need for special institutional arrangements to ensure efficient delivery of assistance to smaller enterprises. Wherever possible governments and development agencies will wish to avoid creating new institutions. This is not only because of the cost but also because of the larger lead time in launching new development initiatives and implementing them when institution building is involved but also because of a scarcity of appropriate skills combined with commercial experience within a new institution which is so desirable to help bridge the gap between institutionalized assistance and industrial or commercial requirements. However in key areas of assistance to smaller enterprises, such as management advisory services and financial assistance, regular contact and close working relationships between development officials and entrepreneurs are necessary. Some special institutional provisions are therefore necessary to provide improved access to the parties concerned. For this reason it may also be necessary to decentralize decision making processes within development agencies to match the operational timescales and precise needs of smaller enterprises. Providing appropriate development assistance to smaller enterprises does have a major overhead cost in any widely distributed

programme, not the least of which is the training costs of the perscnnel involved and extensive branch networks. This is one factor to be borne in mind when seeking to provide assistance to enterprises in more remote areas. There is some evidence that attempts by development agencies to encourage more evenly distributed industrial development outside the dominant urban centres result in further concentrations of development in a few selected localities as entrepreneurs respond to the proximity of and access to 'channels of assistance' or the lack of them.

(iv) Training and advisory services

A number of industrial promotion programmes seek to provide comprehensive packages of assistance to entrepreneurs to accelerate the process of creating new small and medium scale enterprises. In addition to help with the supply of inputs and the development of industrial projects in a form acceptable to development agencies, there is also a need for training and advisory services on management issues, physical setting up of production facilities, choice of equipment, etc. In part entrepreneurs are self selecting and are likely to undertake some form of business activity only after some previous related experience. Nevertheless the breadth of skills and knowledge required of them is large. Because of the operational characteristics of smaller enterprises, owner/managers are not readily available for training etc. once an enterprise is in production. There is therefore a need for some short term training opportunities in management skills before an entrepreneur establishes his enterprise. Afterwards the most effective assistance is likely to be making available advisory services and centres of information or reference points on technical issues, markets, legal issues etc. Thus far in development programmes for SMI relatively little has been done to improve the quality and availability of training materials and self instruction guides, which when supported by distance learning methods entrepreneurs might easily use to inform and train themselves. In particular problems of language, dialect, technical terminology, semi-literacy and lack of numeracy need to be taken into account when providing assistance to smaller enterprises in more remote and relatively undeveloped areas.

(v) Infrastructure, essential services and industrial premises

As volumes of output increase from one-off items to small and large batch production or continuous processing, the importance of a reliable supply of inputs and raw materials and of distribution of output increases. The availability of communication services and utilities at a particular locality will confer significant cost advantages to nearby enterprises; conversely the lack of such essential services imposes cost and time penalting. Given the need for smaller enterprises to establish and maintain a close relationship with their market and their limitations in servicing widely scattered markets, smaller industrial enterprises are to some extent followers of development rather than pioneers. Without transport, telephone communications, and suitable premises industrial production may well not be possible, particularly for more specialized processing or manufacturing activities. Assembly of components tends to be more adaptable in its location requirements but is not entirely removed from such constraints. In addition the tendency of industrial enterprises to gather together in close proximity is indicative not only of their demand for physical services but also for commercial services, repair and maintenance services as well as the attractions of inter-industry linkages and subcontracting.

In the light of these circumstances many industrial development agencies have sought to provide such services and buildings within industrial estates or parks. Such development initiatives have often been used to attract smaller enterprises to particular localities and to facilitate the establishment of new enterprises through the advance construction of buildings. An important aspect of such development initiatives is the visibility of such concentrations of industry which demonstrate progress for both political and economic purposes, encouraging similar activities and building confidence in industrial capacities. Industrial premises and estates can also be used to subsidize or at least delay the funding of construction or start up costs, but they are expensive capital investments requiring the most exhaustive feasibility studies and preparations. As an instrument of industrial promotion they are perhaps best regarded as reinforcements for strengthening or accelerating the expansion of an established industrial base rather than as initiators or catalysts of industrial development. Industrial estates are perhaps more suited to meeting the more specialized and more

exacting needs of medium scale enterprises rather than those of very small enterprises, although some experiments in providing accommodation for 'fledging enterprises' in mini-estates have been successful. For the majority of smaller enterprises, it is perhaps better to rely on their adaptability and flexibility in the organization of production in converted or existing accommodation at least in the early stages until they have established their viability and resiliance. Once an enterprise has proven its ability to organize its production and systematically service its market, assistance with the construction or expansion of its premises and buildings is perhaps one of the most secure and valuable forms of assistance which can be provided.

(vi) Support for the development of established SMI

While there is an understandable emphasis on special measures of assistance for the promotion of new enterprises within developing countries, equal priority should really be given to strengthening and upgrading the activities of established small and medium enterprises. Given the shortage of capital and entrepreneurial/managerial skills within many economies, greater attention should be paid to ensuring that those already in existence make the greatest contribution to economic development. Two major difficulties inhibit progress in this area: first there may be some conflict of objectives between governments and established industrial enterprises; second development agencies often find it more difficult and more costly to provide practical and meaningful assistance to established enterprises, since such enterprises tend to be so much more demanding in the quality and range of assistance required.

While governments and development agencies tend to orient their programmes and activities towards medium or longer term objectives, which normally include considerations of employment or equity within the proposed overall pattern of development, individual industrial enterprises tend to operate towards much shorter term objectives and in particular to be highly profit oriented. Development agencies have a responsibility to provide on the one hand a favourable economic and business climate in which enterprises can flourish, and on the other to ensure that individual industrial enterprises come within the boundaries of the 'officially recognized' economy and that their activities should be subject to legal administrative and fiscal arrangements established by governments for broader policy objectives. Such

matters tend to bear heavily on smaller enterprises which are less well equipped to cope with the demands of bureaucracy and tend to have different priorities concerned with the immediate prospects for their industrial activities.

Once smaller industrial enterprises have been in existence for any length of time, most become surprisingly adept at dealing with routine organizational and production problems. To provide them with practical and meaningful assistance with the development of their industrial activities then becomes much more demanding in terms of specialist, technical skills. An overriding aim therefore is to help individual entrepreneurs to be more objective about their own business situation and to analyse any problems or difficulties they may experience in order to identify the real, as distinct from the apparent, causes. Beyond that, the most effective forms of support include providing access to sources of specialist technical information and advice, providing improved experienced managerial expertise to assist with organizational difficulties in periods of transition, growth or diversification as the enterprise adjusts to changed market conditions, and broadening the range of market opportunities to which the enterprise has access including in some cases facilitating entry into export markets. As individual enterprises seek to become more competitive and more efficient producers, greater attention needs to be paid to levels and consistency of quality of output. Development agencies have a major role to play in assisting enterprises to achieve established standards, to control the quality of materials bought in, and of output, through providing access to centres of technical research, testing and production technology. Smaller enterprises generally do not have the resources or expertise to meet their increasing requirements in these areas; with expansion into medium scale activities production becomes more a matter of the efficient application and use of technology, rather than the effective organization of a simpler production process.

The area of technological development and transfers of technological know-how is one of increasing importance to smaller enterprises as their managerial and productive capacity matures. It is however not an easy task for development agencies to provide assistance in this field with. Not only is it demanding of technical and commercial experience, but competition between smaller enterprises and external influences, such as imported goods or

advances in technological capabilities, complicate the position of individual producers. For the majority of smaller industrial enterprises technological developments consist of the application or adaptation of established technologies rather than an involvement in new or evolving technologies. Further, smaller industrial enterprises are primarily concerned with changes in production technology which reduce their costs or improve the acceptability of an established product in a wider market. The wholesale adoption of radically different production systems in smaller industrial enterprises is rare; rather the process is normally one of refinement and adaptation to changing conditions of production or of the market.

For the majority of smaller enterprises assistance in the area of production technology may be divided into three groups: first improved knowledge and access to well established, 'off the shelf' systems and techniques; second, technical guidance and advice with particular production problems which are outside the range of their normal experience but which detract from the quality or efficiency of existing production process; and third, experienced technical support with problems of product adaptation. For a minority with well developed technological skills, it may also be helpful to integrate them within a network of similarly interested individuals to expose them to new ideas and innovations, and to stimulate their technological creativity. The extent to which local technical research and training institutions are linked with the activities of smaller enterprises is not widely known. However, such institutions could contribute significantly in assisting enterprises in solving technical problems of commercial production[1/] and in promoting innovation by providing relevant information and guidance.

In the area of marketing, valuable assistance can be provided by development agencies in two ways. Firstly, through the collection and supply of market data, which can improve the effectiveness of an individual enterprise's marketing activities at very low cost. It does require the regular collection and collation of material, and the facility to supply photo-copies of the desired data, but if properly organized it can be self

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1/ See the interesting case study on the delivery of technological services (TSDS) in the Philippines, as described in Annex I.

funding. Secondly, concerted attempts to open public sector procurement to competitive supply by smaller industrial enterprises can greatly increase the scale of available, local market opportunities for smaller enterprises. The distribution of public sector orders for consumables and equipment can also bring about the upgrading of local production standards if proper quality control measures by buyers are taken. This is a difficult area for development agencies and for smaller enterprises but it is potentially a powerful development instrument.

3. The dispersal of industrial development

Many governments in developing countries are concerned to achieve a more even locational distribution of development. Excessive concentrations of population and thus of social and economic activity impose their own costs on development. The needs and welfare of the majority of the population who live outside the major urban centres need to be actively catered for. As governments at national and local levels have developed administrative controls on land utilization, construction and various forms of economic activity including industry, it has become possible to control to some extent the distribution of industrial activity, particularly through the location of large scale plants and allocating land for industrial use. Smaller enterprises tend to be more flexible and adaptable in their location requirements; they are however closely connected to their markets and tend to follow in the wake of major infrastructural developments. Some countries have tried to utilize smaller industrial enterprises as an 'engine of development' in more rural situations with a view to generating employment and supplying basic needs to the rural population particularly where local raw materials are readily available for processing. Many rural areas are already linked with and served by service centres which function as suppliers of rural needs and consumers or buyers of rural produce. Such meeting-places function as places of exchange and supply of essential services, including government. A prerequisite for the development of the hinterland of such 'service centres' is the radical improvement and diversification of the services/economic activities in such centres. It is through the development of local primary resources that opportunities for manufacturing or processing may arise, providing such production is competitive with goods already available. Much can be done to support local initiatives to establish smaller industrial

enterprises in such service-centres, not least by ensuring that development agencies make their normal measures of assistance readily available in such localities. Industrial development will normally tend to follow and reinforce other development initiatives in other sectors of the local economy rather than to initiate or precipitate such developments. Appropriate training and financial assistance to smaller enterprises in such localities then becomes very important. However the greatest response to measures of assistance will be made by actively supporting those industrial enterprises which produce to satisfy a level of demand which ensures their profitability and economic viability. Small and medium scale industrial enterprises clearly and strongly reflect this principle.

4. The regulation and monitoring of SMI

Given the importance of the SMI subsector in many developing countries, comprising the majority of production units and employing a large proportion of the industrial workforce, governments have been concerned to bring the activities of this subsector within the purview of official regulatory and statistical organizations. One major reason for this has been governments' concern to enforce minimum health and safety standards throughout the industrial sector especially in smaller enterprises which are sometimes inclined to cut corners in order to economise an overhead expenses. In some countries governments have been able to impose quality standards on some industrial products, especially food, in order to protect consumers interests but major difficulties have often arisen for smaller enterprises since they lack the necessary testing and laboratory facilities; government inspectorates on the other hand have found it hard to cope with the fragmented and scattered nature of production in the SMI sub-sector. Almost everywhere the raising of government revenues through indirect and excise taxes has also prompted development agencies to seek to bring major producers within the SMI subsector into the officially recognized and regulated sector of the economy.

To some extent this aspect of regulating and monitoring of industrial activity may be seen to conflict with the task of expanding and creating new industrial capacity and most particularly with the task of investment promotion. Hence development agencies need to simplify and facilitate an enterprise's relationship with the various departments and agencies of

government rather than to enforce the application of bureaucratic controls. Where regulatory and promotional activities have been combined within the same organization or one official's responsibilities it is perhaps inevitable that regulatory tasks have predominated over promotional ones.

The prime means of establishing and maintaining official contact with smaller industrial enterprises adopted by most developing countries has been the introduction of a system of licensing or registering individual enterprises. Such official recognition has then been made a prerequisite for eligibility for further assistance from development institutions or banks. Some governments within the scope of their 'fully planned' economies have attempted to regulate investment by smaller entreprises by the extension of their licensing system or to direct investment into particular product areas.

Almost all governments have attempted to bring smaller industrial enterprises within their regular surveys of industrial output. Clearly it is desirable to make systematic attempts to cover all medium-scale enterprises regularly and frequently. Such comprehensive coverage of smaller enterprises is less feasible. The most satisfactory solution would perhaps be to monitor key parameters of performance in the smaller enterprises on an annual basis and limit a more comprehensive coverage to every three years.

CHAPTER II

DEVELOPMENT OF SMI IN OIC MEMBER STATES: SOME RECENT EVIDENCE

In this chapter it is attempted to provide some information on the role of SMI in the industrial development process in the OIC member countries and on some of the major policies and institutional measures actually pursued to strengthen this role. Obviously such an attempt is constrained by three basic problems. First, the OIC member countries are a very heterogenous group in terms of size, level of industrialization, economic policies. Hence, it is not possible to generalize the pattern and policies relating to SMI. In Table 2 this diversity is indicated in terms of the large variation in the size of the labour force. Second, very little statistical data is available as regards the size and development trends of the SMI in the various countries and the information pertaining to the policy instruments and institutions supporting SMI cannot be systematically obtained especially as regards the actual role and impact of such policies and measures. Third, national statistics are not sufficiently comparable due above all to the different definitions used for small industries.

Given these constraints, however, it is felt that an overview is essential in the context of this paper even if it cannot by any means be complete. The scattered observations of the SMI in a number of OIC member countries are aimed at providing a first picture of the importance and diversity in the approaches in respect of SMI. It is on this basis that an initial set of recommendations could be formulated towards enhancing this important segment of the industrial development process in the OIC and it is indeed on this basis that OIC member countries may find it useful to increase their attention towards a more systematic and coherent collection of pertinent information. To this end, this chapter could be a first step in an analytical programme, which could rest upon the feed back and co-operation of the individual OIC member countries.

Table 2. OIC Member Countries: Basic indicators, 1982

Country	Population (million)	GDP/Capita US $ at current prices	Urban population as percentage of total	Employment in manufacturing	Employment in manufacturing as percentage of total population of working age
Afghanistan	16.8	...	17	34,970 (1981)	0.4
Algeria	19.9	2,350	45	329,500 (1980)	3.4
Bahrain	0.4	9,280	.	...	.
Bangladesh	92.9	140	12	401,160 (1979)	0.8
Benin	3.7	310	15	...	
Brunei	0.2	25,600	.	...	.
Burkina Faso	6.5	210	11	4,881 (1981)	0.1
Cameroon	9.3	840	37	26,944 (1978)	0.5
Chad	4.6	80	19	...	.
Comoros	0.4	340		...	
Djibouti	0.4	...		...	
Egypt	44.2	690	45	779,900 (1977)	3.2
Gabon	0.7	4,000		13,433 (1980)	3.6
Gambia	0.7	360	.	1,800 (1980)	0.6
Guinea	5.7	310	20	...	
Guinea-Bissau	0.8	170		...	1.1
Indonesia	152.6	580	22	963,000 (1980)a/	0.6
Iran	41.2	...	52	437,540 (1980)	2.1
Iraq	14.2	...	70	147,290 (1977)	2.1
Jordan	3.1	690	60	24,378 (1980)	4.9
Kuwait	1.6	19,870	91	37,456 (1978)	4.7
Lebanon	2.6	...	77	...	
Libyan Arab Jamahiriya	3.2	8,510	58	13,843 (1976)a/	0.9
Malaysia	14.5	1,860	30	446,785 (1979)	5.6
Maldives	0.2	...		...	
Mali	7.1	180	19	13,435 (1981)	0.4
Mauritania	1.6	470	26	82 (1981)	
Morocco	20.3	870	42	193,128 (1981)	1.8
Oman	1.1	6,090		3,926 (1978)	
Niger	5.9	310	14	...	
Pakistan	87.1	380	29	456,761 (1977)	1.1
Palestine					
Qatar	0.3	21,880		...	
Saudi Arabia	10.0	16,000	69	61,536 (1976)	1.3
Senegal	6.0	490	34	26,697 (1977)	0.9
Sierra Leone	3.2	390	23	...	
Somalia	4.5	290	32	10,460 (1977)	0.4
Sudan	20.2	440	23	...	
Syrian A.R.	9.5	1,680	49	194,600 (1980)	4.2
Tunisia	6.7	1,390	54	124,537 (1980)	3.5
Turkey	46.5	1,370	44	817,500	3.9
Uganda	13.5	230	9	...	
United Arab Emirates	1.1	23,770	79	30,558 (1981)	5.1
Yemen (PDR)	2.0	470	38	9,588 (1977)	0.9
Yemen Arab Rep.	7.5	500	14	...	

a/ Excluding 3530 (Petroleum refineries).

Source: World Development Report 1984, World Bank, and UNIDO data base.

A. Africa

1. SMI and industrialization strategies in Africa

To start with it is interesting to note that many of the requirements for industrial development formulated by African countries in the Lagos Plan of Action[1/] concern SMI directly:

- diversification of the industrial structure:
  "creation of a network of small- and medium-scale industries as well as active promotion and encouragement of the informal sector";

- appropriate policy environment:
  "take effective measures and provide incentives for the development of small-scale and medium industries taking into account the need for local resource uses, employment and technological diffusion";

- better urban/rural balance:
  "formulate and implement policy measures to stem rural-urban drift through decentralization of resource-based, small and medium-scale industries to rural areas, and the development of rural infrastructures";

- encouraging African entrepreunership:
  "develop, encourage, and support African entrepreneurs to participate effectively in industrial production with a view to gradual control of the capital ownership in the sector by Africans";

Although these elements of the development strategy have been present in African development plans and policy statements already in the 1970s, they occupy an even more prominent place in the 1980s. The promotion of small- and medium-scale industries is by no means a new strategy, but it is gradually gaining more and more attention as part of many national industrialization strategies. It is recognised as important factor in achieving both self-reliance and self-sustaining development in industry.

2. Development trends

In Guinea the private small industries increased their contribution between 1973-81 without interruption both in the manufacturing and the

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1/ Lagos Plan of Action for the Economic Development of Africa 1980-2000, adopted 29 April 1980, issued by the Organization of African Unity, Geneva 1981.

construction sector, including the period of 1977-81, when the production figures in the public sector both in manufacturing and construction sharply decreased.

In Niger in 1979 the (formal) manufacturing sector consisted of 43 industrial establishments employing about 3,400 wage earning people. 10 state enterprises and 13 mixed enterprises produce 50 per cent of total manufacturing value added, providing 68 per cent of wage employment. The artisan branches are probably the dominant component of the country's industrial sector but there are no accurate data to measure their effective contribution which was estimated at 5.2 per cent of GDP in 1979. The best estimates of artisan employment place the figure at 25,000 persons. Modern techniques are being gradually introduced and stimulated by loans to strengthen the small-scale industries. OPEN (Office de Promotion de l'Entreprise Nigerienne) has been playing an important role in the promotion of SMI since 1979.1/

In Algeria, the private small-scale industry (SSI), has kept some share in construction, in the light industries (textile, shoes) and as sub-contractors for the large public industry sector. The Plan 1980/84 has allocated DA 3 billions, 3.3 per cent of total industrial investment, for investments in small- and medium sized downstream industries and subcontractors to develop 'integrated' economic activities.

In Morocco,2/ estimates from the 1977 Industrial Survey show that about 3,160 small-scale industrial enterpises (5-49 workers) employed some 42,100 people, representing 74 per cent of all industrial establishments and 20 per cent of manufacturing employment. About two-thirds of all small-scale establishments were concentrated in the three largest urban areas (Casablanca, Fez, Marrakesh). The very small enterprises, or handicrafts, with less than five employees are more scattered in rural areas mostly supplying local markets. (For major characteristics of SSI in Morocco see Table 3).

1/ See also Annex III.B.

2/ This section on Marocco is based on the World Bank Report No. 3502-MOR: Morocco, Second Small Scale Industry Project, June 10, 1981.

Table 3. Morocco: Major characteristics of SSI in 1969 and 1977
(5-49 workers)

	1969	1977
1. Number of SSI establishments	2,840.0	3,160.0
2. SSI employment	37,200.0	42,100.0
3. Average employment per establishment	13.1	13.3
4. 2 as percentage of manufacturing employment	29.4	19.9
5. SSI Value Added (Million DH 1969 constant prices)	575.0	672.0
6. 5 as percentage of Manufacturing Value Added	28.5	19.3
7. Value Added per employee in SSI (1969 DH '000)	15.4	16.0
8. Value added per employee in non SSI (1969 DH '000)	16.1	16.5
9. Exports of SSI (M. DH)	n.a.	462.0
10. 9 as percentage of manufacturing exports	n.a.	21.9
11. Investments in SSI (M. DH)	n.a.	223.0
12. 11 as percentage of manufacturing investments	n.a.	17.4

Source: Ministry of Industry; Industrial Surveys 1969 and 1977.

Two sub-sectors dominate small industry activities in Morocco: food industries and textiles/leather. In 1977 together they represented 56 per cent of employment, 55 per cent of SSI total value added, 95 per cent of total SSI exports and 59 per cent of SSI investments. Small-scale food industries (canned fruits and vegetables, and olive oil mainly) contributed almost half of all exports by the food processing sector in 1977. SSI's play a substantial role in food processing, mechanical/electrical industries, construction materials, and the wood and furniture industries, in particular by supplying local markets. SSI in textiles/leather have a strong potential for employment creation with 34 per cent of total labour force but make only minor contributions to exports. Additional export opportunities for SSI are, however, expected to be provided by large foreign companies subcontracting part of their production.

A potential competitive edge of some SSI vis-a-vis larger firms is becoming apparent in some subsectors. In 1977, value added per worker in textiles/leather,and more significantly in food industries, was higher in SSI than in large enterprises.

In Burkina Faso, the industrial sector is mainly characterized by small-scale production which takes place in units operations mostly outside

the formal sector. These units account for four-fifth of the industrial sector's contribution to GDP, provide the bulk of industrial employment, and meet the main part of household consumption needs for fabricated or processed goods. The range of techniques employed is wide, and encompasses, for instance, both essentially modern metal fabrication processes as well as the traditional "cire perdue" casting of bronze figurines. Unfortunately, the small-scale production sector, despite its importance, has remained poorly researched; not much is known about market prospects, employment, input consumption, and costs.1/

In the cases of Cameroon and Mali, investment projects eligible for fiscal incentives and approved by the respective National Investment Committees provided some information or employment generation, investment/employment ratios and capital-intensity. From Table 4 it can be seen e.g. that the capital intensity in large-scale enterprises is almost six times higher than in small-scale enterprises in the case of Cameroon and almost twice as high in the case of Mali. These figures are, however, based on relatively small numbers of approved investments and may thus only indicate rough orders of magnitude.

3. Support institutions and policy setting

In most of the African OIC countries efforts are currently being undertaken which are aimed at:

- eliminating conditions that discriminate against small industries e.g. by fixing too high minimum investment values in order to qualify for incentives;
- shortening and simplifying the procedures involved in applying for fiscal and financial incentives;
- simplifying the work of concerned authorities by linking the required examinations to criteria directly prescribed by the code of investments;
- improving the internal organization (e.g. elimination of overlapping competences) of the institutions involved;
- limiting the scope of obligatory investment licensing.

1/ ECA/UNIDO, Report on Upper Volta, 18 June 1981.

Table 4. Profiles of industrial investments in Cameroon and Mali, 1981-1982[1/]

Size of investment[3/]	Nr. of enterprises	Investment in FCFA[2/] Mio	Percentage of total investment	Average investment Mio FCFA	Employment creation	Percentage of toal new employment	Investment per employment created 1000 FCFA	Capital intensity small-scale 100
				Cameroon				
Large	5	11,972	74.2	2,394	893	43.6	13,406	583
Medium	10	2,819	17.5	282	564	27.6	5,000	217
Small	22	1,352	8.3	62	588	28.8	2,300	100
Total	37	16,143	100.0	436	2045	100.0	7894	
				Mali				
Large	4	5,695	54.3	1,424	945	44.2	6,027	173
Medium	3	1,321	12.3	440	199	9.3	6,638	191
Small	46	3,467	33.1	75	995	46.5	3,484	100
Total	53	10,484	100.0	198	2139	100.0	3,901	

1/ Based on approved investment projects eligible to fiscal incentives, source: UNIDO consultant reports

2/ 400 FCFA = 1 US $

3/ Size standards: large-scale: over 1 billion FCFA
medium-scale: 0.25 - 1 billion
small-scale: under 0.25 billion

It is the Ministry of Industry which in most countries plays a decisive role in designing policy measures in support of SMI. Considering the complex network of all the institutions involved in policy implementation (various ministries, investment promotion units, technical supporting institutions, financing institutions, international agencies), it emerges quite often, however, that the respective Ministry of Industry is not adequately equipped to fulfill the required functions of guidance and co-ordination. This may occasionally lead to a certain preoccupation with the handling of individual investment cases and to a corresponding weakness in shaping an overall favourable policy environment conducive to the growth of SMI.

Therefore in most countries technical service institutions have been established, to assist SMI in fields such as:

- identification and preparation of projects;
- advice to obtain financing; etc.
- technical advice to entrepreneurs in SMI;
- training of entrepreneurs.

Examples of respective service institutions are SONEPI (National Society for Industrial Studies and Promotion) in Dakar, Senegal,[1/] as well as CAPME (Centre for the Support of Small and Medium Sized Enterprises) in Cameroon, CEPI (Centre for Industrial Studies and Promotion) in Mali, OPEV (Office for the Promotion of Voltaic Enterprises) in Burkina Faso or the recently created TAU (Technical Assistance Unit) as part of Morocco's ODA. Senegal's SONEPI is also active in financial assistance: it has established an equity participation fund (helping entrepreneurs to raise at least 35 per cent of required investment costs) and a guarantee fund which is to assist entrepreneurs in taking up loans for the purchase of equipment.

In many African contries there are specialized development banks, like the BCD (Cameroon Development Bank), with a clear mandate for financing, inter

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1/ SONEPI has acquired a regional dimension and provides training to nationals of neigbouring countries and undertakes studies also for SMI promotion in other countries. SONEPI has developed a comprehensive industrial estates programme and has set up an effective department for promoting new SMI enterprises. Recently it has also embarked on regionalization policies and subcontracting programmes.

alia, investments in industry, handling credit lines provided on a bilateral basis or by international agencies. In Mali the Development Bank created a seperate department for handling foreign credit lines for small- and medium scale enterprises. High interest rates, inappropriate and difficult procedures, excessive formal requirements which are clearly beyond the capabilities of small entrepreneurs, approval procedures taking place outside the country even in cases of small projects, sometimes the lack of understanding on the part of some bank employees very often hamper the optimum use of these funds.

B. South and Southeast Asia

1. Development trends

In the OIC Member States of South and Southeast Asia, as in those of other regions as well, the definitions used to classify SMI vary from country to country:

- In Indonesia the 1974/75 Industrial Census classified industrial activities into household/cottage industries (less than 5 employees), small industries (5-19 employees), medium industries (20-99 employees) and large industries (more than 100 employees).
- The Census of Manufacturing Industries in Malaysia draws border lines between tiny enterprises (less than 5 employees), small enterprises (5-49 employees), medium enterprises (50-199 employees) and large enterprises (more than 200 employees).
- In Pakistan the small-scale sector is defined as including all enterprises having fixed assets (excluding the cost of land) of up to PRs. 10 million.

Table 5 and Table 6 present some empirical evidence on the size distribution of enterprises within the Indonesian and Malaysian manufacturing sector and their respective contribution to employment and value-added. Particularly in the Indonesian case, intertemporal comparisons are, however, impeded by a number of factors, including above all improvements made in statistical coverage (see the provisos made in the footnotes of Table 5).

In Indonesia (1979), the household/cottage and small industries had a combined share of 87 per cent in manufacturing employment and of 22 per cent in manufacturing value added; in Malaysia (1978), the tiny, small and medium industries together contributed 49 per cent to manufacturing employment and a comparatively high 45 per cent to manufacturing value added.

A recent World Bank report on small-scale industries in Malaysia (quoted in Table 6) identified in some detail those sectors in which SSI appears to have comparative advantages, which may occur in the productive use of both factors of production (capital and labour) or in the use of one of them. In general, this relates to activities where perishable materials are preserved at source, bulky materials are reduced in weight to ease transportation, face-to-face contacts are required with customers and in general economies of scale are minimal or absent.

Table 5. Indonesia: Manufacturing Sector, by Size of Enterprise, 1974/75, 1979

	1974/75				1979				1980	1981
	LM	S	HC	Total	LM	S	HC	Total	LM	LM
1. Number of enterprises ('000)	7	48	1,235	1,290	8	113	1,418	1,539	8	8
2. Persons engaged ('000)	662	343	3,900	4,895	640	827	2,795	4,492	977	1,012
3. Value added (Rp.billion)	476	53	83	613	1,660	187	291	2,139	2,149	2,782
4. Gross output (Rp.billion)	1,294	158	201	1,653					6,904	8,299

Sources: BPS, Census of Manufacturing Industries 1974/75. BPS, Small-Scale Industries 1979. Industrial Development Review Series, Indonesia, UNIDO/IS.458, 18 April 1984, p.20.

Note: Several weaknesses in the data should be noted. Firstly, large and medium firm data are for 1974. Data for small firms are for 1975. Data for cottage firms are for August 1974 to July 1975. Secondly, BPS officials suspect that coverage of the small and cottage firms, especially, may have been rather poor and that the estimates (particularly the value added estimates) for these two groups may be substantially understated.

The increase in the number of enterprises , employment and value added for SE's between 1974/75 and 1980 reflects an improvement in coverage of this type of enterprises rather than a genuine expansion.

The 1979 survey of household and cottage industries was based on a household survey and was carried out in the general framework of the national social economic survey programme. It is uncertain to what extent its results can be compared with the household and cottage industry data generated by the 1975 industry census.

HC = household-cottage
S = small
LM = large-medium

Table 6. Manufacturing sector, Peninsular Malaysia

Economic significance of enterprise-groups by size segments

Size segments	Number of establishments	%	Employment	%	Value added Mio M$	%	Value of fixed assets Mio M$	%
			1978					
Tiny-scale < 5	4,683	41.6	13,630	3.4	65.0	0.5	74.5	1.4
Small-scale 5-49	5,028	44.8	80,376	19.8	705.4	13.1	587.1	11.0
Medium-scale 50-199	1,124	10.0	105,959	26.2	1,700.4	31.4	1,491.5	28.0
Large-scale > 200	390	3.6	206,664	50.7	2,980.7	55.0	3,166.5	59.5
Total	11,225	100.0	406,626	100.0	5,451.5	100.0	5,319.6	100.0
			1973					
Tiny scale < 5	4,683	42.3	11,733	3.9	29.4	1.3	21.8	0.9
Small-scale 5-49	5,250	47.5	77,525	26.0	393.6	17.0	318.8	13.9
Medium-scale 50-199	859	7.8	79,428	26.7	715.2	30.7	673.6	9.4
Large-scale > 200	268	2.4	129,248	43.4	1,185.8	51.0	1,280.3	55.8
Total	11,060	100.0	297,934	100.0	2,326.9	100.0	2,294.6	100.0

Source: Compiled from World Bank Report No.3851-MA, Malaysia, Development Issues of Prospects of Small Enterprises (3 volumes), 25 June 1982.

Looking at the subsectors of industrial production at a more disaggregated level, the following results have emerged in the case of Malaysia:

- Small industries in which utilization of each resource separately as well as combined seems more efficient include canning, preserving and processing of fish; rice milling; sago and tapioca; leather footwear; wooden and cane containers and small cane ware; wooden furniture and fixtures; pottery, china and earthenware; and motor vehicle parts and accessories.

- Industries in which small units appear to be efficient users of capital were coconut oil; palm kernel oil; biscuits; cocoa, chocolate and confectionery; dyeing, bleaching, printing and finishing of yarns and fabrics (except batek); knitting mills; clothing factories; saw mills; planning mills, window and door mills and joinery works; drugs and medicines; rubber remilling; rubber smoke houses; plastic products; structural clay products; foundries; furniture and fixtures (metal); wire and wire products; agricultural machinery and equipment; metal and woodworking machinery; electrical industrial machinery and apparatus; and bicycles, tricycles and trishaws and their parts and accessories.

- On the other hand, the analysis also suggests that SSIs might be performing distinctly worse than their larger counterparts - both in the utilization of labor and capital - in such industries as slaughtering, preparing and preserving meat; ice cream; meehoon, noodles and related products; prepared animal feeds; soft drinks and carbonated water industries; tobacco manufactures; batek; plywood and hard board mills; containers and boxes of paper and paperboard; paints, varnishes and lacquers; perfumes, cosmetics and other toilet preparations; cement and concrete products; cables and wires; and dry cells and storage batteries.

2. Support institutions and policy setting

In general it can be observed that the institutional framework for the active promotion of SMI is fairly well developed in most of the Islamic countries of South and Southeast Asia. Some details on individual countries, including information on recent changes in general economic policy orientation, are presented below:

Bangladesh

In 1973, the government as part of its industrial development policy, limited the role of the private sector to small- and medium-scale units with assets not exceeding TK 2.5 million. Since 1975, the ceiling had been gradually raised to TK 100 million and then finally lifted. The government

seems to have accepted the views of those who argued that the restriction of private investment to small-scale industries had undermined the vitality of small-scale enterprises by stiffling the opportunities for individual enterprise growth.1/

The new policy provides for equity support to the private sector, is aimed at the reactivation of the capital market and at the disinvestment of public enterprises. This policy reduces the sectors reserved for public investment and includes a tax holiday, the mobilization of savings through financial institutions and capital markets, preferential electricity rates, deferred payment of customs duty, rebate on duty for small units and export industries.

Three major organizations are responsible for the promotion of small-scale and cottage enterprises, being the Department of Industries, the Bangladesh Small and Cottage Industries Corporation (BSCIC), and the Bangladesh Shilpa Bank (BSB). Of the three, BSCIC, is the oldest and the most active one. Each of its operating divisions is devoted to one major area of small-scale enterprise promotion, as in finance; planning and development; projects, industrial estates and extension; design and handicrafts. BSCIC has four regional headquaters and administers 18 industrial estates in different parts of the country.

The Bangladesh Shilpa Bank is the principal financial agency for support to the small industry, though its operations are not limited to this sector.

Indonesia

The preparations for the next five year plan (Repelita IV, 1984/85-1988/89), the deterioration of the balance of payment since 1982 have lead the government to take measures that may change the general economic environment for small- and medium-scale industries as well.

1/ A.H.M.H. Rahman, et.al. Entrepreneurship and Small Enterprise Development in Bangladesh, University of Dacca, 1979, p.43, in Economic Bulletin for Asia and the Pacific, Vol. XXXIII, No.1, June 1982, p.78.

The industry sector (manufacturing and construction) grew at a rate 14 per cent per annum in the period of 1970-82. Much of the growth resulted from the government controlled large-scale industries, some in the form of joint ventures with foreign companies. Further growth potentials are now emphasized in finishing of raw and semi-raw materials, where small- and medium-scale industries have a particular role to play.

The government is increasingly aware of the adverse effects caused by licencing and controls such as: duplications, long and uncertain procedures, short periods of validity. There are signs that some of the procedures discriminate - though not by intention but by the way they operate - against small and new enterprises. The on-going process of deregulation contributes to reducing costs and establishing a better business environment for industrial enterprises.

The Department of Industry comprises a Directorate General of Small Industry. Assistance in production technology and management is carried out by the Directorate and by the Offices of Industry of the provincial governments.1/

Measures for development and promotion of small-scale industries are consolidated under a scheme entitled "Industrial Extension Services for Small Industries", BIPIK. This scheme provides assistance to SMI in the following fields: (i) extension services and guidance activities; (ii) training in management and technology; (iii) marketing assistance; (iv) materials procurement support; (v) mechanization assistance; (vi) quality control and standardization; and (vii) surveys and research.

A well structured network of financial institutions supports the small and medium scale industries in Indonesia:2/

- The state owned Development Bank (BAPINDO) is the principal domestic source for financing large-, medium- and small-scale industrial projects. The Indonesian Development Finance Co. (IDFC) concentrates

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1/ For a description of UNIDO's contribution to the development of small industry in Indonesia see Annex III.A.

2/ This section is based on the UNIDO Report. Industrial Development Review Series, Indonesia, UNIDO/IS.458, 18 April 1984, p.56-69.

on the financing of relatively small individual projects. The D.T. Bahana, a development bank established by the government in 1973, provides financing and managerial assistance to financially weak enterprises and also engages in lending operations for the small-scale industry sector.

- The Government has introduced various additional facilities for the financing of small-scale industry and for assisting small entrepreneurs. Loan opportunities are available to small and medium-scale enterprises under the short and medium-term lending schemes of Bank Rakyat Indonesia (BRI), Bank Negara Indonesia 1946 (BNI 1946) and BPD, comprising schemes for lending funds for plant and equipment investment (KIK) and for working capital (KMKP). In addition, there is also a small-scale credit scheme handled by the State Banks and selected Rural Development Banks on the basis of re-financing by the Central Bank, which have provided a large number of small entreprenerus with much needed long-term funds.

- In 1971, the Government established the P.T.Asuransi Kredit Indonesia (ASKRINDO) to insure bank loans made available to small entrepreneurs covering up to 75 per cent of the total risks. This insurance scheme was established with a view to inducing banks to pursue more vigorously their term lending to small- and medium-scale enterprises. Further, a non-bank financial institution, UPPINDO founded in 1972, provides funds and assistance to small enterprises.

Malaysia

The Small-scale Enterprise Sub-section of the Industries Section in the Economic Planning Unit (EPU) is to ensure that the strategies implemented for small-scale industries are consistent with the over-all strategies of the manufacturing and other sectors. In 1981 a Small-scale Enterprises Division was set up in the Ministry of Trade and Industry to coordinate the activities of different institutions charged with the responsibilities for the development of the small-scale industries. The Ministry of National and Rural Development has also a Small-scale Enterprises Division.

The Perbadanan Kemajuan Kraftangan Malaysia (PKKM) promotes the handicraft industries. A product development centre (Pusat Daya Cipta) carries out research on production techniques, designing and other related fields to improve existing handicraft and develop new handicraft products.

Various sectoral institutions (rubber, forest, palm oil, agriculture) provide services to small- and medium scale industries in their respective fields.

Majlis Amandet Rakyat (MARA) was established in 1966 as a statuary body under the Ministry of Public Enterprises. The objective of MARA is to motivate, guide, train and assist especially the rural population to participate actively in commercial and industrial activities. MARA has implemented an entrepreneurial development programme, the objective of which is to develop and increase the number of Bumiputera entrepreneurs and to upgrade Bumiputera small industries.

The Credit Guaranteee Corporation (CGC) was set up to encourage commercial banks to provide more loans to small enterprises. The CGC scheme provides guarantee cover for credit facilities made available by commercial banks to small enterprises for financing their fixed capital and operational requirements.

Pakistan

The small-scale sector in Pakistan (being defined now as including manufacturing enterprises having fixed assets, excluding the cost of land, up to PRs. 10 million) accounts for about 4.4 per cent of the country's gross national product (1982/83, at constant factor cost of 1959/60), 30 per cent of manufacturing value added, 18 per cent of total exports and 75 per cent of industrial employment.1/ After two decades of very slow growth the small-scale sector gathered momentum during the seventies with its production growth rates being considerably higher (7.3 per cent annually during 1970/80) than those of large-scale manufacturing (2.2 per cent during 1970/75, 3.7 per cent during 1975/80).2/

Compared to many other developing countries, Pakistan disposes of a rather sophisticated institutional set-up in order to support SSI in realizing their development potential. At the centre of the institutional framework are

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1/ For these figures and the following paragraphs cf. Government of Pakistan, Ministry of Industries, Small-Scale Industry in Pakistan, Islamabad 1984 (mimeo).

2/ Cf. Amjad, R., Small-Scale Industries and Rural Development: Implications for Rural Industrialization in Pakistan, in: Chuta, E./Sethuraman, S.V. (eds.), Rural Small-Scale Indsutries and Employment in Africa and Asia, Geneva 1984, p.94.

the Provincial Small Industries Corporations which were established some 10 years ago in Lahore, Karachi, Peshawar and Quetta. Their financial funds are mainly received from the regular yearly budgets in each Province. Among the major activities undertaken by these organizations are the following:

- Provision of financial assistance to SSI: This is arranged either with a consortium of commercial banks or together with the Industrial Development Bank of Pakistan (IDBP). The Small Industries Corporation takes over the responsibility to identify suitable projects, to prepare a project evaluation and to submit it to one of the commercial banks. If the bank accepts the project as being creditworthy, it will be passed to a Technical Advisory Committee. In case of final acceptance, the risk of default will be shared on a 50:50 basis between the respective Small Industries Corporation and the bank concerned. Furthermore, a preferential interest rate (0.75 per cent below market rates) will be offered to the borrowing enterprise. In the case of Punjab it is reported that about 50 per cent of all loans to SSI are channeled by the PSIC in Lahore.

- Setting up of industrial estates: More than 20 industrial estates have up to now been established in Pakistan in order to provide the physical infrastructure as well as some common facilities to small enterprises. Only a marginal percentage of small enterprises (about 2 per cent in the case of Punjab) has, however, been reached with this kind of instrument.

- Furthermore, the Small Industries Corporations are operating services centres (offering e.g. guidance in the choice of product and process technology), handicraft centres, vocational training centres and assistance in the marketing of products (Table 7 gives a comprehensive picture of Small Industries Corporations' activities).

Apart from the policy support measures being undertaken at the provincial level by Small Industries Corporations, mention should additionally be made of the following institutions:

- In the field of financing the State Bank of Pakistan (SBP) has introduced a so-called Small Loans Scheme for Businessmen and Industrialists, aimed at supporting enterprises with fiexed assets below PRs. 3.0 million.

- Professional training is provided through the Pakistan Industrial Technical Assistance Centre (PITAC) in Lahore which organizes on-the-job training, extends consultancy services and disseminates information on technology options available and suited for small enterprises.

- Under technical assistance from IDA the Pakistan Institute of Entrepreneurship Training is to be established in 1985. This will be a specialized agency engaged exclusively in the managerial training of entrepreneurs from SSI.

Table 7. Small industries corporations of Pakistan

(Figures of 1980)

Province / Name	SIND (SSIC)	PUNJAB (PSIC)	N.W.F.P. (SIDB)	BALUCHISTAN (SIW)	TOTAL
Headquarters / Year of Establishment	Karachi (1972)	Lahore (1962)	Peshawar (1972)	Quetta (1972)	
Zonal Offices	2	5	4	-	11
Staff / Professionals	285 (2o)	1,9oo (2oo)	3oo (14)	75o (1o)	3,235 (244)
Estimated Number of SSI-Units	3o,ooo	45;ooo	5,5oo	6oo	81,1oo
Total Assets / Fixed Assets (million Rs.)	37 (11)	2o4 (57)	45 (2o)	14 (6)	3oo (94)
Development Expenditure (million Rs.) 198o	2.6	31.4	3.5	6.7	52.7
Non-Development Expenditure (million Rs.)	2.o	5.2	1.3		
Number of Industrial Estates	3	7	8	2	2o
Total Size of All Ind. Estates (acres)	25o	4oo	285	no operated by SIW	935
Number of Plots (% allocated)	9oo (3o %)	1,3oo (6o %)	1,2oo (3o %)		3,4oo (4o %)
Firms Operating / Under Construction	45 (2o)	26o (15o)	66 (45)		371 (215)
Common Facilities and Training Centres:					
- Service Centres (Total)	4	8	8	1	21
Textile Centres	1 (closed)	-	8	-	9
Leather Centres	1 (Hyderabad)	1 (Gurjanwala)	-	-	2
Metal Working Centres	1 (leased)	2 (Gurjanw./Sialk.)	-	-	3
Sports Goods Centre	-	1	-	-	1
- Handicraft Centres	1	6	6	55	68
- Carpet Centres	-	78	18	36	132
- Handicraft Shops	1	7	2	1	11
- Other Centres	-	11	-	-	11
- Vocational Training Centres / Trainees	6 (173)	13 (148)	3 (78)	2 (-)	24 (4o1)
- Training Centres / Trainees	8 (388)	6 (8o7)	8 (1o8)	- (-)	1o (1,3o3)
- No. of Teachers	u.a.	465	u.a.	u.a.	-
- No. of Trainees / Year	3,289	5,133	1,133	499	1o,o34
Estimated SSI Loans (million Rs)					1,ooo
Foreign Assistance:					
- Advisers	-	11	32 Man Years	-	
- Grants	-	4.1 m.Rs. (FRG)	2.o m.Rs. (FRG)	-	
- Loans (IDA)	-	36.5 m.US$	-	-	
- Loans (FRG)	-	4.8 m.DM	-	-	

Source: Study on Small-scale Industries in Pakistan, Volume I, UNIDO Report, January 1981, p.49.

C. West Asia

1. Development trends

Economic developments in some of the countries of the region since the early 1970s have led to very special conditions under which arguments normally put forward in Africa and Asia for small- and medium-scale industries only partially apply. On the other hand, existing economic and industrial structures, in part together with the application of leading-edge processing techniques, offer new opportunities in the development of modern small- and medium-range industries. The following paragraphs will be dealing with the Gulf Co-operation Council countries as a separate sub-group on the one hand, and with Jordan, the Arab Republic of Yemen and the People's Democratic Republic of Yemen on the other hand.

Gulf Co-operation Council Countries

The Economic Agreement signed in June 1981 by the GCC member countries (Bahrein, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates) details the framework, mechanisms and principles of co-ordination, harmonization and integration of economic activity in the region.

Within a historically short period of time, the GCC countries have transformed their resource-poor economies into resource-rich, rapidly growing economies during the 1970s. The subregion now has an adequate and well functioning infrastructure, seaports, highways, housing complexes. Large infrastructural facilities for industry have been completed, particularly in Saudi Arabia, Kuwait and the UAR. Water, energy and other services are often priced under production costs for industry. In Saudi Arabia the term 'normalization' has meanwhile been coined for the forthcoming phase of development, one aspect of this 'normalization' being a stronger emphasis in the future on rural development efforts. This gradual reorientation should provide for some additional growth potential particularly for enterprises in SMI.

Major structural changes have to be brought about within the near future. There is e.g. a heavy oversupply in sectors producing conventional building materials and components (such as metal window frames, bricks, tiles,

pipes), caused by the downscaling of infrastructural construction works. Consequently entrepreneurial energies will partly have to be shifted away from construction and towards new, more sophisticated products. Due to increasingly urbanized life styles of particularly young families there will be a growing demand for consumer items, be they processed food of high quality, furniture, textiles, home appliances or consumer electronics. SMI enterprises capable of efficiently producing high-quality items will hence find considerable growth opportunities.

As major metallurgical, petrochemical and aluminium production facilities come on stream, medium-scale industries should also be strengthened to process the basic and semi-finished products to final products in order to achieve further diversification and integration of the industrial sector.

In 1982 the import bill of engineering products made $13.4 billion in the GCC sub-region. Potentials for the production of telecommunication equipment, electronic products, machinery and equipment for the petrochemical industry, construction and transportation equipment have been identified as one of the growth poles[1/] for the industry in the sub-region. Such engineering industries may offer a broad range of opportunities for the creation and growth of small- and medium-sized enterprises.

Human, natural and financial resources of the sub-region point to development avenues relying on computer-based technologies opening up new levels of accuracy and product-line variety to modern small- and medium-scale enterprises. Computer controls, programmed production sequences, and electronic memory make the application of leading-edge processing techniques feasible to small production runs (mini-mill operation in the steel industry, robots producing a wide range of pieces, materials, and products).

Jordan

The Jordanian industrial development strategy is characterized mainly by relying upon large-scale, capital-intensive, mineral resource-based and/or

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1/ UNIDO. The resource base for industrialization in the Gulf Co-operation Council countries: A framework for co-operation, UNIDO/IS.423, 21 December 1983, Vienna, p.405-418.

export-oriented industries (including foreign investment in specified areas) aimed at the rapid infusion of advanced technologies and management methods.

The 1974 Industrial Survey conducted by the Jordan Department of Statistics, reported about 7,000 small-scale establishments (1-4 employees) making for almost 90 per cent of the total number of Jordanian industrial establishments and employing 10,964 workers, constituting 41 per cent of the total industrial labour force. According to a survey by the Industrial Development Bank (IDB), 89 per cent of small-scale units used electricity as the main source of energy.1/

During the fast modernization of the medium- and large-scale sector managed by the traditional Jordanian merchant class the small-scale and handicraft industries have remained virtually untouched, although some steps have been taken to foster their progress as well.

The small-scale sector is built around the traditional Arab bazaar and the master craftsman who maintains his position within the market by participation in an informal craftsman's guild with well established traditions and behavioural patterns. Use of mechanics is gaining popularity as is the use of electricity as source of energy. Familiarity with production processes is high so that 85 per cent of an earlier IDB sample stated that they had no difficulty in selecting appropriate machinery.

The significance of this sector lies in the fact that it constitutes the largest pool of entrepreneurial ability within the Jordanian economy. The search for industrial efficiency and economies of scale must therefore not be at the expense of indigenous entrepreneurial ability. A conscious attempt needs to be made to avoid forcing the informal sector entrepreneur into becoming a semi-skilled labourer or an immigrant to the Gulf.2/

1/ UNIDO, Country Industrial Development Profile of Jordan, Problems and prospects, UNIDO/ICIS.159, 15 May 1980, p. 79-80.

2/ UNIDO, op.cit, p.86-87.

Yemen, Arab Republic

The results of a field survey undertaken during 1975/76 showed 270 establishments employing more than five workers in the YAR. In addition, 11,067 establishments employing between one and four workers existed in the same year. The number of workers engaged in industry and related activities amounted to 23,856 persons, of which 50.8 per cent were employed in food industries and tobacco, 25.4 per cent in textiles, 11.8 per cent in minerals, 7.6 per cent in building materials and 4.4 per cent in chemical products[1/] (Table 8).

Table 8. Number of industrial establishments by branches of industries and strata of employment 1975/76

Industrial activity	Number of establishment by strata of employment			
	Total	More than 10 workers	Between 5-9 workers	Between 1-4 workers
Food industries	6,884	22	77	6,785
Manufacture of non-metal building materials	527	8	13	506
Textile industries	2,601	7	33	2,561
Metal industries, repair and jewelery works	1,158	9	29	1,120
Chemical, wood works, printing and publishing industries	167	13	59	95
Total	11,337	59	211	11,067

Source: YAR, Central Planning Organization, Statistical Yearbook 1976/77.

Industrial development in YAR has taken place without much protection from imports, taking advantage of investment incentives provided by the government, of transport cost differentials, local raw materials and special

1/ UNIDO, Long-term prospects of industrial development in the Yemen Arab Republic, UNIDO/ICIS.87, 9 November 1978.

characteristics of the local market. It is largely undertaken by the private sector with the government participating only in those investments that are too large for private entrepreneurs to finance. Further chances for small- and medium-sized projects are seen in food processing, building materials, textiles, metal- and wood-working.

Yemen, People's Democratic Republic

The manufacturing sector in PDRY is still relatively small employing about 12,000 workers. In addition, some 15-20,000 people are engaged in small (huy) industries and handicrafts. Private companies represent about one fourth of the total industrial output and 80 per cent of the jobs.

The current development plan has identified 5 large projects and about 20 new projects, mostly medium-sized, which are currently under consideration, for the public sector. In addition, about 25 generally small projects have been tentatively identified by the Planning Department of the Ministry of Industry as suitable for private investors and which might be offered to those wanting to invest in industry, but lacking their own project ideas (bakeries, aluminium door and window frames, car springs, paper cartoons and plywood).

A recent World Bank Report[1/] underlines the need for medium-sized import substitution projects employing typically 25-50 workers and involving an investment up to YD 500,000. It is this type of operation, perhaps particularly suited for private ownership, which is most obviously lacking, covering a wide range of sectors, but especially clothing, footwear, simple metal products and household items.

2. Support institutions and policy setting

Gulf Co-operation Council countries

The Economic Agreement signed by GCC member countries constitutes a favourable environment, inter alia, for the development of small- and

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1/ World Bank, People's Democratic Republic of Yemen, Mid-term Review of the Second Five-Year Plan, 1981-85, 4 June 1984, Rep. No. 4726-JDR, p.52-53.

medium-scale industries, particularly in view of the arrangements made for free trade, free movement of people and capital.

Most of the GCC countries are well equipped with institutional infrastructures for the promotion of industry, including small- and medium-scale enterprises. Examples will be taken here from Saudi Arabia.

In Saudi Arabia the ultimate responsibility for co-ordinating industrial endeavours within the framework of the Development Plan rests with the Ministry of Industry and Electricity. Several autonomous institutions have been established for special purposes, one of them being the Industrial Studies and Development Centre (ISDC).

Since commercial banks are more likely to finance short-term projects and needs, the government has set up financial institutions with substantial capital to finance medium- and long-term projects. The funds are extended to both private and public projects.

The Saudi Industrial Development Fund was established by Royal Decree in 1974 with its head office in Riyadh. Its main function is the provision of medium- and long-term interest-free loans to new or existing establishments. The loans extended cover up to 50 per cent of the total funds required for financing the project or its development. Loans are to be redeemed within a maximum period of 15 years and a fee of 2 per cent is charged of an outstanding loan as a service fee. The loan conditions stipulate that the funds shall not be used for working capital, and that a feasibility study should be attached to the application form. The Saudi Industrial Development Fund since its inception financed the vast majority of industrial establishments which fell outside the heavy industrial sector. Between 1975 and 1982 the SIDF had made loans totalling SR 41 billion to 675 industrial plants.

To complement the increasing emphasis on private sector involvement and investment in the Saudi economy - a salient feature of the new Fourth Five-Year Plan strategy - a National Industrialization Company (NIC)1/ has

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1/ The Economist Intelligence Unit, Quarterly Economic Review of Saudi Arabia, 1984, No.1, p.9-10.

been established as a holding company for investments in medium-size industrial and service ventures in the Kingdom. 40 per cent of the capital has been put up by a group of 119 Saudi businessman and seven institutions such as the Public Investment Fund (4 per cent), Sabic (4 per cent), National Commercial Bank (2.5 per cent), Riyad Bank (2.5 per cent), etc. Only half of the company's SR 600 million is being called up initially, with the remainder to be raised over the first two years of operations. NIC will, in many ways, be to the medium-sized industrial sector in Saudi Arabia what the Saudi Basic Industries Corporation (SABIC) and Petromin General Petroleum and Minerals Organization (PETROMIN) are to the heavy industry and oil sectors.

Creation of industrial estates is another successful instrument of the Saudi policy of encouraging small- and medium-scale industrialization. The first three industrial estates were established in Riyadh, Jeddah and Damman. They provided virtually free, developed sites and infrastructural services together with cheap electricity to investors who, with SIDF loan, could then erect buildings and install production plants. Each of these three estates has for long allocated all its sites and each now has plans for expansion.

The second wave of industrial estate building is more closely associated with regional development policy, and many provincial municipalities have also been providing or at least allocating sites for business enterprises. Furthermore, duty exemptions and the liberal tax system constitute a favourable business environment for small- and medium-sized enterprises as well.

Jordan

The Ministry of Industry and Trade, the Industrial Development Bank of Jordan (IDB), industrial estates and zones established in Amman, Zarqa, Aqaba and elsewhere are the most important institutions supporting the development of small- and medium-scale industries in the country.

The Ministry of Industry and Trade is responsible for the issuance of licences for the creation of new industrial establishments and the renewal or expansion of existing ones.

The licencing system aids the merger of small industrial enterprises. Previously, it also served the policy of preventing duplication of industrial investments. As the government relaxed its prohibition regarding duplication in the late 1970s, the number of medium-sized establishment licences increased, however, by 142 per cent in one year.1/ The change has strengthened a competitive spirit in industry.

The Industrial Development Bank, though it maintains some windows for small-scale and handicraft industries, is basically an institution geared to meeting the credit needs of the medium-sized modern establishments. There has been awareness of the needs of the tranditional small-scale industries. Since 1975 IDB has also established an experimental programme for providing finance to this sector.

Yemen Arab Republic

Two recent institutional developments may contribute to the strengthening of small- and medium scale industries in the country.

The first one is the strengthening of an advisory service in the Industry Department of the Ministry of Economy and Industry with the purpose to

- identify potential entrepreneurs
- select areas and activities in which small- and medium-scale production will be viable
- evaluate techno-economic feasibility studies
- provide techno-economic, finance and accounting and managerial guidance
- secure access to finance on appropriate terms.

The second one is the strengthening of the operations of the Industrial Bank of Yemen. The Industrial Bank of Yemen (IBY) was established in 1976 as an autonomous development finance institution with corporate status. Its main functions have been to promote and assist the establishment of industrial projects in private, public and mixed sectors. IBY also provides financial and technical assistance to small business and handicraft industry. IBY is

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1/ UNIDO, Country Profile Jordan, op.cit., p.72.

operating, since March 1979, a United Nations Capital Development Fund (UNCDF) guarantee scheme for small industries with a total amount of $1 million - $800,000 for credit guaranties and $200,000 for equity support. It normally includes enterprises with a total investment not exceeding YRls 500,000. In addition IBY is administering a $450,000 credit facility (IDA) to the Industrial Estate Development Authority.

Yemen, People's Democratic Republic

The basic organizational framework for comprehensive economic and social planning is now well established in the country. The Ministry of Industry has overall responsibility in the industrial sector, though a substantial proportion of production and investments come under the direct control of other ministries. Small private operations are under the responsibility of municipalities.

Many artisans and small investors appear to have adequate financial resources for investments in industry. Nevertheless, it is felt that a government sponsored small loan facility could be very effective. It is support and advice - both technical and management - which are needed.

D. Turkey[1/]

Small (establishments with less than 50 workers) and medium-scale enterprises (establishments employing 50-200 workers) are predominant in Turkish manufacturing. In 1970, there were about 175,000 establishments in the private sector, (estimated to be around 180,000 in 1981), of which 487 (or 0.3 per cent of total) employed 200 or more workers, 941 (or 1.2 per cent) between 50 and 199, 3,391 (or 1.9 per cent) between 10 and 50 workers, and the vast majority of some 170,000 establishments (or 97.2 per cent) less than 10 workers. In the last category, the so-called unorganized sector, over 162,000 (or 93 per cent) establishments employed 4 or less workers.

In the organized sector, between 1970 and 1977 the total number of establishments increased from 4,819 to 8,537, or by 77 per cent.[2/] The increase has been the most impressive in the medium- (50-200) and small-scale industry (10-49) sectors, where the number of establishment rose by 88 and 82 per cent respectively. The number of large-scale establishments also increased, but by a more moderate 23 per cent.

Analysis of the sectoral distribution of the growth in the number of manufacturing establishments in the organized sector during 1970-77 indicate that the most important increases, both in absolute numbers and percentage-wise, have been in basic metals, including foundries, and metal products, followed by leather products, plastics, and chemicals, reflecting the potential in industries and the quick response of new entrepreneurs, as evidenced by the high incidence of new entry in the face of rising demand for consumer and intermediate goods (backward linkages). It is also notable that

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1/ This section is based, inter alia, on the following two World Bank reports: Turkey, Labour intensive industry project, 1 February 1981, World Bank Country Study; Prospects for Small-, Medium-scale Industry Development and employment creation, September 1980.

2/ This period was preceded by the years of 1965-69, when the output incrased by over 10 per cent annually. Following devaluation in 1970 solid reserve of foreign exchange was established. After achieving a record overall growth of 11.5 per cent in 1976, the manufacturing output slowed down, but picked up again in 1981 and 1982 when there were 7.2 per cent and 4.6 per cent increases in Turkey. EIU, Turkey, Annual Supplement 1983, p.17.

in the more traditional industries such as food, beverages and textiles (excluding clothing), the growth in the number of establishments was very low. This reflects the already higher level of development of these industries (large original base) and, possibly, growth in the size of the establishments.

Employment in manufacturing increased by 55 per cent during 1970-77, growing at an annual average rate of 6.5 per cent. The growth rate has been much higher (8.0-8.5 per cent) in the medium and small compared to the large-scale enterprises (5.6 per cent). In view of underreporting by smaller enterprises, the actual level of employment is probably underestimated.

Industrial development in Turkey has progressed to the point where future growth of SMI depends on increasing adoption of modern efficient production processes, specialization in production, improved product designs and higher product quality, modern management methods, and developing closer linkages with larger manufacturing firms as sub-contractors for the provision of parts, components and sub-assemblies or with large-scale trading houses serving either the national or export markets.

Subsectors which appear most promising in terms of potential growth of SMI comprise the foundry, engineering, food processing, ready-made garments, footwear and leather products, furniture, plastics and construction materials. Complementarity with larger industry, involving manufacturing operations in which the processes are readily separable (e.g. producing specialized machine products, components and tools, etc.), will also play a major role in the future.

In Turkey, there is a particular emphasis within the framework of the development plans on the promotion of small-scale industry. For this purpose, a General Directorate has been established within the Ministry of Industry and Technology which, inter alia, has realized the establishment of 77 small industrial districts in various parts of the country. In addition to the Regional Centre for the Development of the Small Industry the Ministry will also realize the formation of the Board of Directors of the KUSGET (General Directorate for the Small Industry Development Organization) which is to initiate action for the establishment of a new Regional Development Centre

assisting the foundry industry in Ankara. Furthermore, a Small Industry Development Board is to be established to serve as a high level consultation and co-ordination organ in determining the policies for small-scale industry development.

CHAPTER III

POLICY RECOMMENDATIONS FOR THE STRENGTHENING AND PROMOTION OF SMALL AND MEDIUM INDUSTRIAL ENTERPRISES

It is axiomatic that policies and programmes for enhancing the role of the SMI have to be tailored to local circumstances, resources and skills particularly to entrepreneurial skills in each country, taken into account the operational difficulties and priorities with which these enterprises are faced. Any development programme must consider the quantity and diversity of individual enterprises when organizing the support and assistance and selecting a target group.

Smaller industrial enterprises are widely scattered and therefore often relatively inaccessible, difficult for development agencies to identify, and to communicate with. The provision of support services in the financial, managerial and technical fields requires frequent direct contact with large numbers of individual enterprises at the local level. Consequently industrial development programmes aimed at the SMI subsector require extensive branch networks interconnected to a number of specialized function, resource or service centres. Above all they require skilled and carefully trained staff who are credible sources of assistance for the industrialists and entrepreneurs who risk their capital and their labour. Such a development programme with multiple and complex aims and objectives represents a substantial investment and itself requires effective management if its objectives are to be fulfilled.

Clearly the major share of responsibility for development of the small and medium scale sector must lie at the national level, where a government and its development agencies within the framework of a broader plan for economic development can assess development potential, set priorities, allocate appropriate resources, and organize programme implementation appropriate to national circumstances. Moreover, governments' macroeconomic policies for development of primary resources, education and training, savings, investment, foreign trade and public/private sector policies will bear directly on the prospects for development of the SMI subsector. One important element of government support to SMI is to ensure that broader economic policies do not

inhibit or obstruct industrial development of this sector. The second task for governments is to actively create a favourable business environment specifically for smaller private industrial enterprises to enable them to grow and advance. It should be noted that there is a danger of obstructing this development process through too tight and detailed interventions and controls by the government. The SMI programmes should therefore be limited to some key areas of assistance which will be described below. On the other hand the SMI must be given the framework for its operation. To this end it is essential that governments' priorities are clearly visible and understood by all.

As was pointed out the unavailability of credit is normally the greatest single impediment to the growth and diversification of industrial activity in the SMI sector. One key area of support would thus be the provision of long and short term credits. Such provision of loan facilities to small and medium scale enterprises does carry with it the necessity of providing managerial assistance to the enterprises so as to enable them to upgrade their financial planning and control procedures as well as to introduce systematic accounting techniques. As far as can be observed only few financial institutions in the OIC member countries are equipped to fulfill these functions through proper follow-up to loans. A build-up of such function could significantly increase the enterprises' debt servicing capabilities.

While individual enterprises continue to identify and supply market opportunities, the problem of initiating and sustaining a process of growth to a 'mature' stage with larger markets remains to be solved. In this regard valuable assistance could be provided by development agencies through the extension of an enterprise's market horizons beyond the local market. At the national level governments can play a major role in this respect through improving smaller enterprises' access to public sector procurement. In many cases local market opportunites for smaller enterprises can be significantly increased if they are made aware of and are eligible for tendering for local government or other public sector supplies (see also Annex I on the ancillarization approach in India). Relatively small changes in public sector procurement procedures are usually required to achieve this goal. However, some special support for smaller producers may be necessary in the initial stages in terms of quality control.

The development of production know-how is another key area for support. Whereas the general education and training systems can generate basic skills and the accumulation of practical experience in the application of production technologies can broaden these skills, the question arises how specific government assistance could be designed so as to more actively support SMI. One way is to provide small enterprises with technical consultancy services (i.e. specialist technical skills) to help them service and exploit their installed capacity and adapt their products to changing market conditions. Moreover, enterprises need assistance in order to refine and enhance their production technologies. Here the raising of technical efficiencies within the production process can do much to upgrade the competitiveness and keep abreast of developments. To this end governments should take measures to reinforce indigenous technological capabilities through the establishment of research and development institutions, test laboratories etc. in key technology areas according to the local resource endowment. In addition the creation of networks for technical production information between interested parties in private industry, public sector organizations and research establishments can accelerate the diffusion of new concepts and techniques (see Annex I on the TSDS in the Philippines).

(a) Assistance in obtaining basic information

An enterprise's external information requirements cover technical, financial and marketing data. Some of the information defines basic parameters, specifications, points of contact, etc. which change less frequently; other information is derived from ongoing commercial activity, and is variable. The information required by small industrial enterprises on international development concern mainly (i) information on changes in product and process technology emerging in other countries and new adaptation of technologies especially suited for short-run small-series production and (ii) information on opportunities and trends in foreign markets. The SMI obviously do not have the resources or access to networks through which SMI could obtain and analyse such information. There seem thus to be a built-in obstacle of SMI for overcoming the threshold of a 'minimum scale of an enterprise'. In this situation there is a strong case for support to SMI; such information gathering and dissemination could be organized both at the national level - in respect of national data on demand, prices etc. - and at a regional or

inter-country level. As demonstrated by some existing cases, regional information centres could be of significant importance. Regional information centres have a large catchment area and can collate and distribute industrial information concerning production and trade within the region and with more distant markets. Such centres can support national development agencies and strengthening their capabilities to gain access to more specialized and more up to date information and data. A regional information centre can not only provide raw statistical data and qualitative information, but it can also provide information of an analytical or comparative nature: Given the necessary technical skills, such a centre can provide an enquiry service for individual producers as well as for development agencies.

Such centres could be created through the extension of the capabilities of existing centres of industrial activity, such as government agencies, research and development institutions, financial institutions, by providing them with the means of outreach to distribute data to the SMI sector. By a supporting network of 'contact points' SMI could gain access to an information system with the minimum cost and delay.

(b) Engineering support services

For small enterprises technical support in the form of advice and assistance on the choice of production or process technology can be crucial to future profitability, as the production capacity can accurately be tailored to both the market and the available resources. Once in production there is always a need for effective servicing and maintenance; in most cases such skills will need to be developed in house or else be contracted out. In more sophisticated production units, technical support will be required with adaptation of the production system or the development of capabilities to meet specialized requirements or changing market conditions. Product adaptation and development become increasingly important to an enterprise's development once it reaches a more 'mature' stage and external assistance may well be required to achieve exacting technical standards or specifications for new or overseas markets. The quality of output of most smaller enterprises is often largely determined by the quality of bought-in materials and components. Few smaller enterprises are equipped to test materials adequately. Therefore technical test facilities for raw materials and for finished goods are an

essential support service for many small and medium scale industrial enterprises.

Regional organizations have the advantage of often being able to mobilize resources to provide such specialized services or to provide access to existing facilities in the public or large-scale sector by means of the product or technology based expertise they maintain or have access to. Such technical support can be crucial to the development of export capability within smaller enterprises.

(c) Training in programme development and implementation skills

Given the large population of small and medium scale industrial enterprises, the variety of output and the scattered distribution of producing units, industrial development agencies are faced with severe difficulties in assembling the skilled manpower necessary to both support existing activities in the small and medium scale sector and to promote the creation of new industrial capacity. The range of skills required by such development institutions is wide covering administrative, organizational and managerial tasks as well as technical production skills in a great number of different technologies.

There are four main fields where concerted training and retraining programmes are necessary in order to equip industrial development 'agents' to deal effectively with production in small and medium scale enterprises; these are financial control and accounting, management and 'shop floor' supervisory tasks, marketing tasks (including sales and tendering), and the technical aspects of production. The first group of organizational and management tasks is fundamental to the planning and maintenance of industrial activity and can be dealt with through short formal training courses reinforced by practical experience wherever possible. The technical aspects of production including production control, product development, quality control etc., require appropriate basic technical training, which is highly specialized and requires a longer period, and the opportunity of considerable commercial experience to apply the principles learned. It is in this area that specialized technical support from institutions of higher education, technical research and development, test laboratories or even from large-scale industry are most

needed if comprehensive support services are to be provided to the SMI sector. In addition development agencies need to ensure that their personnel has the necessary skills in industrial promotion, project identification and development, project presentation, and in consulting services.

(d) Towards an OIC programme for SMI

Due to its very nature, the SMI sector is to a large extent operating on its own within the limited framework of small local markets. However, it was shown above that there is a need for support to enhance the role and to utilize the large development potential of the SMI through measures at the national and regional levels and that, indeed, such measures are being pursued - to a varying degree - in all OIC member countries.

In many OIC member countries there is already in place an extensive institutional framework and significant expertise and experience with industrial development in the small and medium scale sub-sectors. The priority for the immediate future is to upgrade the capabilities of these existing agencies so as to improve their effectiveness and mobilize their expertise. Areas of weakness in technical or commercial support services should be dealt with by means of appropriate assistance from the international agencies including UNIDO. However most of the countries now have much to learn from their own experience to date and from that of other OIC member countries. It is on this basis and on the basis of OIC member countries' recognition of the importance of the SMI sector as part of their industrialization process that a proposal is made to more systematically utilize the intra-OIC experience and resources for a supporting programme among the member countries. Through regular consultations, - possibility backed up by international assistance - the national efforts could be significantly enhanced.

There seem to be four major areas for such regular consulations. First, the improvement of information flows on technologies, markets and other key economic factors for dissemination to national and regional bodies. Second, the recording of initiatives and progress in developing and refining development techniques and methodologies. Third, joint elaboration of innovative approaches to encourage the growth and efficiency of SMI. This may

include the utilization of new information technologies to increase the presence of SMI at the market. Fourth and most important, the training aspect whereby skilled and experienced 'practitioners of development' learn from each other as well as being exposed to new concepts from external sources, so extending their capabilities and motivating the application of their skills.

Priority should be given in OIC programmes to the training of trainers and the development and distribution of training materials. In some management areas there are also opportunities for the use of distance teaching methods, self instruction manuals, self-help guides etc. but there is a shortage of such materials which have been adapted to local needs and circumstances. Problems of language, literacy, numberacy are not uncommon in the SMI sector. New internaional programmes are well placed to provide valuable assistance in these areas.

It should be noted that obviously any joint OIC programme needs firstly to be built-up gradually and possibly involve, in the initial stages, only sub-regional activities. Secondly, some priority issues of the outlined areas need to be singled out. Thirdly, a more systematic data base on SMI needs to be developed at the country level with the aims of creating a greater awareness of the prospects, constraints and trends of SMI. Such data would also enable better international comparison and joint OIC monitoring of developments.

ANNEX I

SOME RECENT INSTITUTIONAL APPROACHES TO THE PROMOTION OF SMI

For this annex only a few institutional approaches have been selected without putting them into a systematic perspective. They are not to be interpreted as alternatives nor are they intended to offer any complete overview. The examples that have been selected on the basis of available information refer to non-member countries of the OIC so that, to OIC countries, they may offer some new information and may be taken as point of departure for further discussions.

A. At the National Level

1. Ancillarization (India)[1/]

The concept of ancillary development or ancillarization of SMI received priority status in India in 1971 when the Bureau of Public Enterprises for the first time issued guidelines to all public enterprises in order to enhence the number and growth of ancillary units.[2/] In order to qualify as ancillary unit, an enterprise has to meet a number of specific requirements:

- investment in plant and machinery must not exceed Rs. 2.5 million;
- it has to be engaged in the manufacture of parts, components, sub-assemblies, tooling or intermediaries, or the rendering of services;
- it has to supply or render 50 per cent of its production or of total services to other units for production of other articles;
- it must not be a subsidiary of or be owned or controlled, by another enterprise.

1/ The following thoughts on ancillarization draw on a draft paper on "Ancillarization - Its role in industrialization" prepared by V. Dhall for UNIDO and on some of the papers that were presented at the International Seminar on Ancillary Development, New Delhi, March 26-27, 1984, organized by the Industrial Development Bank of India.

2/ Ancillarization is however not restricted to public sector enterprises but applies also to the private sector.

From this definition of ancillary units it emerges that in functional terms ancillarization follows the same lines as the promotion of subcontracting in general does. A distinction is made, however, between 'simple' subcontracting units and ancillaries insofar as the latter are committed to sell at least 50 per cent of their production to parent companies. The conceptual basis of ancillarization is to be seen primarily in the attempt not to establish purely commercial buyer-seller-relationships but, what is often called 'relationships of a higher order' in which the large nucleus firms are expected to accept longer-term responsibilities for a healthy and efficient development of their ancillaries (e.g. by means of technical, managerial or financial assistance).

As regards the orders of magnitude involved in ancillarization the following tentative figures may be given: ancillaries in 1981/82 accounted for around 20 per cent of total purchases made by public sector enterprises from the small-scale sector. If, however, total purchases of both public and private sector enterprises from ancillaries are held against total production of the small-scale sector, the resulting share turns out to be as low as 2 per cent.

Not surprisingly, the scope for ancillary production varies from sector to sector of manufacturing activity with the following rank order and rough figures in the Indian case:

Manufacturing Sector	Scope for Ancillaries
1. Transportation industry	60 - 70%
2. Communication industry	50 - 75%
3. Prime movers and power-based industry	30 - 50%
4. Industrial machinery and machine tools	20 - 40%
5. Chemicals and pharmaceuticals	15 - 30%
6. Consumption and consumer durables	10 - 30%
7. Basic industry (metals and minerals)	5 - 10%
8. Wood, paper, fifres, glass and ceramics	2 - 10%

Experiences have been gained now for more than a decade in India concerning the 'ancillary approach' to SMI promotion and, notwithstanding the mushrooming growth of ancillary units and their production, a number of critical constraints have also come to light. Among these are to be mentioned:

- The present taxation policy is a detrimental factor to further growth and specialisation of ancillary production. Indirect taxes like sales

- tax and excise duty are based on turnover (instead of on value-added) with the result that it is cost-saving for large enterprises to grow vertically in order to avoid the cascading effects of taxes to be paid at each stage of production. This is only another example for the important role of the overall policy environment as determinant of SMI potential.

- Another problem area is to be seen in the clashing of social objectives and private profit-seeking interests. The large private nucleus firms are expected to take part in e.g. the development of infrastructural facilities for ancillary units which they in turn regard as a genuine part of government responsibilities.

- The most important single retarding factor has apparently been the lack of financial support for ancillaries. Firstly, the large parent companies are on the whole unwilling to have financial stakes in their ancillaries and secondly, the ancillaries are facing difficulties to get bank credits because of their low standing in most financial institutions. Moreover, as has often been reported, they suffer from delayed payments by parent companies which among others may indicate the cut-throat competition in getting orders at all.

- Many parent enterprises, including in particular a public sector enterprise engaged in telephone industry, have complained about the alleged inability of ancillaries to introduce and to operate sophisticated technology (see also chapter I.A.6 on the technology aspect).

All in all, the ancillarization approach has been no exception to the rule that SMI face a difficult business environment and are in need of supporting policy measures. This is not to say that the approach as such has been wrong but that it needs further improvements, in order not to be just another label for what is already well-known as subcontracting. Above all, it should be kept in mind that ancillarization will always play only a supplementary role in overall SMI promotion (in India about 6 per cent of small-scale units may be classified as being ancillaries). It ties the growth of SMI to the prospects of large industrial enterprises thus offering to the former additional opportunities as well as additional risks.

2. Technology Services Delivery System (Philippines)[1/]

In March 1978, the Philippine Government through the Commission on Small

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1/ For detailed descriptions and analyses cf. UNIDO-documents ID/WG.350/1 and ID/WG.350/2, both of 23 September 1981, and ID/WG.350/24 of 26 March 1983. They present preparatory work and the results of the Expert Group Meeting for Exchange of Experiences on Technology Services Delivery System (TSDS), Manila, Philippines, 2-6 November 1981.

and Medium Industries (CSMI) of the Ministry of Industry started the implementation of the Technology Services Delivery System (TSDS). This project was implemented with the assistance of UNIDO,[1/] the Japanese Government, ESCAP and the local UNDP.

The main objective of the TSDS project has been to establish the institutional framework for an efficient mechanism delivering technological information and services to SMI, particularly those located in rural areas. The project rightly started from the assumption that valuable technological knowledge is principally available in every country but is either not geared to the specific needs of small and medium-scale producers or is not being disseminated to them. In the first case the problem lies with the orientation of technological research, in the second case with the diffusion of its results.

This indeed represents a crucial problem area which has only recently also been identified and subsequently addressed in many industrialized countries, notably in the Federal Repbulic of Germany where so-called transfer institutions try to build a bridge between large universities 'research capacities and the needs of industrial enterprises, particularly small and medium-ones. Preferably this attempt should, however, be made in the earlier stages of industrialization in order to avoid from the beginning the emergence of too large a discrepancy between the work orientation of technological research institutions and the various industrial sectors' requirements.

Whereas most large industries already have integrated into their organization the capital and managerial resources to secure continuous development, acquisition and application of new technologies, most SMI lack (for reasons discussed in chapter I.B) the resources required for this purpose. More often than not there is even a lack of information about the range of technological options that have already been developed. One of the central tasks of the TSDS thus should be very basically the provision of required information. The whole TSDS consists of three different sub-systems:

1/ Under the project "Strengthening and Modernization of the Technological Performance of Medium and Small-Scale Industries in Selected Countries of the ESCAP Region" (TF/RAS/77/004).

- the information sub-system: dissemination of existing written material available in research isntitutions on technological alternatives (incl. skill requirements, costs etc.) in various industrial sectors;

- the training sub-system: planning and preparation of lectures, seminars, practical demonstrations etc. in research and training institutions as well as in the countryside;

- the in-plant consultancy sub-system; this will be the crucial and most expensive link element between technological research institutions and SMI requiring at least short-term absence of research staff and thus the interruption of on-going research and development work.

It is important to note that the TSDS as envisaged by UNIDO does not necessarily require the creation of additional institutions but will focus on systematically establishing linkages and feedbacks between institutions already in existence. The TSDS in the Philippines is a case in point: It has been using the Bureau for Small and Medium Industries as TSDS coordinating unit and the Small Business Advice Centres as instrument for the establishment of regional linkages with SMI.

It may be advisable to concentrate the TSDS in its initial stages on some core industries (target sectors) with high shares of small and medium-scale enterprises. In the Philippine case food processing, wood processing and metalworking industries have accordingly been selected and TSDS-related efforts have already had a significant impact on the SMI target enterprises, e.g. in terms of their organization into working industry associations.

There is no doubt that the TSDS approach which has been applied in the Philippines could also work effectively in other countries, if suitably adapted to their individual institutional environment. On the other hand, it would appear to be an open question if the TSDS lends itself also to attempts at closer regional co-operation. In this case individual research institutions would take over the responsibility for region wide technological advice in a particular industry sector. This may be theoretically appropriate in the case of countries disposing only of limited technological research capabilities and capacities but would increase unavoidably both time and costs required for administrative and coordinative actions.

B. At the International Level

Although national efforts to expand and diversify the production of SMI should always be at the center of policy attention, there are also substantial benefits to be reaped in terms of the transfer of technology from small and medium-sized enterprises in developed countries to respective counterparts in developing countries.1/ Small and medium-sized enterprises as agents of technology transfer have some distinct advantages to offer, e.g. they tend to be engaged in highly specialized, small-batch production processes. Furthermore, they may be preferable as a co-operation partner to large multinational companies, because in general they can be expected to use intermediate technologies to a larger extent, to adapt more flexibly to local conditions and to be less demanding in terms of control or ownership of joint ventures.

1. Sister Industry Cooperation (Sweden/developing country)2/

In 1976 the Swedish International Development Authority (SIDA) started a new approach to support and enhance the transfer of technology of Swedish SMI-enterprises to developing countries within the framework of the so-called sister industry programme. This programme is aimed at broadening the range of technological options available for small and medium-scale enterprises in developing countries. Thus the emphasis is not exclusively on the foundation of new enterprises or the engagement in equity joint ventures but on the transfer of production know-how on a contractual basis: A Swedish enterprise ("senior sister") makes a long-term contract with an enterprise in a developing country ("junior sister") comprising the transfer of hardware (machinery, tools, sometimes semi-products) as well as software, the latter being typically specified as follows: "the technology means all the know-how and technical knowledge that is in the possession of the senior sister that is needed or is useful in the planning, manufacture or use of the products agreed

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1/ Cf. UNCTAD, Organizational Forms of Transfer of Technology to Developing Countries by Small and Medium-Sized Enterprises: A base Study of Equity Joint Ventures and Technology Agreements in Latin America (prepared by E. White), Doc. TD/B/C.6/77, Geneva 1982.

2/ Cf. the detailed analysis presented by Kuivalainen, op.cit., p.101 ff. a summary of which is given here.

upon. It has to include at least layout of the production establishment, detailed description of production machinery, precise definitions of raw materials, parts and components and testing methods, planning of products, knowledge related to manufacture, testing methods for finished products and packing methods."

Since 1976 sister industry co-operation has primarily been organized between Sweden and Tanzania. The respective institutional framework is very simple in nature and consists of SIDA plus an industrial consultant agency on the Swedish side and the Small Industries Development Organization (SIDO) on the Tanzanian side. The basic procedural mechnism may be described as follows:

- SIDO prepares a list of suitable products for manufacture in the Tanzanian industrial estate.1/ and sends the list to the Swedish consultant firm. At the same time, SIDO looks for suitable Tanzanian entrepreneurs for the industrial enterprises to be established.

- The Swedish consultant firm calls upon Swedish entrepreneurs who would be interested to transfer their technology or to participate in the establishment of an enterprise in their own branch in Tanzania. A list of suitable candidates will then be sent to SIDO.

- In the next stage, the Swedish consultant firm arranges a trip for SIDO's visitors to the Swedish enterprises proposed in order to assess the suitability of their production to the conditions in Tanzania. In turn, on opportunity is arranged for the Swedish enterprises to visit Tanzania so as to become acquainted with local conditions and co-operation partners.

- The Swedish manufacturer will then make detailed offers on the basis of which SIDO carries out the necessary feasibility studies. If they come to positive conclusions, concrete business negotiations will be held between SIDO and each Swedish enterprise and the co-operation contract will eventually be signed.

- The Tanzanian enterprises, after having signed their own contracts with SIDO, send some of their workers to Sweden for on-the-job training.

- Eventually the required hardware will be sent to Tanzania and technical staff of the Swedish enterprise will provide assistance in starting up production.

The sister industry programme has primarily been financed through Swedish development co-operation funds, provided on grant terms in the case of

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1/ In the Tanzanian case all enterprises are to be located in the Arusha Industrial Estate, but in general the approach of sister industry co-operation is not restricted to production in industrial estates.

Tanzania. The Tanzanian firms, on the other hand, have had to pay for all hardware components of the technology transferred (10 per cent in cash, 90 per cent during the first five years) whereas they have received the software (training etc.) from the Swedish enterprise free of charge during an agreed initial period of producion.

Notwithstanding the fact that participants in sister industry co-operation have up to now been basically satisfied with the results obtained, a couple of problem areas have also emerged. Among these are to be mentioned:

- difficulties in connection with the transport of machinery to Tanzania, e.g. due to insufficient port facilities like a lack of large cranes;
- delays at the site during the stages of setting up machinery and starting production;
- administrative and managerial problems during the initial production stages.

The concentration of the sister industry programme on one specific industrial estate has proved to facilitate the co-operation substantially (e.g. through exchange of experiences; common facility workshop etc.). Above all it must be emphasized that the existence of an efficient organization for promoting small-scale industry would be the basic precondition for any country's attempt to engage in this kind of approach for technology transfer.

2. Programme on Plant Level Cooperation (UNIDO)[1/]

UNIDO recently set up a special support programme for SMI in developing countries with the purpose of upgrading their technological capabilities by means of a plant level co-operation with enterprises in industrialized countries. The mechanism employed in this effort is that of promoting co-operation partnerships between complimentary enterprises. As the focus is on the creation of longer-term industrial co-operation for mutual benefit, proposals which are purely for sale of equipment or other forms of embodied technology are not promoted within the project framework. Cooperation

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1/ Cf. Programme on Plant Level Cooperation for the Transfer of Technology to Small and Medium-Scale Enterprises, UNIDO Internal Working Paper, Vienna, 24 February 1984.

approaches that would, however, fit well into the framework, e.g. are: joint ventures, sub-contracting, licensing with marketing or buy-back arrangements etc.

Once the technological requirements of each potential recipient enterprise have been articulated, the search begins for a partner (for each) which has the experise in the particular field for supplying the required technological know-how. However, only those requirements which can not be met with national resources are considered potential foreign technology inputs After the technology supplying partner has presented his specific proposal, a co-operation agreement can subsequently be negotiated with the assistance of UNIDO.

This approach obviously has much in common with the Swedish sister-industry approach described above. On the other hand, there is a stronger emphasis on strengthening the negotiating capacity of developing country enterprises as well as on the adaptation of the technologies transferred. A considerable part of the project budget has actually been spent on technology adaptation, be it for the purpose of scaling down certain production processes or of adapting them to the use of specific local raw materials. As this often requires highly cost-intensive modifications, they would in many cases not be undertaken on a purely commercial basis.

Plant level co-operation agreements have up to now been negotiated between enterprises in the Netherlands and in China, Mexico, Sudan and Thailand as well as between enterprises in Sweden and in Egypt, India, Kenya and Sri Lanka. A third round of projects is envisaged between Italian enterprises and counterparts in Cameroon, Columbia, Peru and Tunisia, concentrating on engineering industries.

ANNEX II

UNIDO PROGRAMME FOR SMALL- AND MEDIUM-SCALE INDUSTRIES DEVELOPMENT[1/]

UNIDO technical co-operation programme for promotion and development of small- and medium-scale industries covers a wide range and varied nature of activities which involve one or a combination of the following:

(a) general consultancy and promotional assistance;

(b) establishing and strengthening institutions and servicing facilities for SMI;

(c) specialized institutional support mechanisms and decentralization programmes;

(d) direct assistance to SMI.

(a) General consultancy and promotional assistance involve, inter alia,

- direct advisory services to Governments in establishing policies, programmes and support measures for SMI development;
- identification of industrial requirements and resources available to the SMI; preparation of viable SMI projects; surveys and techno-economic studies;
- technical councelling and industrial extension services;
- promotional measures and inducements supported by legislation; developing networks of advisory services; facilitating access to financial sources; seminars, workshops to raise awareness and enhance technical assistance flow to the SMI sector;
- fostering intra-SMI co-operation; assisting in organizing collaborative efforts through associations and co-operatives; promoting linkages with other economic sectors.

(b) Technical co-operation projects on institution-building deal with transfering expertise and improving the capacities of indigenous bodies like the following to provide a wide range of technical services and facilities:

- Small Industry Department of Ministries or of Financing Institutions (e.g. Industrial Development Agencies, Development Banks).

1/ Prepared by Institutional Infrastructure Branch, Division of Industrial Operations, UNIDO.

- Institutions for promoting small-scale industry such as Small Industry Development Organizations.

- Industrial Extension Service Systems.

- Common Service Facilities (aimed at improvement of productivity and product quality)[1/].

- Industrial Estates and Industrial Free Zones.

One of the basic assistance requirements of SMI in developing countries is a programme providing industrial extension services to transfer essential knowledge and skills in economic, technical and management fields. In most developing countries industrial extension services are usually provided by government-assisted agencies or special institutions which may combine the functions of an extension service with SMI promotion and industrial research and training. UNIDO technical co-operation in this field aims at establishing and/or developing the capacity of such indigenous institutions to provide the required technical services through well trained industrial extension officers. Assistance to enhance indigenous capacities often include establishing regional offices to initiate and/or improve technical, economic and management councelling to existing and new industrial units spread out in the country.

(c) Specialized institutional support includes programmes such as entrepreneurship development, rural industrialization, industrial co-operatives, and industrial decentralization programmes.

Often special measures are needed to develop small industries on a decentralized pattern against the strong and self-perpetuating tendency for industrial growth in urban centres where prerequisites for development are concerned. These efforts must be particularly integrated with industrialization programmes in rural areas where there is urgent need to arrest urban migration caused by heavy pressures of rural unemployment and economic distress. UNIDO assistance in this respect is involved in both the modernization of the small industries sector as well as the development of

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1/ These include testing and quality control laboratories, toolrooms for manufacture of tools and equipment, workshops where complicated operations using spcialized machinery are performed and services for the maintenance of equipment.

traditional and village industries. Emphasis is given to providing special facilities like training-cum-production centres for managerial and technical personnel; pilot and demonstration plants where experience can be gained in the latest appropriate technologies and various industrial operations; extension centres fully conversant with the peculiarities of installing and running rural industries; and mobile facilities which bring technical assistance to where problems need solving on-the-spot.

The role of indigenously established and locally based groups like co-operatives cannot be stressed strongly enough. In this field UNIDO technical co-operation aims essentially to develop the capacity of an indigenous agency/institution to foster the development of existing and potential industrial co-operatives on a continuous and systematic basis. UNIDO assistance involves a combination of institution-building and training elements as well as direct support (in form of industrial extension service) to industrial co-operatives.

Increased attention is also focused on human resource development with special emphasis on entrepreneurship development for industry programmes assisting identified potential entrepreneurs with a package of incentives and institutional support systems.

Within the limited scope of this document it will not be possible to make a comprehensive presentation of all types of activities ranging from advise on policies and strategies to institution building and to direct support to small- and medium-scale industries. Therefore only two examples are described below to give the reader some information on project objective, approach and outputs:

(i) Integrated programme for the development of small- and medium-scale industries

The objective of this type of a project is the promotion and implementation of a comprehensive programme of support to small- and medium scale industries. The expected project outputs are:

- a survey report of SMI areas of activities including an assessment of the performance of on-going programmes and of key agencies involved;

- identification of resource requirements for support components: Field extension services, infrastructural support like small industry estates and common facility centres, market access and marketing services like institutional procurement, subcontracting;

- analysis of economically viable projects covering opportunity studies, market surveys, pre-investment studies and identification of financial needs and of sources of financing;

- identification of target groups and compilation of potential entrepreneurs;

- a plan of action to implement an integrated programme for the development and operations of small and medium enterprises;

- organized and systematic assistance on the operational level in form of extension services to serve small- and medium-scale industries including consultancy services to potential enterprises.

(ii) Industrial estates

The setting up of industrial estates is usually combined with special incentives and supportive measures (e.g. provision of industrial sheds, common production facilities, guaranteed supply of raw materials and services, sub-contracting arrangements, etc.) to develop and relocate industries of various sizes. UNIDO support is often requested to assist governments to achieve one or more of the following objectives:

- formulation of an integrated industrial estate development programme (planning, financing and construction) in accordance with the objectives of the National Development Plan;

- strengthening and development of the managerial and operational capabilities of the industrial estate agencies;

- strenthening the capacity of the institutions providing specialized services to establish new industries and develop existing ones, e.g. through growth-centres, workshop clusters and export processing zones in development areas.

The nature of assistance provided covers a wide range of activities required to complement and supplement the central activity of the programme, i.e. advice and assistance in establishment, effective management and operation of existing and future industrial estates:

- advice on key elements of the programme: strategy and policy guidelines, physical planning and layout, feasibility and promotional activities (marketing estate land and buildings and attracting local

and foreign investors), admission policies, rental or sale policies, and industrial effluents;

- advice on financial management to improve systems concerned with lending activities and loan portfolios;

- providing industrial extension service on a regular basis to entrepreneurs and assisting potential entrepreneurs in implementing their projects;

- providing direct support services to needy enterprises in the estates.

ANNEX III

EXAMPLES OF ON-GOING UNIDO TECHNICAL CO-OPERATION PROJECTS IN OIC MEMBER STATES[1/]

UNIDO Technical Co-operation in the field of small- and medium-scale industry covers a broad spectrum of activities as briefly outlined in Annex II. Projects range from advisory services to Governments, direct support for SMI to establishing and strengthening various institutional mechanisms to provide the requisite services to foster SMI. At present technical co-operation projects primarily concerned with SMI development are being carried out in some 40 countries of which 10 are OIC Member States. The following four examples are selected to illustrate different types of operational activities currently being carried out in OIC Member States.

A. Indonesia: Assistance to the development of small industry

This project is designed to support the integrated development of the Small Industry Sector in line with the Third Five-Year Development Plan (Repelita III) objectives of creating some 434,000 jobs and stimulating regional development. After considerable experimentation, the Government of Indonesia has developed well defined policies and programmes for fostering small-scale industries and created the Directorate General for Small Industry in the Ministry of Industry to implement these policies and programmes. The current UNIDO project was specifically designed to assist the Directorate General in operationalizing and accomplishing such programmes through planning and establishing regional small industry extension service centres, mini industrial estates, common service facilities. The project aims at enhancing the institutional capacity of the Government organization in the implementation of these policies and programmes as well as in utilizing effectively the capacities of the national industrial research and development institutes. The project activities which commenced in August 1981 are focused on:

1. Establishing an operational Central Project Unit/Team at the Directorate General of Small Industry dealing especially with the

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1/ Prepared by Institutional Infrastructure Branch, Division of Industrial Operations, UNIDO.

planning and implementation of various Government programmes for the development of Small Industry, particularly, the establishment of Mini Industrial Estates, Small Industry Development Centres, Product Reservation Programmes, and formulation of policies and incentives for the promotion of small-scale industries.

2. Establishing and operation of model Small Industry Development Centres and their constituent Extension Services Centres in five regions.

3. Establishing and operation of model Mini Industrial Estates (MIEs), Common Service Facilities in the five regions and training their staff.

4. Identification and implementation of opportunities for linkages with national technological institutes with a view to mobilize and stimulate national technical expertise to develop joint programmes aiming at the diversification and improvement of the quality of products manufactures by the small industries.

5. Identification of business opportunities like production and marketing sub-contracts with large industries and assistance in their implementation.

6. Upgrading of the planning, implementation and monitoring of the in-service training programmes for the extension officers, trainers and entrepreneurs.

7. Mobilization and co-ordination of technical and financial assistance from other multilateral and bilateral sources for Small Industry Development Centres, Mini Industrial Estates, and Common Service Facilities.

In addition to the Central team in Jakarta six field teams have been operational, providing direct industrial extension/consultancy services to the small industry enterprises located in 12 mini industrial estates and several outside artisan clusters. The regional field teams are also assisting in the establishment of common service facilities in and outside these mini industrial estates and artisan clusters. Field teams have undertaken a number of training programmes in specific technical areas for some 300 extension service personnel as well as entrepreneurs. Two model information and documentation centres ar already set up and workshops held for information officers. Some 280 small scale manufacturing ideas are under exploration for promoting new small enterprises and product groups have been identified in the automative and electronic sector for potential sub-contract manufacturing. Further training programmes have been conducted on project identification, project formulation and feasibility studies.

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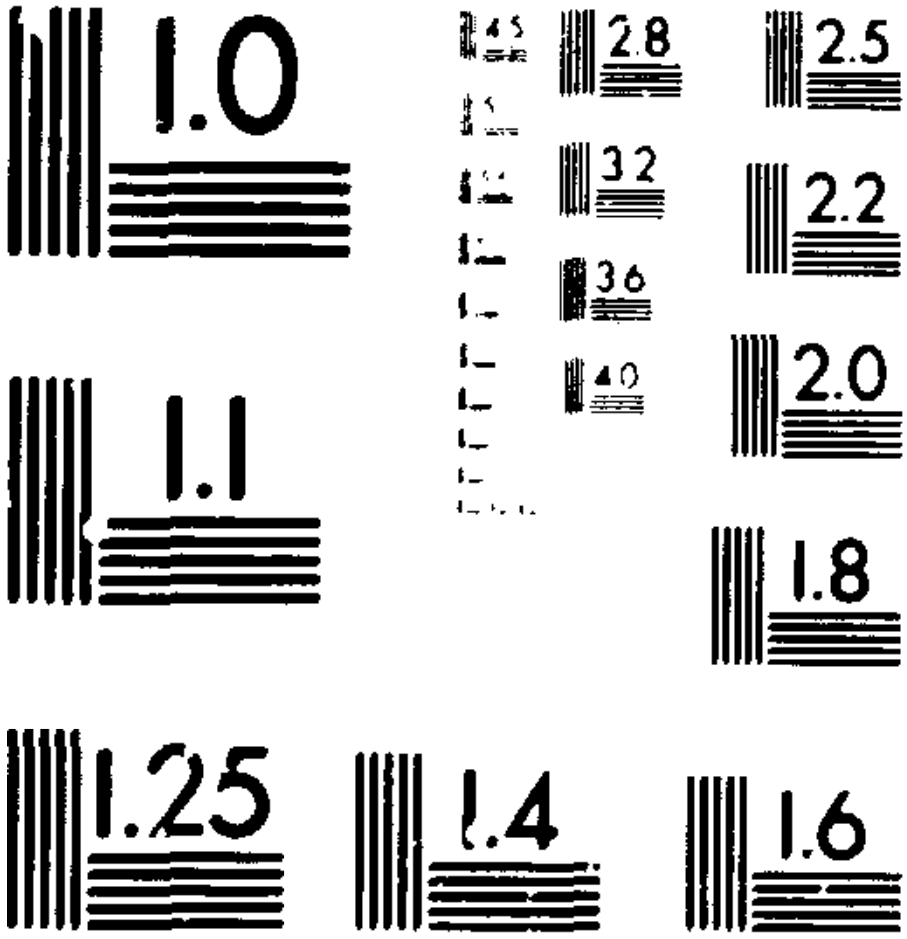

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(ANSI and ISO TEST CHART No. 2)

B. Niger - Assistance a l'Office de Promotion de l'Enterprise Nigerienne (OPEN)

The aim of this technical co-operation is essentially to develop the capacity of the "Office de Promotion de L'Enterprise Nigerienne (OPEN) to foster the development of existing and potential SMI on continuous and systematic basis.

UNIDO assistance commenced in 1980 subsequent to the formal establishment of OPEN which started to operate in 1979. Since then OPEN has been playing an important role in the identification, study, financing and establishment of SMI in Niger. In the early years, OPEN concentrated its activities on identifying promotors and investors, feasibility studies of projects appropriate to the local industry and implementation of infrastructure projects. From 1981/82 onwards OPEN has focused emphasis on feasibility studies for small-scale projects, providing assistance in preparation of bids for equipment, financing and initial setting up of industrial enterprises. UNIDO support was directed not only to promotion of respective industries but also to the intensive training of OPEN executives as well as technical staff from existing and/or prospective enterprises assisted by OPEN. During the first phase of the project 69 SMI projects were studied of which 27 were implemented. The UNIDO team of experts (which included the chief technical adviser, industrial economist, marketing expert, mechanical engineer, training expert and a number of short-term consultants in specialized fields) participated directly in the promotion of SMI providing individual councelling. However, assistance also concentrated on necessary start-up technical support to OPEN itself in establishing its organizational structure, budget and in staffing to reach full operational capacity.

Phase II of UNIDO assistance which started in the current year has the objective of reinforcing two specific departments of OPEN - one for feasibility studies, promotion and implementation and the other for assistance to existing enterprises. It is envisaged that, within the next two years, 23 small-scale projects will be implemented, building materials and agro-industries being the main sectors. Emphasis will also be given to continued training of OPEN counterparts involved in various activities of the project.

To illustrate the nature of technical assistance provided to SMI two examples of projects promoted by OPEN with UNIDO support are given below:

(a) SONICHAUX/MALBAZA

The project concept was triggered by an artisan who was exploiting in Malbaza a small lime production unit which used basic techniques. Following a market study which showed that there was development potential at the industrial level for domestic production of lime, a joint venture between the National Development Bank, OPEN and some private investors was launched. Specifications for a lime kiln with a production capacity of 15 tons per day were drawn up under the supervision of OPEN with the assistance of the UNIDO experts/consultants. The equipment was bought, installed and commissioned and production started in September 1983. A UNIDO consultant provided further advice on improvement of the production process and quality control. UNIDO through OPEN is still continuing assistance to SONICHAUX in the field of marketing.

(b) SONIA/NIAMEY

A feasibility study was carried out by OPEN assisted by UNIDO experts/consultants on the establishment of a biscuit making factory in Niamey. The factory with a production capacity of 0.4 tons per hour representing a total investment of 650 millions F. CFA will start to operate in November 1984. OPEN/UNIDO assisted the entrepreneur through all the necessary phases: marketing, pre-investment, feasibility study, design of the plant, formulatoin of the bankable request, drawing up of equipment specifications, installation of equipment, production start, training of technical and managerial staff, etc.... Technical support will continue to be given to SONIA until the enterprise is well established.

C. SUDAN - Assistance to small-scale industry

The immediate objective of this short-term project is to assist the Government in establishing policies and programmes for small-scale industry development to facilitate the healthy development of industries of all sizes which complement each other closely. A small-scale industry advisor will

assist the Ministry of Industry, in close consultation with the Sudanese Industries Association, for a period of three months starting November 1984. The expert will be carrying out the following activities with the assistance of his counterparts at the Ministry:

- a general assessment of the performance of the small industry sector, the problems and constraints faced by industrialists as well as assistance requirements (technical, managerial and financial) of the sector;
- On the basis of that assessment the adviser will elaborate a programme for SMI development with specific recommendations for activities to be carried out by the Government and various national institutions to render required services and facilities to SMI;
- identify national and international sources of financial assistance with a view to channel and organize such assistance to SSI;
- identify small-scale industries which show high potential to develop in short time if appropriate assistance and incentives are provided;
- make recommendations with regard to feasibility, location and size of the envisaged industrial estate in Khartoum area and prepare a comprehensive proposal for the implementation of the Khartoum industrial estate project.

D. Yemen Arab Republic - Industrial advisory services to the Ministry of Economy and Industry

UNIDO technical co-operation with the Industrial Department of the Ministry dates back to 1973 when assistance was provided in the initial operation of the "Industrial Promotion and Advisory Unit". The present phase commenced in 1979 in response to the objectives of the Second Five-Year Development Plan which places increasing emphasis on industry and envisages rapid expansion increasing the total production value of manufacturing industries by 91.6 per cent. This focused attention on a number of important areas that call for substantial strengthening. Foremost among these were the capability to formulate long- and short-term industrial policies, strategies and plans, to prepare sound industrial feasibility studies and to monitor technology transfer transactions. Consequently, the current phase of the project was envisaged as having two major objectives:

(1) Develop the institutional capacity of the Department of Industry of the Ministry of Economy and Industry to perform effectively and efficiently, inter alia, following functions:

- Providing the Government with expert policy-oriented advice on development issues concerning the industrial sector, taking into account the inter-sectoral implications of industrial development.

- Preparing medium and short-term plans for the development of the industrial sector.

- Identifying, formulating and appraising development projects in the sector.

- Monitoring plan and project implementation and preparing related progress evaluation reports.

- Regulating private sector investments in industry in the light of national priorities.

- Assisting in negotiating and administering management and technology agreements with foreign investors.

(2) Establish within the Department of Industry an advisory service for small and medium-scale industries which will provide techno-economic extension services such as:

- Identify potential entrepreneurs.

- Select areas and activities in which small- and medium-scale production will be viable.

- Evaluate techno-economic feasibility studies.

- Provide techno-economic, finance, and accounting and managerial guidance; and

- Secure access to finance on appropriate terms.

The project has produced very useful results, beneficial to the overall development of YAR in general, and the industrial sector in particular. Its two main achievements have been the participation in the Five-Year Plan and in streamlining the operations of project review and licensing which is a major responsibility of the Ministry. Other significant contributions, have been in organization, training of counterparts and a variety of advisory services in the form of studies and in the field. The project is envisaged to be extended beyond 1984 with stronger orientation of the objectives towards institution building and specifically in the organizational set up and manpower development of the Industry Department.

ANNEX IV

LIST OF UNIDO PROJECTS RELATING TO SMALL AND MEDIUM INDUSTRIES IN OIC MEMBER STATES (IMPLEMENTED 1980/84)

Burkina Faso	- "Assistance à l'OPEV - Phase III" (DP/UPV/81/003).
Chad	- "Conseillers au Ministère de l'Economie, du Plan et des Transports" (Advisory Services to the Ministry of Economy, Planning and Transport) DP/CHD/76/007).
Egypt	- "Workshop on the Formulation of a Comprehensive Programme for the Identification, Promotion and Financing of Small- and Medium-scale Industrial Enterprises in the Alexandria and Behera Provinces" (UP/EGY/80/021).
	- "Industrial Free Zone and Investment Development - Phase II" (DP/EGY/78/007).
Guinea	- "Preparatory Assistance in the Promotion of Rural Industries" (RP/GUI/82/002).
Indonesia	- "Assistance to the Development of Small Industries - Phase II" (DP/INS/78/078).
Iraq	- "Assistance to the State Organization for Industrial Development for Establishing Industrial Estates" (TF/IRQ/79/001).
Malaysia	- "Institutionalizing programmes in Entrepreneurship Development" (UC/MAL/78/105).
	- "Integrated National Programme for Small-scale Enterprise Development" (DP/MAL/82/005).
Mauritania	- "Création d'une Cellule d'études et de promotion industrielles" (Establishment of a Unit for industrial studies and promotion) (DP/MAU/77/003).
Niger	- "Assistance à l'Office de Promotion de l'Entreprise Nigérienne" (Assistance to the Office for Promotion of Enterprises in Niger) (DP/NER/78/003).
	- "Extension de l'assistance à l'Office de Promotion de l'Entreprise Nigérienne (OPEN) - Phase II" (DP/NER/83/004).
Pakistan	- "Small-scale Industries Project - Phase II" (DP/PAK/79/014).
Senegal	- "Dynamisation de la promotion et du développement des petites et moyennes entreprises industrielles" (Intensify the Promotion and Development of Industrial Small and Medium Entreprises) (DP/SEN/82/026).

	- "Assistance à la SONEPI" (Assistance to SONEPI) (DP/SEN/80/005).
	- "Assistance au développement des petites et moyennes entreprises dans les région du Sine-Saloumet de la Casamance" (Assistance to the development of small and medium enterprises in the regions of Sine-Saloumet of the Casamance) (DP/SEN/84/001).
Sudan	- "Assistance to Small-scale Industry" (UC/SUD/84/146).
Tunisia	- "Programme d'assistance technique dans le domaine des PMI auprès de l'API (Agence de promotion des investissements) et du CNEI (Centre National d'Etudes Industrielles)" (Technical assistance programme in the field of small and medium industries to API and CNEI) (DP/TUN/82/005).
Turkey	- "Extension Service for Small Industries" (DP/TUR/80/010).
Yemen Arab Republic	- "Industrial Advisory Service to the Ministry of Economy" (DP/YEM/78/006).
	- "Institutional Support to the Industrial Division of the Ministry of Economy and Industry" (DP/YEM/84/001).