REVIEW AND EVALUATION OF

SMALL-SCALE ENTERPRISES IN EGYPT

A REPORT SUBMITTED TO

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I. SUMMARY AND CONCLUSIONS

A. STUDY OBJECTIVES

The principal objective of this study was to formulate and recommend a program for supporting the development of small scale industrial enterprises (SSEs) in Egypt.[1] This first report describes Egyptian SSEs and the economic and institutional environment in which they operate and identifies the principal constraints and opportunities which must be taken into consideration in the development of an SSE support program. Starting from these constraints and opportunities a second (Phase II) report will develop an SSE support strategy and identify specific projects for implementing this strategy.

The purpose of an SSE support strategy is to strengthen existing enterprises and to encourage new investment. However, the fundamental objective to be applied to the structuring of any assistance program for SSEs should be th[illegible]ncement of Egyptian economic development strategy. Hence, a [illegible]am must strengthen these small enterprises (or encoura[illegible]t the overall effect will be to:

- Provide mo[illegible]
- Improve [illegible]
- Increas[illegible]
- Increa[illegible]
- Incr[illegible]ces;
- Enh[illegible]hments;
- Er[illegible]
- [illegible]
- Increa[illegible]
- Help fulfil[illegible]a Objectives.

[1] SSEs are broadly defined to include only manufacturing firms with between 10 and 200 employees and less than LE 300,000 in fixed assets, excluding land and buildings. Although the range of firms qualifying for specific support programs may be more narrowly defined, a broad definition is used at the outset to insure that all firms sharing the characteristics and problems of smaller establishments are included.

In order that an SSE support strategy can have this effect it is necessary for the designers to identify:

- The role that the SSE sector plays in the Egyptian economy;
- The characteristics of SSEs in terms of the major operational factors of management practices, production technology, raw materials procurement, employment practices, marketing, and finance and credit ;
- The legal, regulatory, financial, and other institutional environment in which SSE's must operate;
- The internal and external constraints which currently are inhibiting SSEs from fulfilling their national economic potential; and
- The opportunities which could be exploited to enhance the economic contribution of the SSE sector.

In the following sections of this Summary we present the understanding we have gained of these aspects of the SSE problem. This understanding was gained through interviews with 250 small and medium sized manufacturing enterprises, discussions with knowledgeable individuals working in many aspects of the Egyptian economy, and extensive documentary search and study.

B. FINDINGS

1. SSEs in the Egyptian Economy

Private industrial companies, and particularly small scale manufacturing enterprises, play a significant role in Egypt's economy along with Government owned or public sector industry. The extent of the private sector and SSE role can be seen from a number of different measures.

The importance of both the private sector and SSE is particularly striking in terms of number of establishments. We estimate that currently there are about 7800 industrial establishments with over 10 employees, of which only 265 (3%) are owned by the public sector.[1] Of the estimated

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[1] The Federation of Egyptian Industries estimates a total of only 4900 industrial establishments. However, we have adjusted this figure to incorporate an estimate of the number of firms which are not officially registered.

7530 private sector firms, approximately 92%, or 6,900, employ between 10-50 people, 7%, or 510, have between 51-200 workers, and only about 1%, or 120, have over 200 employees.

The relative share of value of output is another indicator of the significant role played by private sector and small scale establishments. Of the estimated LE 6.1 billion in industrial output in 1980, all private sector establishments accounted for about 29%. The ouput of SSEs with between 10-50 employees is estimated at about LE 1.2 billion, or about 66% of private sector output and 19% of total industrial output. However, since many SSEs are unregistered or under-report their output, it is likely that their relative contribution to the value of gross industrial output is actually greater.

Private sector and small scale establishments are also important contributors to several of the principal national economic objectives noted above, including:

- Employment, particularly of less skilled workers. It is estimated that the private sector, excluding artisans, employs at least 25% of all workers in industry.
- Capital formation , as indicated by the 905 private projects approved in 1980-81 by the General Organization for Industrialization (GOFI) amounting to LE 260 million, and the average of LE 360 million in projects approved each year by the Investment Authority since 1977. The importance of private sector investment can be seen in the 23.5% annual average growth in the gross value of private sector industrial output between 1976-1980, compared to 18.9% growth in the public sector (in current prices).
- Increased exports which amounted to LE 72 million in 1980 compared to LE 16.1 million in 1970, or a 16.1% annual growth. Much of the growth has been in non-traditional exports such as cosmetics and other chemical products and aluminum products.
- Increased supply of basic goods, such as foodstuffs, apparel and some fundamental building materials. The private sector, and SSE s in particular play a major role in all three of these industrial subsectors.
- Complementarity with large enterprises, particularly in the textile, metals and engineering, and foodstuffs subsectors.

2. Characteristics of SSEs

We were greatly impressed by most of the small-scale manufacturing enterprises we visited. The managers of these companies could be characterized as: extremely hard working and dedicated to their enterprises; energetically striving to manage in an environment characterized by severe institutional and operational frustrations which would probably be considered intolerable by a developed country entrepreneur; creative and ingenious in making the most of available resources; and actively interested in discovering how their operation could benefit from developed country experience. We also found that fewer than 10% of the small businessmen interviewed felt that they had significant problems with labor relations, implying a productive potential in private sector manufacturing in sharp contrast with the labor motivation problems broadly reported for the public industrial sector. However, SSEs are affected by significant problems which constrain their growth. Among these we would cite the following:

- SSEs are particularly constrained by the lack of medium term working capital which is essential for purchasing materials and spare parts, as well as for generally enhancing capacity utilization.
- Many SSEs , particularly smaller and more traditional establishments, are often averse to borrowing for either working capital or fixed asset requirements. This finding appears to be due to high interest rates combined with a fear of large fixed payments in an uncertain future; a preference for obtaining capital from relatives; cultural and religious beliefs prohibiting interest payments; and a general aversion to risk by many small entrepreneurs. This attitudinal constraint suggests that specific funding channels, such as the Islamic banking concept of partnership risk participation, may be important. However, it should be emphasized that a significant number of SSEs , particularly the more dynamic and entrepreneurial firms, do not share this aversion to risk and borrowing.

- Shortages of skilled labor, largely because of the attractiveness of offshore employment and other opportunities besides SSEs also affect efficient capacity utilization. Many SSEs also complain of a lack of unskilled labor.
- Capacity utilization by SSEs is greatly affected by the lack of adequate or suitable factory space. The shortage of available sites and the high cost of land contribute to crowded work stations, multi-floor factories, hazardous working conditions, poor work flows, inadequate materials handling, and the lack of adequate shipping and receiving areas.
- Inadequate inventories of materials and spare parts contribute to a relatively high level of machine down time. Not only are spare parts for old and obsolete equipment not available, but replacement parts must often be imported, a process which is lengthened by slow customs clearance.
- Deficient management skills and capability, particularly in the financial and marketing areas, hinder the operation of SSEs . Similarly, owner attitudes against delegating responsibility and authority limit the company's level of activity to the owner's span of control.
- Exessive regulatory requirements force managers to make major time commitments to handling red tape which adversely affects operations.
- Inadequate infrastructure, particularly electricity, telephone, and industrial land with services, tends to be a problem for both new and expanding SSEs , as it also is for large manufacturing companies. The lack of telephones requires major time commitments by managers for all external communications, while electricity interruptions force many firms to invest in standby generators.

3. The Institutional Environment

The institutional framework which Egypt has developed to carry out and complicated task of managing its mixed economy includes a wide range of government entities and a complex legal and regulatory system. Many parts of this apparatus work in ways comparable to those found in other countries. However, it is only very recently that the potential importance of the small scale manufacturing sector is starting to be recognized, and there are important aspects of the institutional environment which have not yet been modified to effectively support the growth of this strata of smaller industrial enterprises. Following are what we consider the most serious of these institutional constraints.

- There is no high level agency, or individual, with a broad mandate to effectively promote the expansion and strengthening of SSEs . The Small Scale Industries Department in GOFI is not properly positioned to adequately perform the necessary promotional, advocacy and coordination functions. Furthermore, its SSE support functions are limited.
- The legal and regulatory climate is burdensome to SSEs particularly in terms of the costs (in time and effort) of complying with the wide range of approval and operational regulations. This business climate discourages expansion by existing companies and encourages a large number of establishments to remain outside the legal framework (or underground). We estimate that the actual number of small industrial establishments is about two-thirds greater than is indicated by the number of officially registered firms.
- The influence of the Government on the business climate for SSEs is primarily regulatory rather than promotional. This bias is clearly reflected in the lack of an explicit government policy framework for the development of SSEs .

- Financial institutions tend not to lend to SSEs . This reality is the result of several factors including: more attractive and profitable lending opportunities for banks, particularly in Law 43 projects; a general lack of integrity in SSE financial statements and records which causes banks to either place a heavy emphasis on security protection or to engage in a costly reconstruction of statements; the preference by banks for lending to large, well capitalized establishments which have the capability to furnish the necessary collateral values; and, the lack of adequate incentives for banks to lend to SSEs .
- Institutional channels for SSE financing are highly inadequate. Since commercial banks do not lend much to SSEs , only the Development Industrial Bank (DIB) represents a funding source for SSEs . Although the DIB has responded well to the challenge and has developed impressive funding sources, both the amount of available funding and bank's capability to respond to and administer all loans requests is quite limited in comparison to the size of the potential market. Furthermore, the DIB is affected by service constraints such as overly conservative credit extension policies (including minimal extension of needed medium term working capital loans) a slow response time due to the lack of trained and experienced manpower and a small branch network.
- Information and performance statistics on SSEs are almost entirely lacking because the Government does not differentiate among different sized firms. The formulation of specific and effective SSE policies is unlikely in the absence of basic information about the sector.
- Information for assisting SSEs is very limited. Market information (domestic and export) is lacking, as well as information on available technology and equipment . Also, the information available is not disseminated to SSEss.

- Support institutions for providing technical assistance to SSEs are almost non-existent. The Engineering and Industrial Design Development Center (EIDDC) has begun to provide technical assistance (with World Bank financing) but the extent of this is yet too limited to have a significant impact on SSEs.

C. IMPLICATIONS FOR AN SSE SUPPORT STRATEGY

A major conclusion of the first phase of our study is that SSEs already play a major role in the national economy. Not only do SSEs represent most of the industrial establishments and a significant share of the value of industrial output, but they also make major contributions to key national objectives such as creation of employment, distribution of income, production of basic goods, diversification of exports and increased capita formation.

Although important, SSEs have not reached their full potential in terms of their contribution to national objectives due to the constraints indicated above. Our conclusion from the description and evaluation phase of the study, however, is that an SSE support program could significantly strengthen these establishments and consequently enhance the SSE contribution to national objectives. This conclusion is based on the premise that it is possible to develop an SSE support program which will help overcome key constraints, particularly;

- The absence of a clear Government commitment to support development of the SSE sector and of an organizational mechanism for delivering that support;
- The burdensome regulatory business climate;
- The lack of SSE financing (both in terms of volume and distribution channels), especially for working capital needs;
- Inadequate incentives for banks to lend to SSEs;
- Inadequate management capabilities;
- The shortage of labor, both skilled and unskilled;

- Insufficient technical assistance for SSEs; and
- The lack of adequate market and technical information for SSEs.

In the second phase of our study, we develop a strategy for such an SSE support program. Our approach will be to look for existing or potential forces for change in the Egyptian environment and develop the various elements of an SSE strategy out of these opportunities.

II. INTRODUCTION

A. STUDY BACKGROUND AND OBJECTIVES

The Open Door Policy, introduced by the Government of Egypt in the early 1970's, represented a change in direction for the country's development strategy. The previous emphasis on Government control of most industrial, commercial, transport and financial enterprises was modified in favor of a more market-oriented economy with greater decentralization of the public sector and a larger role for the private sector.

The implementation of this new policy has involved encouraging foreign and domestic investment in areas which had previously been restricted to Government owned enterprises. Law 43 of 1974 as amended by Law 32 of 1977 was enacted to encourage this private investment. However, in practice, much of the emphasis has been focused on larger scale and sophisticated private sector ventures, often in coordination with public sector companies.

Throughout the nationalization period of the 1960's, and continuing to the present, a larger number of small scale industrial establishments (SSEs) have continued to operate regardless of Government policy orientation. Although the existence of these establishments is recognized, there is little understanding of how many of these firms exist, what role they play in the economy, what constraints affect them, and what their potential contribution to national development objectives could be if the constraints are overcome. Furthermore, there is little understanding of what programs would effectively support small scale manufacturing enterprises and alleviate the problems they face.

In response to this situation, and in recognition of the need for an effective support strategy for small scale establishments, the U.S. Agency for International Development (USAID) contracted Arthur D. Little International, Inc. (ADLI) to first review and evaluate SSEs and their role in the economy, and then to develop a long-term plan for addressing the needs of SSEs. The review and evaluation phase of the study, the results of which are presented in this report, include:

The description and assessment of the number and distribution

of SSE s, as well as their role and relative importance in the context of the national economy;

- The description and evaluation of SSE operations, including production, marketing, technical, employment, financing, managerial, and attitudinal characteristics with particular attention to constraining factors;
- The description and evaluation of the Government policy and regulatory environment in which SSEs operate;
- The description and evaluation of existing SSE support institutions;
- The description and evaluation of the funding available to SSE s, as well as an assessment of the financial institutions involved; and,
- The description and evaluation of available information sources which either provide data regarding SSEs or support these establishments with marketing, technical and other information.

A second phase will involve the formulation of a comprehensive strategy for support SSEs with the objective of both strengthening existing firms and encouraging the creation of new ones. The support strategy would be based on the understanding of SSE s developed in Phase I, and would include those program initiatives with maximum impact on the constraints identified in the review and evaluation. Specific recommendations and projects for implementing the support strategy will be described, including projects suitable for donor intervention.

B. STUDY APPROACH

In order to reach an understanding of SSE s in Egypt, the primary task in this review and evaluation phase of the study has been to develop, collect and analyze the necessary data regarding SSE s.[1]

[1] This work program has been carried out by a core team made up of S. Theodore Guild, Dr. Norman C. Dahl, Carlos J. Torres, and Eduardo Tugendhat from Arthur D. Little International, Inc., and Dr. Samir Taher, Adel Aweiss and Dr. Ali Helmy from Arab International Consultants (ARICON). The core team was supported by Dr. William Krebs, Dr. John H. Reedy, Dr. William Reinfeld, George B. Rockwell, Lydia E. Tamlers, Edward J. Wygard and Dr. El Tatawi.

This work has involved the following interwoven elements:

- Formulation of a working definition of SSEs (Chapter II);
- Collection, analysis and organization of available data on the number, distribution, and economic role of SSEs (Chapter III);
- An extensive interview program of 200 establishments to provide a broad understanding of SSE characteristics (Chapter IV);
- A more intensive interview program of 50 SSEs to develop deteiled information on their marketing, production, employment, financing and sociological characteristics (Chapter IV);
- Assessment of the institutional environment in which SSEs operate, including both the policy/regulatory framework and SSE support institutions; (Chapter V);
- Evaluation of the banking industry and available channels for providing SSE credit (Chapter VI); and
- Analysis of the findings from the elements above to identify key constraints and opportunities (Chapter VII).

C. DEFINITION OF SMALL SCALE INDUSTRIAL ENTERPRISES (SSEs)

1. Introduction

Industrial enterprises are usually categorized according to both their size and level of sophistication. Consequently, terms such as artisans, small scale, medium-sized, large, modern, traditional, sophisticated, etc., are commonly used to characterize enterprises. As is implied by these terms, companies have different attributes in terms of their number of employees, value of fixed assets, type of technology and management characteristics.

Furthermore, most countries identify small-scale enterprises (SSE s) as being a distinct category of firms which should be supported and encouraged to expand, modernize and generally contribute further to the economic development of the country.

The purpose of this section is to develop a conceptual framework for characterizing SSEs and to establish a working definition which would be appropriate as the basis for designing and developing a support program for SSEs in Egypt. The underlying parameters we have established for this definition are that it should:

- Distinguish a category of industrial establishments which need outside support in order to expand and modernize;
- Include firms whose expansion and modernization would contribute to Egypt's economic development;
- Be flexible enough to insure that companies worthy of support are not excluded by overly rigid criteria;
- Be as simple as possible in order to facilitate to implementation of support programs.

2. Framework for Defining SSEs

We have developed a conceptual frame work for defining SSEs based on a manufacturing industry spectrum for developing countries which is organized into four basic categories of establishments: artisan, small, medium and large-scale enterprises. The criteria used for defining the position of an establishment on this spectrum include quantitative measures such as number of employees, wages per employee, value of fixed assets, and productivity per worker (measured in terms of value added per worker), and qualitative characteristics such as type and organization of the work-place, and organization and style of management.

It should be emphasized, however, that there is no precise and quantifiable dividing line between these different categories. The transition from one stage to another is market by a series of mostly qualitative characteristics. We believe that the key attributes associated with each of the four stages along the spectrum may be described as follows:

- Artisan Enterprises are generally involved in handicraft activities and are primarily characterized as "cottage industries." This means that the work takes place at the owners' homes and that the artisan and/or his family are directly involved in production activities. Artisans have few or no employees, and rarely have over 10 workers. Wages (when paid) are very low, usually below minimum wage, while productivity in terms of value added per worker is also low. Fixed assets are minimum, since the artisan tends to have the tools needed for his/her craft rather than machines. The number of artisan enterprises in a developing country is usually very large.

- Small-scale enterprises, by contrast, are organized industrial establishments where owner-entrepreneurs operate a factory with at least 10 full-time workers. These factories are characterized by some work specialization, and the owner himself tends to focus on management rather than production. There is some mechanization, but the level of fixed assets still tends to be low, particularly in terms of fixed capital per worker. Productivity per worker is still relatively low, although most employees are now earning close to minimum wage. Management is characterized by strong and direct control by the owner-entrepreneur. Financial accounts, to the extent that they are maintained, are mostly handled by the owner although some small-scale enterprises may have a part-time accountant. A common problem faced by small-scale enterprises is that they experience difficulty in gaining access to credit, and to a lesser extent to technology. Most industrial establishments in a developing country are small-scale enterprises.
- Medium-scale enterprises differ from small-scale enterprises in their size and sophistication. Of particular importance is a greater sophistication in the level of technology and a higher capital/labor ratio. Employees, who on average may not earn higher than minimum wages, have specialized work functions. Productivity in medium-scale enterprises as measured by value added per worker, tends to show a significant imporvement over small-scale enterprise levels. Greater sophistication is also evident in management where some specialization occurs and a permanent accountant is hired to maintain financial records. However, the owner-entrepreneur is still very important. Medium-scale enterprises have somewhat easier access to financing than small-scale enterprises while their access to technology and national markets is considerably greater.
- Large-scale enterprises - usually small in number in developing countries, have both a large work force and a high level of capital investment. Large-scale enterprises tend to be capital

intensive, very sophisticated in terms of technology, and highly specialized in terms of distribution of work. Productivity per worker tends to be several times greater than it is in medium-scale enterprises. However, the key characteristic of large-scale enterprises is the transformation of the management structure. Not only does the company adopt some form of corporate organization, but it also exhibits a high level of management specialization. Professional managers and a Board of Directors tend to replace the owner-entrepreneurs.

The following factors highlight the difference between categories:

- The entrepreneurial transition distinguishes a small-scale enterprise from an artisan enterprise. Here the critical factor is that an individual has chosen to risk his own capital in the establishment of a factory with fixed assets and a full-time work force.
- The mechanization transition differentiates medium-scale enterprises. The first major breakthrough made by companies in their evolution is usually technological. In other words, the owner-entrepreneur recognizes the need for improved technology and equipment as the basis for further growth and sophistication. At this stage, there is much less recognition of the need for significant improvements in management skills.
- The management transition marks the emergence of a large scale enterprise. As medium-scale enterprises continue to grow, they realize that management and organizational factors represent the principal constraint to further expansion and sophistication.

3. Definition of SSEs in the Egyptian Context

For the purposes of this study, SSEs will be defined to include establishments which fall under the small and medium-scale stages described in the industry spectrum presented above. In other words, we will include those companies which have made the entrepreneurial transition, and which are close to the mechanization transition. However, we will exclude those firms which have made the management transition.

More specific criteria for identifying the establishments which would be categorized as SSE s have been developed on the basis of both

available literature and data developed in our field surveys. We suggest that SSE s in Egypt, as defined by the conceptual framework presented above, would include establishments with between 10-200 employees and less than LE 300,000 in fixed assets (excluding land and buildings), as well as the following qualitative characteristics:

- Work done in a factory by full-time employees;
- Average wages close to minimum wage;
- Some work specialization;
- At least some mechanization, with fairly sophisticated machinery possible; and
- Management largely handled by the owner.

Some explanatory notes are required regarding the two quantitative criteria indicated above. It should be emphasized that the 10-200 employee range and the LE 300,000 fixed asset limit are intended to provide a broad and flexible definition for the review and evaluation of SSEs and for the elaboration of a support strategy.

This does not preclude the possibility that the working definition of an SSE developed here may be further refined together with the elaboration of specific SSE policies and support programs. Additional or more limited criteria for establishments qualifying for specific programs can be developed to meet the particular attributes and characteristics of the program in question. For the profiling of SSEs and the elaboration of an overall support strategy, however, it is preferable to use a simple definition based on quantitative criteria.

Furthermore, the employment range and fixed asset limit are intended to provide a working definition rather than an absolute dividing line between SSE s and larger scale firms. For example, some firms with less than 200 workers or LE 300,000 in fixed assets could exhibit the managerial, structural and operational characteristics of a large scale establishment. Some smaller companies organized under Law 43 would be in this situation. Hence, the implementation of specific programs may well require that the basic SSE definition based on quantitative criteria be supplemented by more explicit criteria and guidelines for screening beneficiaries.

The employment range defined above excludes firms with less than 10 employees since these are generally considered to be artisan firms under existing Egyptian definitions. An upper limit of 200 employees is high in contrast to many other definitions of SSE s. However, this broad range is needed to incorporate all establishments which exhibit the qualitative characteristics of SSE s. For example, a labor intensive apparel factory may have between 100 and 200 employees, but its management style and other characteristics could resemble a smaller and more traditional firm.

The limit of LE 300,000 in fixed assets is the same as the definition used by the Development Industrial Bank. Not only is it useful to be consistent with other definitions being utilized, but the results of our interview programs suggest that this is a reasonable upper limit for SSE s.

Two important categories of establishments are excluded from our definition of SSE s in Egypt: Law 43 companies and artisans. Law 43 companies are joint stock companies which tend to be highly sophsiticated in terms of management and technology. Furthermore, these firms generally have full access to credit. Artisans, or cottage industries, also have significantly different characteristics from SSE s.

4. Comparison with Current Definitions in Egypt

For the most part, small-scale enterprises in Egypt are not defined as being a distinct category of firms. The Ministry of Industry, for example, classifies all firms with over LE 8000 in capital as industrial establishments, while all those with less than this level of capital are considered to be artisans. There is no separate definition of SSE's.

The Federation of Industries uses LE 5,000 in fixed capital investment, or 25 employees, to define the minimum size of industrial establishments required by law to be members of the Federation. Again, there is no special definition of SSE s.

The Development Industrial Bank is the only institution in Egypt which has a working definition of SSE s. It distinguishes between very small scale enterprises, and small scale enterprises. The former are defined as establishments with less than LE 150,000 in fixed assets,

(excluding land and buildings), while firms with between LE 150,000 to 300,000 are defined as SSE s.

In our view, a definition using only fixed assets is too arbitrary and inflexible, and does not take into consideration the important qualitative characteristics of SSE s described above. We believe that the definition developed above for this study is more appropriate in that it is more flexible, better focused on establishments in need of outside support, and yet still simple enough to be readily administered within the context of a support program.

III. THE ROLE OF SSEs IN THE EGYPTIAN ECONOMY

A. INTRODUCTION AND BACKGROUND

1. Purpose and Approach

The purpose of this chapter is to develop an understanding of the role played by small scale enterprises (SSEs) in the Egyptian economy, and particularly in the industrial sector. The emphasis here is macroeconomic in that aggregate data is reviewed to assess the relative importance of SSEs in terms of their contribution to industrial sector and subsector performance. This understanding of the SSE role is necessary to provide both the background and orientation for the formulation of an SSE development strategy.

Since primary data on SSEs in Egypt is limited, it has been necessary to develop a profile of their role in the economy from available information on the overall economy and specific industrial subsectors. Our approach has involved the following steps:

1. A review of the principal phases of industrialization in Egypt and their implications for SSEs:
2. An assessment of the role of industry in terms of its share of total economic output, employment, investment and exports;
3. A profile of the private sector contribution to industrial output, employment, investment and exports;
4. A review of each industrial subsector, with an estimation of the number of SSE s and their share of private sector output.

The information for carrying out the first three steps is derived from available sources such as the Ministry of Industry and Mineral Wealth (and its affiliates), the Ministry of Planning, the Federation of Egyptian Industries, and other published reports. Although these same sources are used in the subsector profiles and the estimates of SSE participation, it has also been necessary to draw upon: interviews with officials associated with specific subsectors; a wide range of more specialized reports (such as feasibility studies and the IBRD sector studies), and our own estimates.[1]

[1] See Appendix D for a review of sources.

It is important to emphasize that not only is data on SSEs limited and often unreliable, but that most economic data in Egypt must be treated with caution. Different sources of similar types of information are often inconsistent either because of poor data collection and analysis, or different grouping and classifications of information. The poor quality of available information has made it necessary to carefully sift through the sources and select the most reasonable and consistent data. Where gaps exist, estimates by the consultant have been necessary. Specific data limitations are cited where appropriate.

Despite the data limitations, we believe that the material contained in this chapter provides an important first step in understanding the role of SSEs in Egypt. While the profile presented here undoubtedly could be improved as better data become available, we believe it provides a valid picture and the necessary background for the preparation of an SSE development strategy.

2. Background

Before proceeding to a review of the Egyptian economy and the current SSE role, it would be useful to first review the historical background underlying the present status of SSE s in Egypt. The emphasis of the brief historical material presented here reflects this report's focus on SSE's in the industrial sector.

The development of industrialization in Egypt during the twentieth century may be described in terms of three principal phases. The first phase can be said to have started in the 1920's when the country began to pursue a more vigorous import substitution policy to offset declining exports and to protect emerging national enterprises. Egyptian capital and entrepeneurs, embodied in the Bank Misr, were crucial in financing and promoting industrial development as well as in securing favorable protectionist legislation.

This phase was significant not only for the rapid growth of industrial output and productivity (particularly between 1938 and 1948), but also for the dominant role of the private sector. The Government's role during this time was limited to infrastructural development, mainly in agricultural irrigation systems and social services. Investment decisions

were left to private industry which included both large and small enterprises.

The second phase of industrial development began following the revolution of 1952, although it did not take definite shape until the early 1960's. During its early years, the revolutionary government encouraged both private Egyptian and foreign interests to play a more dynamic role in investment and industrial expansion.

This situation began to change following the Suez War of 1956 when British and French interests were nationalized. At about the same time, a Ministry of Industry was established to take a more active role in the planning and management of the industrial sector. Spurred by a desire to speed up industrialization, a Permanent Council for the Development of National Production was established to study and implement development programs. Its efforts gave the Government a stake in a number of important industrial projects and led to the First Industrial Plan (1957) and the First Five-Year Industrial Plan (1960/61 to 1964/65). These steps reflect the establishment of industrialization as the primary national goal, and the Government's belief that the public sector must play the leading role in capital formation and industrial development.

In 1960 and 1961, sweeping nationalizations took place which resulted in state control of most large private sector firms engaged in manufacturing as well as foreign trade, banking and insurance. The state also took over much of the wholesale and retail activity, particularly of basic commodities. Only small scale enterprises, most employing fewer than 50 workers, remained in private hands. It has been estimated that there were 4,047 manufacturing and mining establishments in 1961 and that the public sector accounted for about 95% of the firms with more than 500 workers, 65-70% of those with 100-500 workers, 50% of those with 50-100 workers, but only 7% of establishments with fewer than 50 employees.[1]

The nationalizations and government policy in the early 1960s discouraged any growth in the number of private sector establishments, particularly larger enterprises. While the number of all manufacturing establishments increased substantially from 4047 in 1961 to 5259 in

[1] Robert Mabro and Samir Radwan, The Industrialization of Egypt, 1939-1973, Oxford, 1976.

1966/67, almost 1000 of these new firms had fewer than 50 employees. The number of public enterprises with over 500 workers also expanded substantially, while the 40-100 and 100-500 worker categories showed little expansion. This pattern indicates that opportunities for the private sector were limited to relatively small scale industries such as leather, furniture, wood, apparel and printing. Most of these are craft specializations and are closely tied to the artisanal sector.

The third, and current phase of industrial development strategy made its appearance in 1973 with the so-called October Paper outlining the new "open-door" policy. This new strategy calls for a greater role for the private sector, encouragement of foreign investment, and greater efficiency for the public sector, in order to stimulate growth in the Egyptian economy. While development of the industrial sector continues to be one of the principal economic objectives, and although the public sector continues to play a key role in industry, the new policy direction calls for revitalization of private activity to complement the public sector.

In the current phase, government policy calls for the private sector, both domestic and foreign, to contribute investment capital, technology, entrepeneurial and management capability, and greater efficiency to the industrial sector. The Government continues to provide a central planning role, as well as investment capital and direct management in industries deemed to be of critical importance to the state. However, joint ventures between public enterprises and foreign investors are also being promoted. The actual results of this new industrial development strategy, in terms of overall industrial performance and the relative roles of private and small scale enterprises, can be seen from the next two sections of this chapter.

B. SSE s IN THE CONTEXT OF THE EGYPTIAN ECONOMY

The purpose of this section is to place SSE s in perspective in terms of their role within Egypt's industrial sector and the overall economy. The first task is to briefly review the industrial sector's position within the economy. As will be seen, industry accounts for significant

shares of gross domestic product, employment, and investment. Furthermore, along with petroleum, industry is targeted as the key productive sector in the Government's development program.

The second task in reaching an understanding of the SSE role is to differentiate between public and private activity within industry. This section will show that the private sector accounts for all but a small number of manufacturing enterprises. Furthermore, private sector contribution to total industrial output is at least 30% and the private sector's share of investment and exports is increasing rapidly.

Finally, in order to provide an overview of the SSE role in industry, it is necessary to identify how much of private sector activity originates in SSE's. Since industrial data in Egypt are not organized by size of firm, this overview has been developed from industrial subsector profiles, presented in Appendix A. Estimates of the SSE share of industrial establishments and output were developed from interviews, primarily with the Federation of Egyptian Industries. These show that SSE s as defined in Chapter II represent about 96% of private sector industrial establishments and 78% of the value of private output.

1. The Industrial Sector in the Egyptian Economy

The industrial sector in Egypt includes not only manufacturing but mining (except for oil and gas) as well, and encompasses both public and private sector companies. Its role in the economy can best be measured in terms of its contribution to GDP, employment and gross fixed investment (GFI). It is also important to contrast the performance of the sector with its relative role in stated Government economic policy.

In terms of its relative contribution to GDP, Table 1 shows that industry ranked third among productive sectors, behind agriculture (23%) and petroleum (16%), with 12% of GDP in 1979. Even though industry's contribution to GDP dropped from 18% in 1974 to 12% in 1979, the sector experienced a 14% average growth rate in this period. Other productive sectors, however, particularly petroleum and construction, experienced 72.8% and 38.2% average annual growth rates during this five year period. Agriculture, at 15.9% per year, and electricity and utilities at 15.6% per year, also slightly outperformed industry, although their relative

Table 1

Distribution by Sector to Gross Domestic Product
(LE million at current prices and percent)

	1974		1977		1979		1974-79 Annual	1980-81[1]		1981-82[1]		1980-82 Annual Growth
	LE(Mn)	%	LE(Mn)	%	LE(Mn)	%	Growth	LE(Mn)	%	LE(Mn)	%	Rate
PRODUCTIVE SECTORS	2331	55	4090	55	6859	57	24.1	9011	57	9959	56	10.5
- Agriculture	1286	30	2038	28	2688	23	15.9	3262	21	3390	19	3.9
- Industry & Mining	746	18	1120	15	1478	12	14.7	1955	12	2232	13	14.2
- Petroleum	111	3	468	6	1708	16	72.8	2922	19	3343	19	14.4
- Elect. & Util.	65	2	106	1	134	1	15.6	132	1	144	1	9.5
- Construction	129	3	358	5	651	5	38.2	740	5	850	5	14.5
DISTRIBUTIVE SECTORS	809	19	1672	23	2839	24	28.5	4109	26	4608	26	12.1
- Transport & Comm.	180	4	322	4	482	4	21.8	571	4	636	4	11.3
- Suez Canal	(1)	-	169	3	423	4	--	513	4	773	4	30.3
- Trade	513	12	929	13	1428	12	22.7	2945	19	3199	18	8.6
- Finance & Insurance	117	3	252	3	516	4	34.6					
SERVICE SECTORS	1057	25	1641	22	2240	19	16.2	2688	18	3377	19	25.6
- Tourism	72	2	134	2	190	2	21.4					
- Housing	203	5	244	3	287	3	7.2	298	2	339	2	13.8
- Services	235	6	350	5	480	4	15.4	2390[2]	16	3038[2]	17	
- Government Serv.	547	13	913	12	1282	10	18.6					
GDP at Factor Cost	4197	100	7403	100	11938	100	23.3	15808	100	17943	100	13.5

[1]Projections prepared by the Planning and Budget Committee of the National Assembly in June 1981 and included in the Industrial Plan 1980-81 - 1984-85.

[2]Includes government services and tourism.

Source: Ministry of Planning

contribution to GDP also declined.[1]

The current Five Year Plan projects a growing role for industry in 1980-81 and 1981-82. With industrial growth expected to be 14.2% annually, compared to 13.5% for GDP as a whole, industry would account for 13% of GDP by 1981-82. The only productive sectors expected to expand more rapidly than industry are construction (14.5% per year) and petroleum (14.4% per year).

Because of the Government's historic emphasis on job creation as a principal objective, employment is another criteria for indicating industry's relative importance. Table 2 shows that industry is expected to account for 12% of total employment in 1980-81 compared to 37% for agriculture and 27% for services. The continued importance of agriculture as the primary source of employment, combined with the relatively low levels of industrial and service employment, indicate that Egypt is still primarily an agricultural country. However, the relative contribution of agriculture to total employment declined to 37% in 1980-81 from 47% in 1974. The service and trade sectors have shown the most rapid growth (6.7% and 5.0% per year respectively between 1974 and 1979) while employment growth in industry has been an average 3.3% per year.

According to the 1980/81 - 1984/85 Development Plan, industrial employment is expected to increase at a 4.4% annual rate between 1980-82 compared to 4.1% for total employment. Although several sectors are expected to show more rapid employment growth, particularly services, commerce and finance, petroleum, and electricity, the growth in the latter sectors must at least in part be attributed to industrial expansion. Among the productive sectors, industrial employment is expected to increase by nearly 100 thousand while agriculture and construction each will add about 75 thousand jobs, and petroleum and electricity employment will increase by only a few thousand in each sector.

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[1] These growth rates reflect current prices. Comparable data in constant prices is not available. Furthermore, Government price controls and subsidies distort the relative performance of different sectors.

TABLE 2

Employment by Sector, 1980-82
(thousands)

	[illegible]		1979		Annual Avg. Increase 1974-79 (%)	1980-81		1981-82		Annual Avg. Increase 1980-82 (%)
	No.	%	No.	%		No.	%	No.	%	
PRODUCTIVE SECTORS	5715.4	63	6206.3	59	1.7	6352.3	56	6478.1	55	2.0
-Agriculture	4212.4	47	4165.0	39	-2.4	4206.2	37	4240.8	36	0.8
-Industry & Mining	1149.5	13	1351.0	13	3.3	1386.5	12	1448.5	12	4.4
-Petroleum	--	--	--	--	--	21.1	.2	23.0	.2	9.0
-Electricity	38.3	--	60.2	1	9.5	58.5	.5	61.5	.5	5.1
-Construction	315.2	3	629.2	6	14.8	680.0	6	704.3	6	3.6
DISTRIBUTIVE SECTORS	1288.2	14	1580.0	15	4.2	1790.2	16	1873.1	16	4.6
-Transport & Comm.	405.0	4	452.2	4	2.2	448.2	4	456.6	4	1.7
-Suez Canal	--	--	--	--	--	18.5	.2	19.0	.2	2.7
-Commerce & Finance	883.2	10	1128.7	11	5.0	1322.8	12	1397.5	12	5.6
SERVICE SECTOR	2035.2	23	2773.1	26	6.4	3196.0	28	3453.4	29	8.0
-Housing	139.1	2	155.0	1	2.2	166.0	1	171.8	1	3.4
-Services	1896.1	21	2618.1	25	6.7	3030.0	27	3281.6	28	8.3
TOTAL	9038.8	100	10560.3	100	3.2	11338.5	100	11804.6	100	4.1

SOURCE: Ministry of Planning

Gross fixed investment in the period 1974-1979 is shown in Table 3. This shows that gross investment increased from LE 645 million in 1974 to LE 3.4 billion in 1979. Also, it shows that among all economic sectors in 1979, industry with LE 817 million, or 24% of total GFI, benefited the most from the distribution of investment. Only transportation and communication, with 19%, came close to investment in industry. The predominance of industry as the primary sector for investment has consistently been the case since 1974.

In summary, these tables point out that agriculture is still the primary source of employment in Egypt. However, industry has been the recipient of the largest share of investment capital since 1974 which has resulted in higher than average growth rates in the value of industrial product and average employment growth. Investment and growth in industry are also at least partially responsible for the rapid expansion of the service, trade, and infrastructure sectors.

The high level of investment in industry reflects a Government perception that this sector should play a critical role in spearheading the development of the economy. Industrial development has been the principal component of the Government's economic strategy for at least the past two decades (see Section A above). The current Five Year Development Plan, which states that "The two major productive sectors to lead the development of the economy are the petroleum sector and the industrial sector...,"[1] suggests that this will continue to be the case, although with the added support of petroleum.

2. Industrial Sub-Sectors

The way in which industry is broken down into subsectors in Egypt varies significantly among different agencies and organizations. For example, the Central Agency for Mobilization and Statistics (CAPMAS) recognizes 20 industrial subsectors compared to 8 by the Federation of Egyptian Industries and 7 by the Ministry of Industry and Mineral Wealth (Ministry of Industry). In contrast, the International Standard

[1] Ministry of Planning, "Role of Egyptian Manufacturing Sector in the Five Year Economic and Social Development Plan 1980/81 - 1984/85.

Table 3

Contribution by Sector to Gross Fixed Investment
(LE million and percent)

	1974		1977		1978		1979	
	LE(Mn)	%	LE(Mn)	%	LE(Mn)	%	LE(Mn)	%
PRODUCTIVE SECTORS	357	55	1136	61	1588	60	2000	59
- Agriculture	54	8	146	8	191	7	268	8
- Industry	159	25	561	30	765	29	817	24
- Petroleum	74	11	206	11	201	8	450	13
- Elect. & Util.	59	9	175	9	299	11	389	11
- Construction	11	2	48	3	132	5	76	2
DISTRIBUTIVE SECTO	192	30	473	25	729	27	952	28
- Transport & Co	187	29	341	18	387	15	634	19
- Suez Canal	--	--	102	5	305	11	248	7
- Trade & Financ	5	1	30	2	37	1	70	2
SERVICE SECTORS	96	15	264	14	348	13	449	13
- Housing	52	8	126	7	136	5	142	4
- Other	44	7	138	7	212	8	307	9
TOTAL	645	100	1873	100	2665	100	3401	100

SOURCE: Central Agency for Public Mobilization and Statistics

Industrial Classification (ISIC) developed by the United Nations establishes 9 principal subsectors which are further broken down into specific industrial groups.

The breakdown selected for use in this study is primarily that of the Ministry of Industry, since most of the available industrial data has been prepared by this agency on the basis of its own definition. The seven subsectors, as defined by the Ministry, are: textiles, foodstuffs, chemicals, basic metals, engineering, building materials, and mining. Two principal changes have been made for this report:

- Basic metals and engineering have been combined because the lack of a clear definition of the composition of each makes a distinction very difficult;
- Leather products including footwear, which is usually combined with tanneries by the Ministry, is isolated here as a separate subsector because of the large role played by SSE s.

Although the Ministry's subsectoral breakdown is utilized, it is often necessary to refer to other sources of information which use different subsectoral classifications or to make finer distinctions among industries. Table 4 relates the Ministry of Industry sub-sectoral definition to the CAPMAS and ISIC classification schemes. The ISIC classification system cannot be used here since the necessary breakdown of data is not available. In addition to these sub-sectoral classifications, the Federation of Egyptian Industries is divided into twelve chambers such that data from this source has had to be modified to comply with the Ministry of Industry breakdown used here.

Table 5 shows that among the industrial subsectors, foodstuffs, textiles and metals and engineering have been the most important in terms of value of output. The importance of foodstuffs reflects both the dominant position still held by agriculture in Egypt, as well as the continuous effort to feed the country's large and rapidly growing population. Textiles in Egypt are largely based on the extensive production of high quality cotton combined with a policy of import substitution. Finally, the growing importance of metals and engineering can primarily be traced back to the emphasis given to heavy industry during

Table 4

Ministry of Industry and Corresponding CAPMAS and ISIC Industrial Classification Systems

Ministry of Industry System	CAPMAS	ISIC Division and Group	Federation of Egyptian Industries[1]
Foodstuffs		(31) Manufacture of Food, beverages and Tobacco	Food
• Sugar and confectionary • Tobacco and cigarettes • Food preservation and processing • Edible oil • Fermentation and beverages • Milk and dairy products	• Food Industry • Beverages Industry • Tobacco Industry	(311)Food Manufacturing (313)Beverages Industry (314)Tobacco Manufacturers	Cereal
Textiles			
• Spinning • Weaving • Apparel • Dyeing and printing	• Spinning and Weaving industries • Footwear, garments and articles made of textiles	(32) Textile, weaving apparel and leather industries (321)Manufacture of textiles (322)Manufacture of textiles except apparel	Spinning and Weaving
Chemicals			
• Organic and inorganic chemicals • Plastic & rubber products • Chemical fertilizers • Pharaceuticals • Cosmetics • Other chemicals • Pulp and paper • Wood and wood products • Glass • (Sometimes footwear & leatner)	• Chemicals, chemical products industry • Rubber products industry • Petroleum and coal by-products • Furniture and Fittings Industry • Woodworking and cork industry • Leather and fur products • Footwear and garments industry	(35) Manufacture of chemicals and chemical petroleum, coal, rubber and plastic products (351)Manufacture of industrial chemicals (352)Mfg. of other chemicals (353)Petroleum refineries (354)Misc. petroleum & coal pro. (355)Mfg. of rubber products (356)Mfg. of plastic products	Chemical Woodworking Printing, Binding and Paper Prod.
		(33) Mfg. of wood and wood products (331)Wood & wood cork products (332)Mfg. of furniture & Fix. (34) Mfg. of paper & paper products, printing and publishing (341)Mfg. of paper & paper prod. (362)Mfg. of glass & glass prod. (324)Mfg. of footwear	
Metals and Engineering		(37) Basic metal industries	
• Basic metals • Basic metal forms • Pipe, castings, foundries, etc. • Valves, fittings, etc. • Elec. & non-elec. machinery • Transportation equipment • Printing & graphics	• Basic metals industry • Metallurgical industries • Machinery (except elec.) • Elec. machinery; instrum. and equipment • Transportation equip. • Printing & publications	(371)Iron and steel industries (372)Non-ferrous metals (38) Mfg. of fabricated metal products (381)Fabricated metal products except machinery (382)Macninery except electrical (383)Elec. machinery (384)Transport equipment (385)Professional, scientific, measuring and controlling equip., & photographic & optical goods (342)Printing, publishing and allied industries	Engineering Metallurgical
Building Materials	• Non-metallic (except petroleum) and coal	(36) Mfg. of non-metallic mineral products	Building and Construction
• Cement & cement products • Bricks • Quarrying • Refractories • Tiles		(361)Mfg. of pottery, china & earthenware (369)Mfg. of other non-metallic mineral products	
Leather & Leather Products	• Footwear, garments and articles made of textiles • Leather and fur products industry	(323)Mfg. of leather and prod. of leatner (324)Mfg. of footwear	Leather
• Tanneries • Footwear • Other leather products			
Mining			
• Metallic Minerals • Non-metallic (except petroleum)	• Non-metallic minerals • Other minerals not in industry	(Mining is separate section)	Petroleum and Mining

[1]Cinema is also considered to be an industrial subsector by the Federation.

Table 5

Industrial Production 1976-80
(Gross Value of Output, Current Prices, LE Million)

	1976	1977	1978	1979	1980	1976-80 Annual Increase %
Textiles	755.8	836.5	1097.5	1163.3	1382.8	16.3
Foodstuffs	774.8	845.9	958.1	1190.4	1459.7	17.2
Chemicals	292.7	354.2	413.4	521.3	671.6	23.1
Metals & Engineering	446.2	541.4	653.8	836.5	1129.7	26.1
Mining & Refractory[1]	27.9	35.2	60.3	83.6	100.9	37.9
Leather Products	162.2	1[illegible]5	248.9	362.5	413.7	26.4
TOTAL	2459.6	2783.7	3432.2	4157.6	5158.4	20.3

[1]Excludes most building materials including bricks, cement, and cement products. The Federation of Egyptian Industries reports that total output in this subsector was LE 143.8 million in 1975, 189.5 million in 1976, and 246.1 million in 1977. The Ministry of Planning indicates that in 1980, output in building materials and mining combined was 244.3 million.

Source: Ministry of Industry. Figures only cover industries under the Ministry's supervision. Hence, some joint ventures, building materials and private sector companies are not included.

the late 1960s and early 1970s. The six principal industrial subsectors are described in greater detail in Appendix A.

Although industry's relative importance in the overall economy has not changed significantly over the years, Table 5 also shows that industrial output increased at a striking 20.3% annual rate between 1976 and 1980. However, this reflects current prices, and since inflation averaged between 15 and 35% in these years, real growth has been less significant.[1] The most rapid growth was experienced in mining, leather, and metals and engineering subsectors. The most slowly growing subsector were foodstuffs and textiles which are the highest priority areas in the current Five Year Plan. However, it should be noted that these two industries are heavily subsidized by the Government, and the real gross value of output would be much higher if these subsidies were reflected.

3. The Private Sector Role in Industry

The importance of public sector enterprises in Egypt's industrial sector is well known. Not only were many private establishments nationalized during the 1960's, but Government owned enterprises were built up rapidly during this period. While the role of the public sector is relatively well understood, information regarding the private sector is relatively limited. In this section, aggregate data on the private sector role in industry, drawn from official sources is presented The next section provides a more detailed assessment of both the private sector and the relative importance of SSE s.

Although the precise number of industrial establishments is not known, the Federation of Egyptian Industries estimates that there are about 4900 firms with a minimum of 10 employees. Only 265 of these are public sector enterprises affiliated with the Ministry of Industry, the Ministry of Housing, or other Ministries, but these account for about 70% of the gross value of industrial output.

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[1] Estimates of inflation vary widely by source. However, inflation of at least 15% per year is likely.

The role of the private sector is shown in Tables 6 and 7. Although both tables show a similar private sector contribution to the gross value of industrial output, the distribution of the private sector role by industrial subsector differs. Table 6 is based on information from the Ministry of Industry, while Table 7 is taken from the Five Year Plan and is based on Ministry of Planning data. The principal differences between the two tables include the following:

- Table 7 includes output from firms with less than 10 employees, estimated at 15% of total output;
- Leather industries are included under Chemicals in Table 7;
- Total industrial output is somewhat higher in the Ministry of Planning data because of the inclusion of artisans, cooperatives, and public enterprises not affiliated to the Ministry of Industry (representing 29% of total output in Table 7);
- Ministry of Planning data reflect projections for 1980 and not actual performance;
- Table 6 excludes most of the building materials subsector.

Table 6 indicates that overall, the private sector has slowly increased its share of industrial output to an estimated 33.1% in 1980 from 29.9% in 1976. This table shows that the private sector is particularly important in leather products (excluding tanneries), mining and refractory (48.8% private although much of building materials is excluded), and chemicals (38.3% private). The private sector's role is least significant in the metal and engineering subsector which is dominated by large public enterprises involved in basic metals, machinery and transportation; however, the private sector contribution to the value of output has increased to 16.7% in 1980 from 14.6% in 1976. In textiles, the private sector share is shown to be 26.5% in 1980, and 25.5% in 1976, compared to 29.6% and 23.6%, respectively, for foodstuffs.

According to the Ministry of Industry data presented in Table 6, foodstuffs account for about 25% of the value of private sector ouptut. Leather products is the second most important source of private sector output with 24% of the total while textiles follows with about 22%.

Table 6

Private and Public Sector Contribution to Industrial Production
(Percentage of Value of Output)

	1976	1977	1978	1979	1980[3] (Est.)	Relative Distribution 1980
Textiles						
- Public	74.5	76.6	72.7	72.1	73.5	29.4
- Private	25.5	23.4	27.3	27.9	26.5	21.5
Foodstuffs						
- Public	76.4	78.9	78.9	75.2	70.4	29.8
- Private	23.6	21.1	21.1	24.8	29.6	25.3
Chemicals						
- Public	61.6	57.1	56.8	6.6	61.7	12.0
- Private	38.4	42.9	43.2	33.4	38.3	15.1
Metals & Engineering						
- Public	85.4	87.0	87.0	86.4	83.3	27.3
- Private	14.6	13.0	13.0	13.6	16.7	11.0
Mining & Refactory[1]						
- Public	27.6	-	55.8	50.7	51.2	1.5
- Private	72.4	100.0	44.2	49.3	48.8	2.9
Leather Products						
- Public	-	-	-	-	-	-
- Private[2]	100.0	100.0	100.0	100.0	100.0	24.2
TOTAL						
- Public	70.1	71.5	69.7	67.3	66.9	100.0
- Private	29.9	28.5	30.3	32.7	33.1	100.0

[1]Excludes most building materials including cement, bricks and cement products. Although cement production is exclusively public sector, brick production in the private sector is very important.

[2]This refers to leather products only and excludes tanneries including some public sector companies. Furthermore, these public tanneries are involved in some production of leather products.

[3]An estimation was required due to a change in the fiscal year.

Source: Ministry of Industry. Value shown in Table 5.

Table 7

Distribution of Expected Industrial Production
in 1979-1980
(Million LE)

Industrial Activities	Industrial Production		Public Sector		Private Sector		Relative Distribution %		
	Value	%	Value	%	Value	%	Total	Public Sector	Private Sector
Foodstuff	2013.7	100	1037.7	51.5	976.0	48.5	34.5	27.3	47.7
Spinning & Weaving	1556.5	100	921.9	56.2	634.6	40.8	26.6	24.3	31.0
Chemicals	666.5	100	519.3	77.9	147.2	22.1	11.4	13.6	7.2
Basic Metallurgical	432.9	100	408.5	94.4	24.4	5.6	7.4	10.8	1.2
Engineering & Electronic	930.2	100	716.2	76.9	214.1	23.1	15.9	18.9	10.5
Construction Materials & Refractories	202.5	100	162.1	80.0	40.4	20.0	3.5	4.3	1.9
Mining	41.8	100	31.8	76.1	10.0	23.6	0.7	0.8	0.5
TOTAL (at current Market Price)	5844.2	100	3797.5	64.9	2046.7	35.1	100.0	100.0	100.0

Source: Ministry of Planning

The picture presented by Table 7 is somewhat different, largely because of its broader coverage. It shows that the private sector contribution to industrial output is about 35.1% of the total. Interestingly, textiles and foodstuffs are shown to be the subsectors where private establishments play the most important roles with 40.8% and 48.5% of output, respectively. It also distinguishes between basic metals and engineering, indicating that the private role is very small in the former (5.6% of output) and somewhat higher in the latter (23.1%) The private contribution to chemicals is considerably lower than was the case in Table 6, despite the inclusion of leather products. The Ministry of Planning data also present a fuller picture of building materials, indicating that the private sector accounts for only 20% of output.

Because of the assumption that textiles and foodstuffs, the two largest industrial subsectors, also have the highest private sector participation, the Ministry of Planning data implies that 47.7% of the private sector output is in foodstuffs followed by 31% in textiles.

The private sector's relative performance in the area of industrial exports is less favorable than is the case for the other measures described above. Table 8a shows that in 1980, the private sector accounted for 17% of both convertible currency and bilateral account exports. This is largely explained by the dominance of the public enterprises in textile exports. While textiles accounted for 48% of Egypt's industrial exports in terms of value in 1980, public enterprises were responsible for 96% of this level of exports.

However, Table 8b shows that private sector exports, albeit small in comparison to total exports, have increased significantly in the past decade.[1] The average annual growth in the value of private sector exports (in current prices) between 1970 and 1980 was about 16.1%. The rapid expansion of exports following the 1973-1974 Open Door Policy

[1]Tables 8a and 8b are derived from the same source and appear to be roughly comparable. Although there are some significant differences in private sector totals in some years, the data is indicative of trends.

Table 8a

Industrial Exports: Public Sector and Private Sector, 1976-80
(LE million[1])

	1976	1977	1978	1979	1980 (Est.)	1980 %	1977-80 Annual Increase %
Exports	207.1	360.2	477.3	458.5	619.8	100	
Convertible currency	103.4	249.0	370.5	337.3	459.9	74	
Public Sector	90.5	218.9	338.3	298.5	382.3	62	20.4
Textiles	(34.9)	(63.2)	(134.6)	(110.1)	(157.3)		
Other	(55.6)	(155.7)	(203.7)	(188.4)	(225.0)		
Private Sector	12.9	30.1	18.0	38.8	77.6	13	37.1
Textiles	(4.7)	(3.8)	(4.1)	(7.0)	(14.0)		
Other	(8.2)	(26.3)	(13.9)	(31.8)	(63.6)		
Bilateral Accounts	103.7	111.2	106.8	121.2	159.9	26	
Public Sector	72.3	85.1	80.6	98.2	133.2	21	16.1
Textiles	(62.0)	(79.4)	(75.0)	(91.9)	126.9		
Other	(10.3)	(5.7)	(5.6)	(6.3)	6.3		
Private Sector	31.4	26.1	26.2	23.0	26.7	4	0.8
Textiles	(3.9)	(5.5)	(3.9)	(1.8)	0.5		
Other	(27.5)	(20.6)	(22.3)	(21.2)	26.2		
Total Exports	207.1	360.2	477.3	458.5	619.8	100	
Public Sector	162.8	304.0	418.9	396.7	515.5	83	19.2
Private Sector	44.3	56.2	58.4	61.8	104.3	17	22.9

[1]The 1976 data are at the official exchange rate of LE 1 = US$ 2.5556. Beginning in 1977 convertible currency exports and parallel market imports are at the parallel exchange rate of LE 1 = US$ 1.4286; bilateral accounts exports and imports are at the rate of LE 1 = US$ 2.5556.

Source: Ministry of Industry, as reported by the IMF. The figures cover only industry under the Ministry's supervision. Ministry officials indicate that coverage of Law 43 companies is incomplete, and that private sector trends are probably understated.

Table 8b

Actual Exports by the Private Sector by Industrial Sector, 1970-1980

(Value in Current 1000s LE)

Industries	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Annual Avg. Increase 1970-80 (%)
Leather Products	5,867	6,043	8,515	11,023	21,661	17,263	11,007	7,690	7,213	13,945	8,478	3.7
Khan El Khalily Prod.	1,047	1,733	2,436	2,436	2,797	3,272	3,115	1,568	2,695	2,468	2,614	9.6
Woodworking Products	3,527	2,641	3,391	3,812	5,449	5,683	4,947	2,642	2,184	2,199	2,268	-4.3
Chemical Industries	1,915	1,763	2,018	5,650	10,909	19,888	13,937	22,156	20,909	26,215	28,193	30.9
Spinning & Weaving Ind.	2,972	4,650	4,425	6,608	12,577	12,254	8,598	6,529	8,006	8,815	12,037	15.0
Metallurgical Industries	121	194	121	140	467	381	1,240	1,372	1,887	6,312	17,020	64.0
Foodstuffs Industries	691	588	535	442	119	30	1,306	647	972	1,545	1,084	4.6
Building Materials	55	44	44	91	332	177	144	352	269	351	319	19.2
Total	16,195	17,656	21,485	30,202	54,311	58,947	44,294	42,956	44,135	61,850	72,013	16.1

SOURCE: Ministry of Industry and Mineral Wealth

is particularly striking. In terms of value, the most important private sector exports are in the chemical (cosmetics), metallurgical (aluminum products) and textile subsectors. Growth has been most rapid in these same areas. It is interesting to note that the best performers have not been handicrafts (leather, Khan el Khalily, and woodworking), usually associated with Egyptian private sector exports.

Another interesting indicator of the private sector role in industry is provided by the number of new projects and the value of investment. All non-Law 43 industrial projects must be licensed by GOFI and although it is possible that some projects are not implemented, or that other projects are not properly licensed, this source does provide an idea of the growth of private sector investment. In 1970, for example, 314 private sector projects were approved valued at only LE 5 million. By 1981, the number of approved private sector projects is expected to reach 905, with an associated investment of LE 260 million. Private sector investment under Law 43 has been even more significant. In the four years until the end of 1977, the Investment Authority approved projects with a total investment of LE 1.1 billion. In the following three years (until the end of 1980) an additional LE 1.4 billion in projects was approved.

According to its 1980/81 - 1984/85 Plan, the Government expects total investment of LE 6.6 billion in industry, of which 12%, or LE 800 million, would be generated by the private sector. However the Plan does not include any mention of policies or incentives to ensure this level of private sector investment.

In summary, the private industrial sector in Egypt is of great significance, particularly in terms of the number of establishments and employment. Although most of these private enterprises are small, the overall importance of the private sector appears to be increasing; private sector ourput *in current prices) is estimated to have increased by 23.5% annually between 1976-1980, compared to 18.9% a year by the public sector. The growth of private sector investment suggests that this trend should continue.

Finally, a comment is required regarding the private sector data. Most of the information described above is based on data collected

by Government regulatory agencies such as the Ministry of Industry, and its affiliates (General Organization for Industrialization--GOFI--and the Industrial Control Department) or the Ministry of Planning. Private companies are required to provide these agencies with data in order to receive the required permits and approvals. However, it is generally believed that private companies understate their employment, investment and production cost because of fear of possible unfavorable Government response. Other small firms evade these regulating procedures altogether. This particularly applies to companies with about 10-25 employees who may officially claim to have fewer than 10 employees and consequently not be subject to these regulations. Thus, it is probable that the private sector role in industry is understated.

4. The Role of Small Scale Enterprises

Estimates of the SSE role in industry have been derived from subsector profiles presented in Appendix A, and summarized below. In the absence of aggregate data, it has been necessary to develop an understanding of private sector and SSE activity from a more detailed assessment of the structure and composition of each industrial subsector. An industry by industry review, primarily based on information provided by the Federation of Egyptian Industries, has enabled us to develop estimates of the number of private and small scale establishments, as well as their relative contribution to the gross value of industrial output. The principal characteristics of each subsector are briefly summarized below.

- Textiles and apparel is made up of five inter-related industry groups: spinning, weaving, knitting, dyeing and finishing, and apparel. There are a total of 42 public sector establishments which account for 75% of the value of subsector output. In contrast, there are an estimated 1600 private establishments (in addition to thousands of artisans) which account for only 25% of the value of output. The public sector monopolizes spinning and plays a major role in weaving, dyeing and knitting (60-70% of output). The private sector accounts for about 70% of apparel production, but in terms of number of establishments it is also important in weaving and knitting. Of the 1600 private establishments, approximately

1350 (84%) have between 10 and 50 employees while only 35 have over 200 workers. There are presently 24 Law 43 companies in operation with an average of 110 employees each. We estimate that all but about 50 establishments can be categorized as SSEs.[1]

• Food Processing includes seven different industry groups: sugar and confectionary products, tobacco products, edible oil and related products, beverages, dairy products, cereal products, and food preservatives. There are 50 public sector firms accounting for about 75% of the value of output and about 2000 private establishments producing the rest The private sector is particularly important in dairy products (45 firms and 80% of output), cereal products (200 firms and 37% of output), and confectionary products (320 firms and 24% of total sugar and confectionary output). About 650, or 81% of the private firms are believed to employ between 10-50 people while 125 have between 50-200 employees and 25 firms have over 200 workers. Of the private firms, 20 were established under Law 43 and these average 130 employees each. Only about 40 establishments would be considered large scale and outside of our broader definition of SSEs.

• Metals and Engineering is divided into primary metals (ferrous and nonferrous) and engineering industries. The latter includes metal fabrication, non-electrical machinery, transportation equipment, electrical machinery, and professional and scientific equipment. About 10 public enterprises heavily dominate the primary metals area (94% of the value of output) while an additional 56 Government owned companies account for 77% of the value of engineering products. Metal fabrication is the only area where the private sector is important. About 1800 private firms (excluding about 10,000 workshops with fewer than 10 employees) produce an estimated 45% of the output in this area. Overall 1900 out of a total of 1940 private firms are very small with between

[1]Throughout this chapter we distinguish between firms with 10-50 employee and the broader definition of SSEs developed in Chapter II, which define SSEs as firms having 10-200 employees and not organized under Law 43.

10 and 50 workers. Only 3 private companies have over 200 workers while the 38 Law 43 companies have an average of 120 workers each. We estimate that 98% (all but about 40 firms) are SSE s.

• Chemicals is a complex subsector which includes forestry products (pulp and paper, and woodworking) in addition to the industries usually associated with chemicals (inorganic and organic chemicals, fertilizers, paints and varnishes, rubber and rubber products, plastics, pharmaceuticals, cosmetics, etc.) Out of a total of 624 establishments, 64 are owned by the Government and 560 are private. However, the former account for 65% of the value of output compared to 35% for private firms. Perfumes and cosmetics (70 firms and 80% of output) and plastics (170 firms and 40% of output) are the areas where the private sector is most important in the chemicals area. However, there are also about 250 private firms in woodworking producing about 98% of total output. Approximately 430 (or 77%) of the private establishments have between 10 and 50 employees, while 95 have between 50 and 200 workers, and 35 firms employ over 200 people. About 52 of the private firms in operation were organized under Law 43 and these average only 85 employees each. However, all of these are considered to be sophisticated large scale enterprises. We estimate that about 75 private establishments should not be categorized as SSE s.

• Leather and leather products is defined to include tanneries, footwear and other leather products. It is in this subsector that private establishments are most dominant. There are only three public sector companies compared to about 780 private firms with over 10 employees. Private firms produce 94% of the value of subsectoral output, including all leather products and 95% of footwear. Furthermore, almost all of these private companies are very small. An estimated 99% (770) of the firms employ between 10 and 50 workers. Only two firms have over 200 workers and there are only about three Law 43 firms.

• Building materials include cement, gypsum and plaster, cement and asbestos products, bricks, quarrying, refractories, porcelain and chinaware, and glass. About 40 public sector companies produce an estimated 80% of the value of building materials. We estimate that there are at

least 1850 private establishments, but about 1000 of these are involved in illegal production of red clay bricks. Since this production is not included in the value of output, it is likely that the private sector accounts for more than just 20% of production. In addition to brick making, private sector firms are important in cement products (700 establishments), refractories and glass. Of the 1850 private firms, an estimated 1800 have between 10 and 50 workers including virtually all of the brick and cement tile producers. About 30 firms have 50 to 200 workers. There are only 11 companies organized under Law 43 each averaging only about 80 workers. Approximately 30 companies are categorized as large scale and would be excluded from our definition of SSEs.

The principal findings from the subsector profiles are summarized in Tables 9 and 10. Table 9 shows that out of a total of about 7800 industrial establishments with over 10 employees, only 265 (3%) are public sector enterprises. We estimate that there are approximately 7530 private firms, of which 92% have between 10-50 employees, and 7% have between 50 and 200 workers while only 1% employs over 200 people. These tables clearly establish the importance of smaller establishments in the private sector.

It should be noted that the Federation of Egyptian Industries, drawing upon data on its own membership as well as GOFI statistics, estimates that there are only about 4700 private industrial establishments in the subsectors as defined above.[1] Hence, our estimate of the number of establishments is about 60% higher. The difference is largely explained by the fact that many firms are not registered with the Federation or do not have the industrial license required by the Ministry of Industry. (See Chapter V on the regulatory environment). This is particularly true of several types of firms: (1) smaller establishments with fewer than 25 employees who may choose not to register with the Federation; (2) establishments which do not depend on the public sector or on imports for materials and equipment, and thus find it possible to avoid registration requirements; and (3) establishments involved in illegal activites such as the estimated 1000 brick manufacturers. Although there is a large

[1] The figure of 4700 has been obtained by reducing the 4900 figure on page I-2 by 200 to get an estimate of private sector firms only.

TABLE 9

Number of Public, Private and Small-Scale Industrial Enterprises, 1980-81

			PRIVATE SECTOR						% OF PRIVATE	
	TOTAL[1]	PUBLIC SECTOR	TOTAL	10-50 EMPL.	50-200 EMPL.	200+ EMPL	LAW 43[3]	SSEs	10-50 EMPL	SSEs[2]
Textiles	1,642	42	1,600	1,350	215	35	24	1,550	84%	97%
Food Processing	850	50	800	650	125	25	20	760	81%	95%
Metals and Engineering	2,006	66	1,940	1,900	37	3	38	1,900	98%	98%
Chemicals	624	64	560	430	95	35	52	485	77%	87%
Leather	783	3	780	770	8	2	3	775	99%	99%
Building Materials	1,890	40	1,850	1,800	30	20	11	1,820	97%	98%
TOTAL	7,795	265	7,530	6,900	510	120	148	7,290	92%	96%

[1] Establishments with over 10 employees

[2] SSEs as defined in Chapter II: establishments with 10-200 employees and not organized under Law 43.

[3] In operation as of 31/12/1980. Law 43 companies are generally in the 50-200+ employee categories

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Sources: Arthur D. Little estimate based on data from Federation of Egyptian Industries and Ministry of Industry, and estimates of non-registered establishments.

TABLE 10

Small Scale Enterprise Share of Manufacturing Output, 1980-81

	GROSS VALUE OF OUTPUT 1980 (LE MILLION)	PRIVATE SECTOR SHARE (%)	10-50 EMPL. ESTABL. % OF PRIVATE	10-50 EMPL. ESTABL. % OF TOTAL	SSE[1] % OF PRIVATE	SSE[1] % OF TOTAL
Textiles	1,400[2]	25%	49%	12%	80%	20%
Food Processing	2,000[3]	25%	60%	15%	70%	18%
Metals and Engineering	1,400[3]	18%	84%	15%	85%	15%
Chemicals	670[2]	35%	35%	12%	50%	18%
Leather	450[4]	94%	95%	89%	95%	90%
Building Materials	200[3]	20%	45%	9%	65%	13%
TOTAL	6,120	29%	66%	19%	78%	23%

[1] Based on definition of SSEs in footnote 2 in Table 9. These percentages are ADL estimates.

[2] Ministry of Industry

[3] Ministry of Planning

[4] Ministry of Industry plus estimate of tanned leather output.

Source: Arthur D. Little estimates based on Ministry of Industry, Ministry of Planning and Federation of Egyptian Industries data. Private sector and SSE shares are derived from subsector profiles in Appendix A.

difference between our estimates and official estimates, we believe that our figures are conservative and that the extent of underestimation could be considerably greater.

Table 9 shows that 7290 establishments or 96% of private firms are categorized as SSEs under a broader definition which includes firms with under 10-200 employees but excludes all Law 43 companies. In other words, these are the firms that have made the entrepeneurial transformation, and possibly the technological transition, but have not yet made the management transition that distinguishes a sophisticated large scale enterprise.

The share of the gross value of manufacturing output accounted for by private sector and smaller scale establishments is shown in Table 10. This indicates that the private sector as a whole accounts for only 29% of the LE 6.1 billion in industrial output. Small enterprises with 10-50 employees are estimated to account for about 66% of private sector output, but only 19% of total output. SSEs, as defined above, account for a higher 78% of the gross value of private industrial output and 23% of the sector's total production.

This measure of the relative importance of smaller scale enterprises, however, is less reliable than the number of establishments. The gross value of output is based on official statistics which are believed to significantly understate private sector performance. While public enterprises have no reason not to report the full extent of their output, private sector performance is understated because firms may either be unregistered ("underground") or under-reporting in order to avoid taxes or other controls. However, we have no basis for estimating the extent to which private sector output is understated.

As is the case for all industrial establishments, SSEs are disproportionately concentrated in the Cairo and Alexandria metropolitan areas. Although recent data is not available, we estimate between 50-55% of all SSEs are located in the Greater Cairo area while an additional 15-20% are located in Alexandria.

The most recent CAPMAS data, for 1973, shows that about 41% of all private firms are located in Cairo Governorate alone while several other Governorates could be considered part of Greater Cairo. About 14% of all firms located in Alexandria Governorate. Of establishments with 10-50

employees, 51% and 16% are located in Cairo and Alexandria Governorates, respectively. This estimate is also consistent with the 1970/71 data from the World Bank's 1977 Survey of Small Scale Industry. This report indicates that about 51% and 15% of all private establishments were located in Greater Cairo and Alexandria, respectively. Interestingly, smaller firms were somewhat less concentrated in the two urban areas. About 40% of the establishments with 10-100 employees were located in Cairo while 14% were located in Alexandria. In contrast, 52% and 11% of the private firms with over 100 employees were located in Cairo and Alexandria respectively.

The regional distribution of new industrial projects suggests that the level of concentration has remained roughly the same during the 1970s. About 45% of the projects approved by GOFI during this period were to be located in Cairo, while about 20% were planned for Alexandria.

C. THE OUTLOOK FOR SSEs

The previous section indicates that SSEs, and particularly firms with 10-50 employees, are an important factor in Egypt's industrial sector. Although the relative contribution of SSEs has been increasing in recent years, we believe that the expansion of existing firms and the establishment of new companies has not been nearly as significant as it could be. The constraints restricting the performance of SSEs are explored in subsequent chapters. Here we review briefly the limited available data indicative of recent growth trends and develop a baseline projection of SSE growth, assuming no action is taken to alleviate the constraints affecting these establishments.

1. Historical Trends

Growth in the number of small scale industrial establishments can only be roughly approximated on the basis of data for officially registered private sector firms. For 1973, CAPMAS reports about 4300 private industrial establishments in operation while by 1980, FEI and GOFI statistics indicate a total of 4700 private firms.[1] This

[1] These figures have been slightly adjusted to insure coverage of the same industrial categories.

increase of only 400 establishments represents a slow 1.3% annual growth in the number of firms. Furthermore, about 150 of the new private industrial firms have been established under Law 43 and cannot really be considered small scale.

Investment in private sector expansion projects, as well as in new establishments, has increased significantly. Private sector projects approved by GOFI[1] (excluding Law 43 projects) numbered only 314 in 1970 and 332 in 1973 with an associated capital investment of LE 12.5 million and LE 16.7 million respectively. After the announcement of the Open Door Policy, the number of approved projects jumped to 740 in 1975 (with a capital investment of LE 67.1 million), 813 in 1979 (capital of LE 166.6 million) and 907 in 1980 (capital of LE 259.9 million). This represents significant annual growth rates for the 1970-1980 period of 11% for the number of projects and 36% for the associated capital investment.[2] Total approvals between 1975 and 1980 amounted to 4330 projects and LE 828 million, or about LE 190,000 per project.

Although the growth in investment projects is impressive and indicates the significant impact of the Open Door Policy, some additional considerations must be noted. First, the level of private investment between 1970 and 1973 was so low that any subsequent improvement would look good. Second, the projects only indicate GOFI approval and have not necessarily been implemented. Third, the much more rapid growth in the level of capital investment than in the number of projects suggests a significant number of large scale projects. Fourth, the total level of non Law 43 private investment is still relatively low. In contrast to Law 43 approvals which amounted to LE 2.4 billion between 197501980, the investment associated with approved non Law 43 projects was LE 828 million during this period.

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[1] Any capital investment project costing LE 8000 or more requires GOFI approval.

[2] Capital investment is estimated in current prices and thus includes inflation.

A final measure of the growth of the private sector, and implicitly of SSEs, is the rate of increase in the gross value of private sector output. Ministry of Industry statistics show an annual growth rate of 16.3% for the 1970-1980 period and 20.6% for the 1973-1980 period. Although significant, once inflation is taken into consideration this rate of increase is much less impressive.

It should be emphasized that these trends only reflect the activity of those industrial establishments which are officially registered and are submitting the required reports and information to the appropriate authorities. The "underground" economy, of both unregistered firms and establishments which are under-reporting their growth and productions, is not taken into consideration in the available statistics. We believe that these "underground" establishments are likely to have grown more rapidly than the official firms. This is due to a number of factors including the rapid growth in market opportunities in the past 5-7 years, the liberalization of certain price and raw material controls associated with the Open Door Policy, and the heavy regulation of private sector enterprises (which will be further discussed in a later chapter). To the extent that small firms can obtain raw materials and equipment from domestic channels outside of the public sector, it is likely that these firms would find it advantageous to stay as far outside the "official" economy as possible.

2. Baseline Projection of SSE Growth

We believe that SSEs are unlikely to expand or increase in numbers at more than a slow to moderate rate in the next five years without a major effort to alleviate the constraints which have been limiting growth of these establishments in recent years. The outlook for SSEs is likely to be characterized by the following principal trends over the next five years:

- Growth of 2% per year in the total number of SSEs which would increase to about 8050 in 1985-86 from the current level of 7290.
- An annual rate of increase of 1.5% in the number of SSEs which are officially registered such that these would total

about 5280 in 1985-86 compared to the 4900 in 1980-81.

- A higher growth rate of about 3% per year in the number of "underground" SSEs, resulting in an estimated 2770 establishments by 1985-86.[1]
- Employment of between 15,000 and 19,000 workers in new establishments assuming an average labor force of 20-25 people per firm.
- Real growth in gross value of output produced by SSEs of about 15% per year, reflecting both expansions and new establishments (compared to 10-12% annual growth for industry as a whole).
- A small increase in relative SSE contribution to the gross value of total industrial output from 23% currently to 26% by 1985-86.
- Continued growth of "underground" SSEs.

Although the projections suggest a relatively positive outlook, we believe that the potential for SSE growth is much more substantial. How to achieve this potential is the question which will be addressed in Phase II of this study.

IV. CHARACTERISTICS OF SSEs IN EGYPT

A. INTRODUCTION

In the following sections we offer a description of the characteristics of SSEs in Egypt which was developed through interviews with 250 small and medium sized manufacturing enterprises, supplemented by discussions with Government officials and other Egyptians knowledgeable about SSEs. These firms were selected such that the sample of 250 was representative of the SSE sector as a whole with respect to the relative economic importance of each industrial subsector, the subsector's distribution of firms by number of employees, and its geographical distribution. The relative economic importance of an industrial subsector was taken to be its percentage contribution to the gross value of private sector output.

Two hundred of these firms were interviewed by experienced Egyptian interviewers who worked from a questionnaire and were briefed as to the particular information sought from each question. The English version of the Arabic questionnaire used in this extensive interview program is shown in Appendix B. The remaining 50 firms were interviewed in an unstructured discussion format, in most instances by a two-person team consisting of one ADL team member and one team member from our Egyptian subcontractor, ARICON. The aim in this intensive interview program was to cover the same range of issues as in the extensive program but to do so in a more informal manner which would enhance the possibility of deeper or more candid discussion. To the extent possible, an effort was made to combine experience in finance with experience in engineering on each two person field team.

The following sections summarize the results of the different interview programs into a characterization of SSEs in the context of major operational factors: management practices, production technology, raw material procurement, employment practices, marketing, and credit and finance.

It is not easy to establish broad common denominators in a multi-industry study in which there are a variety of different manufacturing

activities within each industry and where the number of firms interviewed in a given industry is necessarily limited). Even within a singl manufacturing activity there will be, for example, a spectrum of attitudes towards growth, ranging from the future-oriented firm looking for products which have growth potential to the firm which is content to remain where it is, both in products and in volume. As a consequence, in identifying common denominators, judgmental analysis must be combined with quantitative analysis, and the combination runs the risk of giving a few general characteristics disproportionate attention.

It should also be noted that our interview period followed immediately after the death of President Sadat. This event, terminating a relatively long period of stability, unquestionably shocked the country, and most probably brought some bias to our findings. We believe that in this period of reappraisal businessmen were more conservative about their future prospects than would previously have been the case. Certainly the very high cancellation rate for tourist group reservations significantly impacted sales in the Khan-el-Khalily and other Cairo tour shops during the peak November-December sales period, and caused worker lay-offs in this supply network.

Despite these hazards it is our judgment that the following description of SSE characteristics if fair and accurate as of this time. However, SEEs show much dynamism and priority findings at this time may not necessarily retain their validity into the future. Moreover, these findings are initial ones in an area not previously examined in depth and should be regarded as subject to re-examination and refinement over time.

B. MANAGEMENT PRACTICES

Very few small scale enterprises, 6.5% of the firms sampled in the extensive interview program, are joint stock companies. Most are family operations or partnerships and the dominant management practice is that of absolute personal supervision by the owner(s). For example, one company we visited does not operate a third shift because the owner must sleep. Another exporting company is limited by the ability of the

owner, his wife, and son to personally inspect each finished piece. Even in a more sophisticated small factory, the owner's brothers supervise the production floor via a video camera in their adjacent office.

Other manifestations of this personal management style include:

- A dislike of multiple plants, or distribution centers, or off premises sub-assembly operations.
- Close proximity of the owner's home and his business.

Because of several factors, including limited delegation of responsibility and authority, virtually no control exercised through a management information or a production/financial reporting system, an unreliable telephone system and traffic congestion inhibiting travel, the typical management arrangement appears to be a two man family team (brothers, father/son-in-laws). This system allows for a continuing presence at the plant, as well as attention to necessary off premises tasks. Among larger companies it is common to have an administrative/financial office located in Central Cairo with production operations at a plant within driving range under the supervision of a plant manager. Again, close administrative control is exercised by frequent visits to the plant.

Management by objective is an almost unknown concept. The relative historic importance of trading rather than manufacturing in the economy means that opportunistic, short-term horizons predominate. Therefore, the managerial skills of strategic planning, management by objective, comparison of actual with forecast, patience, and reinvestment for long term gain have not been significantly developed.

It is, for example, the normal expectation among bankers that a pre-feasibility study will turn out to be inadequate in any professional sense. Investment project studies most typically are prepared to achieve the specific objective of GOFI approval. Because the GOFI review is basically a technical analysis, the report will be strongest in that area. Feasibility studies are not prepared with the view that they will become a critical management document for the sponsor - a strategic plan with a detailed implementation schedule and a risk/reward analysis for Board decision. Instead, they are prepared for an external audience, and designed to pass the narrow focus of a bureaucratic eye.

Also missing is the developed country practice of significant "up-front" investment of funds at the pre-feasibility stage. The tendency is to get GOFI approval "on the cheap" and thus be assured of a potential opportunity to recoup study costs from an actual project.

It is interesting that the responses to our extensive survey indicate that SSEs overwhelmingly (approximately 95%) believe their administrative skills and style are more than adequate to meet their financial, accounting, production, and marketing needs. Furthermore, they do not believe that assistance in improving these skills is needed. We intend the above comments to be descriptive of conditions we have observed and not to be interpreted as critical of Egyptian entrepreneurs. On the contrary, we were tremendously impressed with the managers we met, and would characterize the group as:

- extremely hard-working, and dedicated to the enterprises in which they are investing their lives;
- energetically striving to "get ahead" in the face of institutional and operational frustrations which would have completely sapped the zest of a developed country entrepreneur.
- creative and ingenious in making the most of available resources.
- actively interested in discovering how their operation could benefit from developed country expertise.

At the same time, there is great need to broaden the perspectives of many SSE managers in regard to what might be accomplished with alternative managerial practices.

C. PRODUCTION TECHNOLOGY

Present day use of the word "technology" implies not only the physical equipment employed in a process but also the human organization and information systems required to make economic and social use of the equipment. Put another way, technology is perceived to consist of both hardware and software.

Egyptian private sector industrial production consists of four tiers. At the top are a few generally larger companies - almost exclusively

newly chartered under Law 43 - which enjoy the benefits of all new plant and modern machinery. In the past two to three years some traditional partnership firms, most noticably in shoe manufacture, have entered this tier with new plants organized for high production with modern machinery. Below this tier is a group of companies, usually partnerships, which have introduced one or more pieces of new equipment into their existing plant, but have generally retained their historic production culture and facilities. Next are those companies which have not modernized -- and hold together ancient pieces of production equipment with marvelous ingenuity and operate with a very high labor element.

The fourth tier, at the bottom, is a large group of "unofficial" or unregistered companies, whose number of employees and invested capital is on the border line of the GOFI registration requirements. Their production equipment usually is more antiquated and in poorer condition than that of companies in the third tier, one reason being that these companies are outside the system which might assist them in procuring better equipment.

1. Hardware Technology

Of the 200 firms in the extensive survey, 30% mentioned problems in obtaining information on new technologies. The level of sophistication of the hardware technology used does not vary systematically by subsecto but rather by the size of the SSE. At one end of the scale we saw small SSEs using old, but proven technology combined with a great deal of creativity and ingenuity to achieve the desired production process. Many of these firms would like to acquire more sophisticated technologie if they knew how to get it at what they consider a reasonable cost (which is not always a realistic cost). At the other end of the scale we saw large firms using sophisticated equipment, most of which is imported from Europe, in what might be described as "reasonable" semi-automatic production methods. By "reasonable" we mean technology which utilizes a high degree of labor to load and unload the product at each step of the production process, thus taking advantage of low labor rates in the country while achieving the required quality because machines do

the actual work, and without the automatic transfer systems which are difficult to install and maintain in this environment and may not be economically feasible. Clearly this "reasonable" semi-automatic technology which can be readily brought into the country is capable of achieving higher levels of productivity while at the same time providing employment. Most SSEs considering high production equipment seem to recognize this and no manager we interviewed was looking for fully automated systems for this environment.

Incentive for the SSE to upgrade its technology can come from several sources. The company may wish to expand and wants to insure that the investment will yield the best overall return. Competition from imported products or from other SSEs which have upgraded their machinery and are producing better quality products may force a SSE to improve its technology in order to retain its market share. Another incentive may be the decline in availability of skilled workers which will require the SSE to replace these skills with more automatic machines. Whatever the incentive for upgrading their technology, the SSE is faced with the formidable problem of securing the right kind of technology for its particular needs, and many SSEs don't even know where to begin.

The top tier of companies described above generally appear to have adequate technology transfer founded in either a transfer of technology on the part of a foreign investor, or the international tender procedures related to the project financing. These firms also represent attractive targets for the sales representatives and local distributors of foreign machinery manufacturers, many of whom are active in Egypt. There appears to be a pattern in that the larger more sophisticated SSEs import equipment from Europe (W. Germany, Italy, France and England) and only occasionally from the U.S. These larger producers have usually reinvested earnings over time to pay for these imports and have well educated family members (engineers) making the decisions on types of equipment to import or utilize. The major source of information for these SSEs on types of technology available to them ar the Cairo Industrial Fair and brochures and literature which are mailed to them by aggressive European firms. A complaint we heard several times was that Americans usually only sent

automobiles and electronics to the Cairo Industrial Fair and thus did not allow the local manufacturer a chance to see and "feel" the types of American products they really need. It was also mentioned that the American firms never mailed out brochures and so it was difficult to visualize what was available.

In the tier below these high visibility companies, technology transfer appears to be directly related to the personality of the owner. A number travel regularly - mostly to Europe - to keep informed of trends and developments in their industry. The Cairo Industrial Fair and the Italian Trade Center in Dokki represent windows for those who want to look around. A not insignificant number have worked abroad themselves or have relatives outside the country who assist them in locating technology appropriate to their needs.

The third tier of companies, the smaller SSEs, are not so well placed in getting information on technology and for them this is a problem and a major area of concern. Many of those interviewed would like to see a mechanism for acquiring and helping them analyze this type of information and for them this was <u>just as important</u> as "favorable" financing terms for acquiring the technology. Some SSEs were even willing to pay for this information if they knew where to go, or were willing to pay for a license agreement.

Some licensing occurs as a method for Egyptian companies to acquire technology, or assistance in production, from abroad. But the only SSEs using this are some of the larger ones that have been able to locate the technology abroad. It is clear from our interviews that many SSEs are hungry for licensing agreements (or joint ventures) with foreig companies as a way of decreasing risk and acquiring and maintaining up-to-date technology. The problem faced by the SSEs is that they are not sure how to locate a foreign company for a licensing agreement nor can they afford the time, energy and money to conduct a search for these types of agreements. This is an area where there clearly is a need for assistance and where minimal efforts could result in some substantial additional investment in the country.

Almost all maintenance of equipment is performed by the SSE itself with its own staff. Reliable shops for equipment maintenance usually are not available, and if they are the response time is too slow to meet the needs of the SSEs.

A few SSEs visited have s[illegible]air facilities, some of which certain tools which are more [illegible]ed than the equipment in the shop itself. These SSEs are usual[illegible]repair any piece of equipment and sometimes will inventory [illegible]nent on those pieces which might not be repairable immediately [illegible]o minimize the risk of shutting down production for long peri[illegible] due to equipment failure. The major constraint to maintenan[illegible]ack of spare parts. For some SSEs the risk associated with havi[illegible]of high technology equipment is viewed as being unacceptable [illegible]the repair and spare parts problem, and therefore their leve[illegible]logy is kept to a more simple level, or to the level of rep[illegible]lcation which is available to the SSE.

We must also comment on the very high level of ingenuity we found across the spectrum of industries in copying, developing or modifying existing equipment ot meet the special needs of a particular production situation. One company, for example, was funding the effort of its chief mechanic to duplicate their Italian plastic extrusion machine. The owner was confident this program would successfully yield increased capacity at a cost of LE 20,000 versus LE 80,000 for the current Italian model, and LE 120,000 for an improved Japanese version.

2. Software Technology

With respect to the software aspect of technology, the knowledge of modern production management techniques is quite rudimentary.

- Plant layout is generally haphazard and frequently victimized by the constraints of multi-floor buildings, or inadequate total space.
- Quality control by specialized units on a production run sampling basis is not practice by most SSEs.
- Product cost accounting is close to non-existent because the basic books of account are not regarded as a management

tool and thus do not support such a level of sophistication.

- Production planning usually is no more than an exercise in crisis management. An owner struggles to actually produce as high a percentage of capacity as he possibly can given the factors of labor shortage, electricity failure, machine down-time, and irregular raw material availability. Almost all smaller companies have inadequate working capital and consequently operate on a cash purchase -- cash sales basis with production planning being completely controlled and dependent on financial factors. Where some financial flexibility exists available resources usually are devoted to raw material stocks. Finished goods are shipped promptly, and there is no production scheduling to maintain predetermined inventory levels of finished goods.

Few companies have any real incentive schemes to increase production/productivity. Some of the more sophisticated SSEs attempt to reward workers who exceed certain production levels in order to encourage others to do the same. A few SSE managers expressed the feeling that they were hindered in rewarding the better employees because the government mandates that salary increases must include raises to all employees.

Most SSEs do not believe that inadequate "technology software" is to blame for their production/productivity problems. Instead, they complain of shortages of parts and materials, poor quality materials, electricity blackouts, worker absenteeism, and government regulation.

D. RAW MATERIAL PROCUREMENT

Regardless of the sub-sector interviewed, problems and procedures associated with the acquiring of local raw materials was mentioned by 50% of those interviewed were similar for SSEs we interviewed, although it appears that larger SSEs were able to dedicate more manpower to this task and therefore were able to secure more constant and adequate supplies than their smaller counterparts. Credit terms are usually not

from local suppliers (only 25% of SSEs received supplier credit according to our interview), forcing the purchaser to pay cash on delivery for raw materials. This is probably due to the fact that the suppliers of raw materials face a strong demand for their products and find it totally unnecessary to provide credit in order to achieve a sale. Delivery time varies by raw material and in those cases when the raw material is in short supply (aluminum, for example) which appears to be the case when the original source for most or all the material is outside of Egypt, delivery times stretch out over a period of months, while other raw materials such as oil, cotton, and other locally available or produced products were deliverable on very short notice.

The quality of raw materials leaves much to be desired, and many times is the cause of low productivity in some industries. A lack of quality consistency in raw materials, which was mentioned by about 50% of the extensive interview sample, not infrequently requires the producer to reprocess the raw material itself before pushing it into production in order to achieve the quality and consistency needed for advanced technology operations.

For imported raw materials, the problems were common in that most SSEs that utilize imported raw materials felt that the government could relax the red tape associated with importation procedures. Few SSEs appreciated or recognized that the government needed to monitor imports in order to insure that these privileges were not abused by importers. Here the larger SSEs have an advantage over the smaller ones in that they can afford to place full time staff to monitor imports and clear the imports through the system. The large SSEs are also able to secure financing from exporters of up to six months at international rates (although many preferred not to use this type of financing and use their own capital to pay for the imports).

The sources for many of the industrial raw materials and intermediate goods used by SSEs are public sector companies or government factories. Many SSEs had complaints about quality (see above), about the size of their quota where quotas are imposed, and about competing public sector plants getting better quality materials. Whatever the validity of the

individual complaints, the frequency of complaint suggests that problems do exist in the relationship between SSEs and public sector raw material producers.

E. EMPLOYMENT PRACTICES

1. Skilled Labor

It is the almost universal perception of the SSE owners we interviewed that the availability of skilled labor is a major operational constraint. About 70 percent of the firms interviewed cited a shortage of skilled workers and 48 percent indicated a lack of semi-skilled workers to be a major constraint. For example, we visited a leather company, with three finishing factories which had places for a total of 200 workers but maintained only 65 on the production line. The owner stated that the problem of labor availability was always an active topic at meetings of his Chamber of the Federation of Industries.

We found a variety of incentives used to attract skilled and semi-skilled labor. SSEs' attempt to meet this requirements for skilled and semi-skilled labor through several means including apprenticeships for boys (rarely for girls); on the job training; and hiring workers away from other private firms or from public sector enterprises. Practices we noted include:

- periodic bonuses
- transportation allowances
- piece rate production incentive payments
- regular work schedules on a 12 hour basis, so that base pay may be effectively doubled by the overtime payment (i.e., frequently at 2x rather than the 1.5 time required by law).

Although there is almost universal agreement that shortages of skilled labor (and to a somewhat lesser extent semi-skilled labor) are a problem for SSEs, there is no consensus as to the causes or acuteness of the constraint. Several of the apparent factors are completely outside the control of the SSE, including: the limited capacity of the vocational training system relative to demand for skilled labor; the high wages offered in neighboring oil-rich countries (although some

respondents indicated that the net pay differential was not less of a factor); the complete job security offered by public sector enterprises; and the low prestige associated with manual labor and possibly with working in SSEs.

Other factors are at least partially related to the operating practices of SSEs. The most obvious of these is the low pay offered by SSEs compared to other opportunities. For example, we visited a factory with 60 glass making machines where the owner averaged only 10 machines on line because he did not have the necessary trained workers. He was paying LE 1.20 per day, and commented that non-skilled workers could make LE 2.00 per day pumping gas. It did not seem to have occurred to him that there might be a relationship between his pay scale and his problem.

Another factor is the poor and often unsafe working conditions in many SSEs. This could explain why a small shoe factory owner expressed the opinion that since the pay scale for skilled workers was so high, workers could afford the luxury of a frequent day off. This suggests that workers value leisure time more than additional income working in an unpleasant or unsafe environment. In general, it appears likely that SSEs have a difficult time attracting skilled workers in a tight market given more comfortable, safer, higher paying, more secure and higher prestige opportunities elsewhere.

2. Unskilled Workers

One of the most surprising findings of the field surveys is the perception of unskilled labor shortages as a problem for SSEs. Almost 60 percent of the establishments interviewed cited the lack of unskilled labor to be an acute problem. This is particularly surprising in an economy with a high level of visibly underemployed people. One possible explanation for this situation is the poor working conditions, long hours, and relatively low pay which are characteristic of many SSEs. Furthermore, extensive government subsidies of basic necessities may make it possible for people to subsist without having to tolerate these working conditions for long.

Another reason could be the labor laws and regulations which were perceived to be highly burdensome by most interviewees. We observed a universal desire to keep the number of permanent employees as low as possible while maintaining a high level of temporary workers. This tendency, in turn, could make it harder for SSEs to attract and keep workers. Key considerations influencing this attitude are:

(1) The legal requirement to unionize plants with over 50 workers;

(2) The difficulty of discharging permanent workers, a situation which biases owners/managers to keep this group low in order to enforce quality, production and discipline standards.

(3) High employer social security payments amounting to a benefit cost of 20% beyond the direct labor costs. Government mandated minimum wage levels have increased 40% in 1980/1981, and employers have become particularly sensitive to the total labor cost of a permanent worker.

(4) Labor legislation that is not adequately flexible to permit seasonal adjustments in a factory work force to reflect seasonal market demand (bedroom furniture in Egypt, for example, is sold in the summer and production is low in the winter). Managers, therefore, try to hold their official, stated labor force to the seasonal low point.

(5) The psychological importance of the number of employees shown in official records with respect to the visibility of a company in all its relationships with the Government. The 50 employee level was the minimum level for nationalization under President Nasser.

All of these factors serve to create a large group of "temporary" workers which in turn has two sub-groupings:

- "temporary workers", who are in reality always required in the work force of a company.

"temporary workers" needed for an unusual production situation (a large order, faster delivery, seasonal fluctuation, etc.)

From our observations, the temporary worker groupings contain significant numbers of children, young-boys and women. We noted that:

Children (boys) are almost universally seen in private sector factories in all industries.[1]

Young boys who have dropped out of the educational system are broadly employed prior to their military service.

There are limited numbers of unmarried, "village" women working in the industrial sector - particularly in the final product packing of consumer goods. We believe most "village" women do not continue working after marriage. We found in our visits that information concerning the number of women workers furnished by a manager in his office often understated the number we would see later during a factory tour. This may have been a classification problem as unmarried women are considered girls, but we were also told it is customary to consider a woman worker as the equivalent of one half an employee.

There is a different situation with respect to skilled or professional women living in Cairo who remain in the work force in significant numbers after marriage. The rate of growth in the urban cost of living also serves to make the two income family increasingly necessary for maintenance of living standards.

3. General Labor Practices

By law anyone entering the labor force registers at an office in his municipality and is given a number. Factories are required to make a monthly report on their labor vacancy needs to the Registry office. If the skills of those on the registration are appropriate, such

[1] By law children aged 12 are allowed to work provided time is provided also for schooling. Many schools operate on a shift basis.

applicants must be hired according to registration number priority.

It is our impression that to the extent this system operates it does so with the public rather than the private sector. Certainly it does not operate at all with the large "unofficial" or unregistered component of the total private sector (including the artisanal firms). There is also a provision that defined need for "casual" labor (work efforts extending not more than 1 month) is not subject to the rules of worker need reporting, and we believe that maximum advantage is taken of this clause.

It is our observation that new private sector industrial workers are largely recruited by the word of mouth solicitation among the friends and neighbors of present employees. This practice appears based on the fact that the difficulties in commuter transportation argue for drawing people from the more accessible geographic areas. Help wanted advertisements in newspapers are also used.

Commonly, employers prefer new entrants into the labor market so they may train them in their own particular methods and practices, and not have to "untrain" them from bad habits acquired in other plants. The exception to this condition is found at the skilled worker level, where experienced workers are recruited selectively from like industry companies on the basis of salary. Public sector companies are often the target of such pirating.

Training is on the job, and a new employee works either as a member of a group - or team - or with a more experienced worker. Foremen are notably lacking responsibility as trainers, or supervisors. The job description "foreman" appears to identify someone with a responsibility to keep the machines running and production flowing, not someone with a responsibility for worker relations. This responsibility is handled directly by the owner.

In one instance in the shoe industry we found a father training his two daughters in his work, and we believe the sponsor network which brings in a new employee may also be influential in arranging and providing his initial training.

Outside training programs were not highly regarded in the companies we visited, and less than 6% of the SSEs sampled by us were aware of any government training programs for laborers. Managers mention the negative aspects associated with loss of productive time and the probability a newly trained worker will take his skills to another company, or another country, for increased pay. They believe that they will not be the ones to benefit from any outside training provided Moreover, in the more modern or sophisticated industries there is a feeling that the training available may not reflect the plant's own level of technology.

Working conditions in the industrial activities do not seem to be a factor in management thinking (with the exception of the food industry where attention must be paid to health regulations). Lighting is poor, most work stations are crowded together and housekeeping unpracticed. There seems to be minimum recognition of a possible relationship between working conditions and the quantity or quality of output. Management offices often are equally inefficient, dark, and cluttered. Many are so bad, in fact, that we feel there may well be truth in the joke that they are deliberately maintained in this condition to give the tax inspector an overriding impression of poverty and failure.

While many small factory owners say that they operate as a "family" and that they attend employee weddings, and see employees outside the factory (because they probably live in the same general area), and maintain factory morale through personal interaction with individual employees, we view this as a limited statement. We found an equal tendency to view workers as a necessary adjunct to the operation of production machines (to be replaced by new machines whenever possible).

We found a close parallel here to the work relationship culture which we have observed in Mexico - a much more developed country. The owner there is both dictatorial and paternalistic, speaking of "my" workers and "my" machines. A worker accepts this as perfectly satisfactory in a small factory, where he is in fact in a close relationship to the "boss", and the existence of such a close relationship

gives the worker status. Implicit also is attention by the owner to the family crises of his employees.

Most SSE companies are family businesses and the owners do not see their employees as future owners. An employee does not logically save to buy into a family business, and the costs associated with getting married in Egypt are so high that a potential entrepreneur without family support will probably have to decide to remain single - if he wishes to save capital for his own business.

F. MARKETING

Marketing is clearly subordinate to production and finance in the priorities of SSE management, and our survey showed that approximately 60% of the SSEs interviewed do not promote their sales in any way. The continuing existence of enormous unsatisfied domestic demand appears responsible for this ranking. Apparently everything that can be produced can be sold.

Very little effort or emphasis, if any at all, is placed on the collection or analysis of market information by the SSE manager. Many times the SSE manager is only aware of the fact that local production of his product is much smaller than the demand in the Egyptian market, and that the difference is being made up through imports, and that the market can absorb all he can possibly produce. Only the more sophisticated producers are aware of their market share and other pertinent market information, which they estimate based on their own experience in the market rather than from published market statistics which are very limited. Little evidence of sophisticated forecasting techniques exists since the constraints which face many of the SSEs are not on the marketing side, but rather on the production side of the enterprise. Forecasts are based on what the SSE manager feels he can produce given the capacity, labor, raw materials and other production factors that are available.

On the other hand, SSE owners are very clear about the immediate basis of competition.

- If they are in competition with a public sector company, they are undoubtedly competing on the basis of better quality, and delivery time, and have calculated this value differential in establishing their pricing structure.
- If a number of private companies are competing they may well have established some degree of price fixing through informal cartels.
- Where multiple distribution channels are being used, attention has been given to volume incentives, and appropriate discounts.

Salesmen are paid on a commission basis with payment based on cash collections, not on orders. Deliveries are generally made direct from the factory, rather than from a distribution warehouse.

It is our finding that in Egypt, as in the developed world, there are:

- Companies with an established market niche, premium pricing and high volume which are extremely profitable.
- Companies which price to obtain a high unit profit, and are then production limited, and hardly cover all fixed costs.
- A very few companies with a pricing policy which deliberately sacrifices unit profit in an effort to gain market penetration.
- Companies which face strong price competition from imported products (Japanese nuts and bolts).
- Companies which fact strong import competition regardless of price because of the prestige associated with foreign brands (perfumes).
- Companies which are probably in price transition (shoes, where the industry appears to be in a significant shift from artisan production to highly mechanized production).

- Companies which operate under price control policies which preclude any product profit (e.g. bread, with the result that bakers must recoup their profit out of pastries).

1. Inter-Company Transactions

In our visits, we saw only limited evidence of subcontracting with larger corporations. Even when the product was being sold to other companies for further processing or finishing, no subcontracting agreements existed. Part of the reason for this may be that since the product being produced is usually in short supply, there is little advantage to be gained by limiting ones' sales options with a contract. Also production schedules are difficult to achieve in this environment due to the uncertainty in raw materials, etc. and the SSE manager may view a contract as an overly risky commitment.

Public sector company procurement needs are published, with the selection among bidders being made on the basis of price, quality, reputation, and delivery schedule, and 45% of the sampled SSEs did sell at least some production to public sector enterprises. There is no concept of "small business" set-aside programs as practiced in some other countries - either in the form of percentage of the total purchases, or through the reservation of certain listed products for small business suppliers.

Private sector companies who buy from public companies generally express the feeling that they operate at a disadvantage when competing against public buyers, and suffer in terms of the size of their allocation (when supply is limited), quality and delivery. There is also a strong feeling that public companies are favored in the competition for imported raw materials.

As the Ministry of Industry has moved in the direction of delegating limited operational freedom to the Chairmen of public companies, flexibility with respect to private sector sales policies also appears to have developed. For example:

- When an item is in short supply, it may well be offered for cash purchase only (a policy of course, which does not favor small companies). In some instances a short

supply item may only be available in connection with a tie-in-order covering certain of the slow moving products of the same factory.

- Where a public factory is pushing sales of a product it may well offer credit to regular private customers as a sales tool.

Those instances where private companies are selling to both private and public entities are relatively few. Where allocation is a factor it applies to both types of customers (i.e., an aluminum kitchen utensil manufacturer selling both public wholesalers and private distributors, allocates to both).

2. Export Shipments

With ample local orders available to support capacity, there is little incentive for a small manufacturer to seek out export opportunities. Any export shipment with a value in excess of LE 100 must be supported by a confirmed letter of credit, and we found that owners generally view the time invested/reward ratio negatively. A plastic bag manufacturer, for example, felt there would be an extra profit margin for him if he by-passed his distributor and developed direct export sales, and that solicitation would increase volume, but did not see this activity as holding priority interest for him.[1] Consequently, only 4% of our extensive interview sample sold any of their production to exporters.

G. CREDIT AND FINANCE

A primary financial concern of private sector owners is tax avoidance, and financial records are always kept with this objective in mind. CPA's prepare tax reports, not statements for the purpose of obtaining credit.

There is unanimity of opinion among the western trained bankers who interface with this attitude that credit cannot be extended on the

[1] For further discussion of private sector exports see Appendix D

basis of the financial reports furnished by applicants. (Such bankers, of course, tend to be exposed only to the larger, and presumably more financially sophisticated companies). Loan commitments are made on the basis of the reputation of the owner, and the bank's own laborious construction of a balance sheet and profit and loss statement from field inspection data and interviews.

In an environment where financial data is suspect, it is quite natural for lenders to relate their assumption of risk directly to specific asset items whose value can be independently verified (and liquidated in case of necessity). Such assets in descending order of risk attractiveness are:

- land and buildings
- equipment
- bills of exchange
- raw materials inventory (placed under the physical custody of the bank).

Such a system of risk assumption means that a borrower's access to institutional credit will be determined and controlled by collateral values rather than by the system of balance sheet, profit and loss, and cash flow analysis commonly used by western lenders to determine credit worthiness and the elements of a loan program. From the viewpoint of market need, a serious limitation of any collateral value system is its failure to provide work-in-process financing for manufacturing companies

1. Fixed Asset Financing

Expansion of capacity normally requires the acquisition of additional space and equipment. There is a high probability in a collateral driven system that such an investment will deplete working capital. While existing assets may have a tie-in value sufficient to support much of a lender's requirement for collateral to loan coverage, the borrower may well dip into his cash resources to make up the down payment.

In the case of an entirely new enterprise developed as a (family) affiliate of an existing business, it is also likely that the liquidity of the latter will suffer in the accumulation of start-up capital.

Thus, the expansion of manufacturing capacity tends to impact the amount of working capital available to support the existing level of operations, as well as creating a need for financing of the new trading assets which are related to the increase in volume.

We found financing to the largest more secure SSEs to be readily available through the banking system because of the amount of collateral they have to offer. Foreign exchange loans are at international rates (although we saw a preference for using internal funds for financing imported equipment rather than accepting bank terms). The Development Industrial Bank does offer a favorable exchange rate on import transactions coupled with slightly subsidized financing rates, but large SSEs perceive the DIB to be risk adverse, profit oriented, and too rigid and slow in closing its paper work, and many would rather stay away from the DIB and public banks altogether.

Smaller or newer SSEs, which are not backed by large amounts of collateral or private money, are forced to work under these constraints and many times have dealt with the problem creatively. In our survey, for example, we saw that 107 out of 200 firms interviewed did not own their land on buildings, but instead leased them, giving them even less collateral to offer in order to receive financing. The option of importing new equipment or purchasing locally produced equipment (which is limited) is almost non-existent due to this lack of financing because of the collateral problem, but also because this group of SSEs appear to see a high risk associated with borrowing and the requirement of making fixed payments over time. These SSEs typically have old, worn, but functional equipment that has been creatively put together from various sources. They buy used equipment from other companies, adapt machinery intended for other uses to their production, or manufacture their own equipment based on what they have been in catalogs or in other companies. These firms seek to minimize their borrowing from financial institutions, preferring instead to raise capital among relatives.

2. Working Capital Financing

We found working capital financing, as the term is used in the developed world, to be a major problem area. Across all subsectors, and in all but the very largest companies, a lack of liquidity was almost always cited as an operating and expansion constraint.

We view this situation as arising out of the following series of complex relationships.

Bank Related

- All bank borrowing is short term. As mentioned above, short term borrowing is frequently used to finance fixed asset expansion (and thus effects liquidity).
- Loans with a maximum maturity of 12 months are generally secured with fixed assets with an advance rate of less than 50% on the collateral.

  To a limited extent bank financing is available against firm orders but only on the basis of a 25% advance. Raw material financing which is available under the "lock and key" system with an 80% advance rate, demands the physical presence of the lender on premises to release the material into production.

It is our finding, therefore, than the existing banking programs for financing working capital consist of a number of quite discrete loan products which are not integrated to form an adequate credit delivery system.

Other

The extension of trade credit is also a factor effecting liquidity. Among the smallest companies almost all purchases and sales are for cash (although some manufacturers sell to shops on the basis of a 50% deposit with the order, and the balance payable on delivery). At a slightly larger size level some sales are made to shops on the basis of a 50% cash payment at the time of delivery with the balance payable weekly as sales are made.

We believe that when the larger SSE manufacturing companies sell to other private companies, they do so on 30 day terms to conform to competitive practice, with the amount of such credit based on their own relationship experience. Sales to public companies are generally on the basis of payment after the goods have been received and inspected and the related papers approved. This process takes a minimum of 20 days.

Finally, among some companies, there is a clear reluctance to borrow; about 45% of our extensive sample felt they did not need loans, or did not wish to put the factory into debt. Among the elements contributing to this attitude appear to be the following:

- A risk adverse orientation on the part of more traditional managements.
- An emotional perception that the rapid increase in interest rates from 7% to 15% in a few years represents an unconscionable action by the banks.
- The religious bias against the payment of interest.

3. The Stratification of Credit

We found the private sector to be stratified in all sub-sectors with respect to its use of and access to institutional credit.

- Larger Companies

  As indicated, the larger private manufacturing companies appear to have reasonable access to bank credit, and thus enjoy the option of whether or not to use it.[1] With this group a definite relationship appears to exist between the cost of capital (interest rates) and the choice of technology, and the overall choice to expand, although the issue is clouded by the present limited and inefficient capital markets which provide relatively little debt financing.

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[1]Note: This view also shared by the majority of the bankers we interviewed who felt money was available, and that there was active competition among banks for large, Law 43 joint venture projects.

Evidenced by our interviews, there has been a holding back of capital investment due to the recent high interest rates faced by Egyptians in both the local and international money markets and of those not using bank credit, approximately 1/3 said this was because of high interest rates. The choice made as a result of these interest rates, however, is not one of settling for less expensive projects or lesser technologies, but rather in yes or no decisions for any action with respect to expansion or reinvestment. Moreover, in those cases where we have seen expansion, it has frequently not been financed through external financing, but rather through internal funds or retained earnings. One reason, we believe, for the significant use of internally generated funds may be that when available, they have a much lower opportunity cost than borrowed funds, (since there is not adequate market in which owners may place their internal funds and earn a reasonable return while also diversifying their interests). Reinvested funds eliminate the need for debt financing which would cost more than they can receive for their own internally generated funds if they are taken out of the business.

Those larger firms that do not have internal funds, still do not make extensive use of external financing for a variety of reasons. Lack of sufficient collateral is a constraint which is mentioned often in the environment, and this is because banks tend not to lend on the soundness of the project, but rather only on the soundness of the security. Owners also mentioned that terms (length of loan, payment stream) reflected more the bank's needs than those of the borrower, and were not always favorable. Finally, there is a perceived risk in having to make fixed payments over time in an environment which is constantly changing and subject to shortages which can upset production, an

attitude which may also explain the preference for internal funds when they are available.

The above constraints have acted to limit expansion and the introduction of new technologies, and obviously have an impact on employment. Although expansion usually introduces more efficient utilization of labor, and the labor component per unit decreases, the overall result is a net increase in employment as a result of expansion because of the large increases in total capacity which occurs. No expansion obviously limits the employment growth in the country.

- Small Manufacturing Companies

  In contrast with the sophistication expressed above, locally owned firms with 10-50 employees appeared generally interested in obtaining some form of financing for expansion. They feel their lack of funds impacts both current operations (insufficient raw material on hand) and expansion (inability to purchase land for relocation). However, they also appear to have almost an adversary relationship with the banking industry, and frequently express the greater desirability of taking in a partner to obtain additional funds. (This attitude may be responsible for the strong growth of the Islamic banks which offer a form of partnership risk financing).

  Frequently expressed examples of the frustrations of small company owners with the service capability of the banking industry were:

  - high interest rates
  - collateral requirements
  - time consuming procedures
  - rapid repayment requirements.

During our study a unique example of the mismatch between the perceived needs of SSEs and banking industry service came to our attention. In 1979 and 1980 the National Planning Institute sponsored a study of the banking relationships of small businesses (defined as those with under 50 employees) in all segments of the textile industry. In this project a sample of 304 firms was interviewed; 179 firms, or 59% of the total sample expressed an interest in obtaining bank credit for either raw material or equipment purchases. However, only 30 firms, or 17% of those with an interest in obtaining credit, reported that they had actually been successful in obtaining bank credit.

149 Firms, or 83% of those who had expressed interest in obtaining edit, reported they did not have access to bank financing.

4. AID Private Sector Financial Support Programs

The companies we visited were not particularly well informed concerning AID financial support programs for private industry. There was either an absence of knowledge about the existence of such programs or confusion about their operation. Manufacturers expressed resentment over the inclusion of commercial traders in the Commodity Import Prograr They felt the fast turnover of goods normal for this group in combination with delayed repayment, provided windfall funding of their general operational activities. In addition, it was felt that procurement requirements and the general level of paper work was burdensome. Moreover, in a period of international inflation and rapidly escalating prices AID procedures are seen as time consuming and thus potentially causative of higher purchase cost.

The PIE fund was not identified to us as a potential new source of assistance. DIB was characterized both as an important source of expansion financing (although not necessarily in connection with the purchase of American made equipment), and as a poor partner for AID funds (for example, comments included "Why does AID force us to go to that bank; it is high cost, inefficient, bureaucratic, and doesn't understand our problems".)

Our interviews did not make us sanguine about the viability of future AID programs tied to the purchase of American made equipment. While there is unquestionably a high level of general in American equipment, in practice the traditional Egyptian pattern of buying European (with relationship, field support, service, and quick-delivery networks all in place) and a perceived lack of market interest on the part of the U.S. manufacturers present definite handicaps.

In addition, AID program requirements (most specifically, the requirements with respect to U.S. transport and insurance) and the international strength of the dollar, were said to produce unfavorable landed equipment cost differentials on the order of 20-25%.

Japanese price competition has also become a new factor in the marketplace. In addition to Japanese interest in the Egyptian market as evidenced by the large number of their business people seen in the hotels, and the abundance of such consumer products as autos, calculators and watches, their presence is now quite evident in the manufacturing sector. To cite examples, we visited a factory which had changed from German to Japanese printing dyes (on the basis of superior quality), a factory which had changed from Italian to Japanese plastic injection moulding equipment (on the basis of price and sophistication), and a factory which is using modern German machines to manufacture nuts and bolts and finds itself struggling with the problem of Japanese imports.

V. INSTITUTIONAL ENVIRONMENT

A. POLICIES AND REGULATIONS AFFECTING SSEs

1. Introduction

Government policies, as well as the legal and regulatory instruments formulated to implement them, are a major force in shaping the environment in which SSEs operate. Ideally, the policy and legal framework should be supportive and promotional, but in reality it might impose some constraints on the growth and operation of SSEs.

The purpose of this section is to briefly review Government industrial policies, particularly regarding SSEs, and the principal laws and regulations which have been developed for the private sector. We will then assess the principal implications of the policy and legal framework for SSEs.

Our review of Government policy is derived from interviews with officials at the Ministry of Industry, GOFI, and the Investment Authority, as well as from the study of the Five-Year Economic and Social Development Plan 1980/81 - 1984/85. Efforts have been made to incorporate and reflect recent changes in policy emphasis. However, it must be noted the material here is only intended to indicate the general thrust of Government policy and does not pretend to be an official policy statement. The discussion of the various laws and regulations is based on the examination of the actual legal documents and has been reviewed by outside legal experts.

2. Current Policies Affecting SSEs

As noted in Chapter III, development of the industrial sector has been targeted as one of the key features of the Government's overall economic development program. Investment and growth in industry are being vigorously promoted as a means to accomplishing the following objectives:

- Meeting domestic requirements of manufactured products, with particular emphasis on items related to basis human needs such as food, clothing, housing and infrastructural development.

- Creating employment opportunities, particularly for less skilled workers;
- Encouraging regional decentralization through the creation of jobs in areas other than Cairo and Alexandria;
- Generating or saving foreign exchange through both import substitution and expansion of exports; and,
- Generally improving the standard of living and equitably distributing the gains from industrial growth.

The strategy which has been adopted to develop the industrial sector is based on the concept of a mixed economy in which both public and private investment have important roles. Through its Development Plan and through regulation of various economic activities (e.g., imports of raw materials and finished goods) the Government seeks balanced and mutually supportive growth of the public and private sectors. The way in which this strategy is implemented can be described in the following steps:

1) Industrial objectives and targets are defined by the appropriate Government planning authorities. This includes the estimation of the market size, or the likely demand for different items. Additional capacity requirements are defined by subtraction of existing capacity from the estimated demand. This work is usually done in GOFI and, in the case of building materials, in the Ministry of Housing. It should be emphasized that the Development Plan specifically recommends meeting capacity requirements through the implementation of large projects.
2) Public sector projects are identified and developed on the basis of Government priorities and available resources. The number and size of projects are restricted by the resources allocated to industry. The subsectoral distribution of these projects is mostly based on policy objectives and priorities as well as on determinations of

where private investment is least likely or desirable. Currently, most public projects are directed towards basic industries involved in the production of raw materials for infrastructural development, intermediate products, and essential consumer goods. Some industries, such as cement, steel, sugar, and spinning are restricted to the public sector, although in these industries some joint ventures with foreign companies are now being implemented.

3) Private sector investment is encouraged to fill the gap between what the public sector produces and the estimated market requirements except in those areas which are restricted to the public sector. In general, private sector investment projects are approved if GOFI agrees that the additional productive capacity is justified by market requirements. The projects must of course also meet other national objectives such as employment creation, technology transfer and foreign exchange generation.

4) Law 43 of 1974, as amended by Law 32 of 1977, is the principal policy instrument for stimulating the desired private investment. This law, which is further described below, provides fiscal and other incentives for the formation of <u>new</u> companies, both foreign and nationally owned. However, this law and its benefits does not apply to existing companies unless they are joint stock companies involved in projects which represent new capacity and which involve <u>new</u> cash equity from outside the existing companies. Because the joint stock company is not the preferred organizational form of most small entrepreneurs, Law 43 so far has had only limited success in stimulating the establishment of new SSE s. In order for an existing SSE which is not a joint stock company to take advantage of Law 43 provisions it must disband and reorganize as a joint stock company and, in addition, it must bring in a significant

amount of new equity capital. Given the difficulties associated with both these steps it is not surprising that very few SSE s have taken this route.

5) There are no explicit policy mechanisms for stimulating, supporting and directing the investment activity of non-Law 43 companies. These companies or SSE s, which are organized under Law 21 of 1958[1] represent almost all of the existing private sector. However, the Government has not developed any specific plans, policies or programs for integrating SSE investment into its overall plan for industrial development. The only exception is Law 59 of 1979 which grants special incentives to existing companies which relocate or expand in the new communities.

It is important to note that this lack of an explicit policy for SSEs is recognized by some Government officials. There appears to be a growing awareness that in order for a mixed economy to be successful, the public and private components must be integrated into a balanced whole which is consistent with Government objectives. It is also now realized that effectively integrating and balancing public and private sector activity will require that much more attention be focused on SSE s. This increased attention is perceived as taking the form of specific SSE plans and support programs, integrated sub-sector plans and programs, and new policy instruments. We believe that the growing interest in SSE s is also spurred by the belief by at least some officials that the Egyptian private sector could contribute to objectives such as employment, income distribution and geographic decentralization. A recent decision by the Ministry of Econ-

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[1] Although the company form of many of these firms is regulated by Law 26 of 1954, Law 21 of 1958 is specifically oriented towards the formation of industrial establishments.

omy to allocate a larger proportion of the Ministry of Industry's foreign exchange budget to the private sector for purchases of materials and equipment reflects this trend.

3. Laws and Regulations

The principal laws which affect private sector establishments are briefly reviewed below. These have been divided into two categories: 1) laws which regulate the formation, organization and registration of companies and/or projects; and 2) laws affecting the ongoing annual operations of these establishments. The focus of this review is to highlight the principal legal factors which affect SSE's.

a. Formation, Organization and Registration of Companies

Private companies in Egypt are established under one of two basic laws:

- Law 21 of 1958 for the Organization of Industry regulated the establishment of all industrial enterprises until Law 43 was enacted in 1974. Consequently, most existing manufacturing establishments are organized under this law. Primarily, Law 21 requires that a license be obtained from the General Organization for Industrialization (GOFI) for the formation, expansion or modification of any industrial enterprise . An application form must be submitted to GOFI for any industrial investment of over LE 8,000 which represents a new increase in productive capacity.[1] A license is issued if the national market is judged to warrant the additional capacity. Other factors are also considered. Once a license is issued, a company can proceed to secure any other additional required permits and approvals. Although many new companies choose to be established under Law 43, all companies that seek to expand and were originally established under Law 21 must still go through the Law 21 procedures.

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[1] Investments of under LE 8,000 can be approved at the Governorate level

- Law 43 of 1973 as amended by Law 32 of 1977, applies only to new companies which represent a net addition to Egypt's industrial productive capacity.[1] Thus, a factory which replaces an older one cannot be established under this measure. Law 43 provides fiscal and other incentives (which will be further discussed below) in order to encourage investment, both domestic and foreign, in new companies. Existing companies can spin off new projects under Law 43 only if they are joint stock companies and if the project involves the infusion of new cash equity from outside the existing company. Potential investors must submit an application to the General Authority for Investment and Free Zones which evaluates the project in terms of its economic viability and contribution to national objectives. The application is sent on to other organizations, such as GOFI, for technical evaluation and to insure that the proposed project conforms with estimates of national capacity requirements.
- Law 159 of 1981, or the New Companies Law on the regulation of Joint Stock, Limited Partnership and limited Liability Companies is one of the most important new laws.[2] The purpose of this new measure is to facilitate and encourage the formation of corporate and limited liability business forms. This could be of importance among SSEs since most have tended to be sole proprietorships or unlimited partnerships. The recently issued law defines the legal attributes of the three types of companies; defines the procedures for their foundation; describes the

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[1] Although the law is not limited to industry, this is the focus taken here.

[2] This law replaces Law 26 of 1954.

the rights and liabilities of owners and managers; indicates the rights of workers; and specifies administrative and management requirements. The provisions of the new law include the following key aspects (many of which are substantially different from previous laws): 1) a previous LE 5,000 limit on salaries has been eliminated; 2) a previous requirement that at least 25% of profits must be distributed to workers has been reduced to 10%; 3) a person may be a director of two companies under certain circumstances; 4) the law does not override any Law 43 provisions; 5) a previous requirement of four worker representatives on the Board has been removed although some worker role is still required. In general, the law simplifies the facilitates the formation of a company and provides greater flexibility in its structure and operation. Furthermore, the law should encourage a greater number of joint stock companies which is of great importance given the very small number (27) formed between 1962 and 1980. It is hoped that projects approved under both Law 21 and Law 43 will be established as corporate and limited liability companies under the provisions of Law 159.

- Law 34 of 1976, or Commercial Registration requires that all establishments (including Law 43 companies) register in the Commercial Register. This is done at the governorate or city level and must be repeated each five years. Smaller companies and partnerships pay a slightly lower fee than joint stock companies (LE 8 vs. LE 50).
- Law 24 of 1977 for Industrial Registration requires the Ministry of Industry to establish an Industrial Registry in which all firms with over LE 5,000 in capital or 10 employees must be included. Registration must be done in Cairo or by mail. Information

required includes basic data on the firm and owner as well as information on capital, labor, salaries and wages, government subsidies or assistance, products, raw materials, energy requirements, days of operation, shifts, etc. Other documents establishing good standing with the Federation of Egyptian Industries, GOFI, Investment Authority, and the Egyptian Organization for Standardization must also be enclosed.

b. Laws Affecting the Ongoing Operation of Companies

The laws described here are those which private companies must comply with on an on-going basis. These would include tax, labor, social security, import-export, and other laws. Again, a basic distinction must be made between companies established under Law 43 and the SSE s formed under Law 21. Law 43 provides a series of incentives which include:

- Exemptions from taxes on commercial and industrial property and on revenue from movable assets;
- Five year tax holidays from the inception of operations (or longer in a few specific situations) on corporate income taxes;
- Exemptions from rent controls;
- Exemptions from the requirements for labor representation in management;
- Greater flexibility in hiring, including the exemption from having to hire through district Manpower Departments;
- Exemption from requirements for distribution of profits among workers;
- Greater flexibility in maintaining foreign exchange accounts; and,
- The ability to import without licenses.

All these special incentives apply to Law 43 companies regardless of the provisions of other laws. Hence, the laws which are reviewed below apply primarily to Law 21 companies. Law 43 companies must comply with these laws unless there are specific provisions in Law 43 which override them. Among the most important of these other laws are:

- Law 25 of 1979 for the Development of New Communities provides the only way for Law 21 companies to enjoy the same type of benefits as Law 43 companies. This law grants the following benefits to non-Law 43 companies that are established in one of the new communities:
  - Exemption from custom duties on materials equipment;
  - Exemption from taxes on commercial and industrial and industrial profits for a period of 10 years;
  - Exemption from all other taxes on income resulting from tax holiday on commercial and industrial profits; and
  - Exemption from taxes on all contractors, subcontractors and consultants involved in the project.
- Law 137 of 1981, or Labor Law, replaces all previous labor legislation. Among its important sections is the requirement for registration by all workers "capable and willing" to work in district offices of the Ministry of Manpower and Training. Only registered workers can be employed. Furthermore, employers must notify these offices of all vacancies and give first priority to candidates suggested by the Manpower offices. Other sections of the law regulate labor relations, employee rights, dismissal procedures, collective labor negotia-

tions, layoffs and worker cutbacks, and safety provisions. Of great importance are the provisions which make it difficult to fire permanent workers, while temporary workers can be more easily dismissed.

Unlike most other laws, several aspects of the Labor Law make distinctions between different sized firms. For example:

- Firms with over 5 employees must post all work regulations.
- Firms with over 50 workers must establish Joint Consultative Councils (with 50% labor representatives) to consider work conditions, productivity improvements, labor relations, etc.
- Establishments with over 50 employees must have a full time nurse and part time doctor, while those with over 300 employees must offer a full range of medical specialists and facilities.
- Companies with over 15 employees must report all cases of illnesses and accidents to the Manpower Department;
- Firms with over 50 employees must provide "cultural" activities;
- Establishments with over 50 female workers must provide a full year off (up to three times) for child-raising, while those with over 100 females must maintain a full-time nursery.

- Law 157 of 1981, or Tax Law, reforms the individual and company tax regime, but only the latter is briefly touched on here. The Industrial and Commercial Profit Tax applies to the net profits of all enterprises, including one-person establishments. The basic tax rate (after deductions) is 20% on the first LE 1,000; 23% on the following LE 1,500; 27% on the following LE 2,000; and 32% on all profit over and above LE 4,500. The tax declaration

must be accompanied by a copy of the operation and trade account, a balance sheet, and a statement of the accounting priciples used.

Provisions related to size of firm include:

- Employers of 50 or more people must declare the number of employees, and indicate the names, salary and taxes withheld for each one;
- Firms with a profit of over LE 5,000 or revenues of more than LE 50,000 must present books with an auditor's declaration of approval; and all firms with capital of over LE 10,000 must maintain books regardless of profit or revenues;
- Individuals or partners can claim exemptions of LE 720 for a single person, LE 840 for one dependent, and LE 960 for two dependents;
- Partners (in partnerships) are personally liable for taxes in proportion to their ownership of the firm.

- Law 93 of 1980 and previous laws regulate Social Security and Social Insurance. This law outlines the different programs such as Old Age, Invalidity, and Death Insurance (GASDI), Work Injury Insurance, Sickness and Maternity Insurance, Unemployment Insurance, Employers and Self-Employed Social Insurance, and Social Security for Other Members of the Working Population. The coverage and funding of each program is described in the law. No specific provisions are made for smaller scale enterprises.
- Code of Commerce and Related Laws. The Code of Commerc is of importance in that it defines a merchant as anyon involved in selling of goods, including manufacturers. It also defines different types of companies and stipulates that all companies must maintain: a journal recording all financial transaction; a stock book recordi

end-of-year inventory; and all business correspondence. Laws related to the Code of Commerce include 55/1951 Governing Trade Names; 48/1949 amended by 153/1949, and 80/1961 dealing with Fraud and Deceit; 132/1949 regarding Patents and Industrial Drawings and Designs; 56/1945 regulating rescheduling of debt or other arrangements; and 57/1939 amended by 205/1956 and 65/1959 Governing Trade Marks and Specifications. These Laws generally regulate business practices and have no special provisions for smaller enterprises.

- Law 118 of 1975 and Ministerial Decree 1936 of 1976 regulate exports and imports. Both private and public sector companies are allowed to import and export within certain limitations established by these legal instruments. Private sector imports are not allowed from countries with which Egypt maintains a bilateral "Trade and Payment Agreement." Furthermore, import permits must be obtained by all private companies except for those established under Law 43. Two types of import permits are recognized:
  - If a company does not have its own source of foreign exchange, and must draw upon the foreign exchange budget allocated by the Government for the private sector, it must apply to the inter-Ministerial Private Sector Purchasing Committee for a license to import all materials and equipment;
  - If the company has its own source of foreign exchange (e.g., from exports), an import license must be obtained from the "Facilities Committee".

  All companies, except for these approved under Law 43, must present an import license in order for a bank to open a letter of credit for payment of the item to be imported.

Exports also require licenses, although again Law 43 companies are exempted. Furthermore, the exporting company must be inscribed in the Exporters Register or must use a registered firm as an intermediary. Export licenses for manufactured goods are usually issued by the Industrial Control Department affiliated to the Ministry of Industry.

- Foreign exchange regulations are currently being modified. However, Law 97 of 1976 and Ministerial Decree 316 of 1976 regulate foreign exchange accounts in commercial banks. All foreign exchange transactions must be conducted through banks and monitored by the Central Bank. As noted, imports cannot be paid for by the banks without an import license. Exporters can open special accounts with their foreign exchange earnings, but this must be spent within three months (e.g. for imports) or the foreign currency must be sold to the Central Bank. Earners of foreign exchange in the service sector (e.g. tourism) can only set aside 50% of their foreign currency in special accounts.

4. Implications for SSE s

The principal conclusions which can be derived from the above revie of the policy and legal environment are the following:

1) The Government's policies and planning regarding industry emphasize the predominant role of public sector enterprises. Private sector investment is also encouraged in order to complement the public sector activities and help realize a balanced and integrated mixed economy. However, the principal conclusion here is that Law 43 is the principal mechanism for encouraging and directing private investment. Since this only applies to certain new companies, most existing private enterprises are not included. There is no explicit policy framework for supporting and directing SSE activity. Despite the growing realization of the need for

such an explicit policy framework, the current situation regarding SSEs is one of "benign neglect".

2) Law 43 companies benefit from a number of special incentives which are not available to Law 21 companies or SSEs. Not only do these incentives give Law 43 (new companies) a competitive advantage over Law 21 (small and existing) companies, but in effect this situation represents a form of discrimination against SSEs. The only way for Law 21 companies to enjoy similar benefits is to relocate in one of the new communities.

3) Despite the lack of an explicit policy framework supportive of SSEs and the lack of any special incentives, we have found individual SSEs to be dynamic and growing. However, a policy framework for SSEs is needed in order to increase the growth of the sector's output to the level required by national needs and to effectively integrate SSE activity with public sector and Law 43 company industrial production. The present institutional environment imposes constraints on what SSEs can do but exerts no leadership to channel the profit seeking energies of small entrepreneurs into socially desirable directions consistent with national objectives. An integrated approach in which leadership is exerted within the context of a clear and supportive policy framework is needed in order to realize the latent potential of the SSE sector to make a major contribution to Egypt's economic and social development.

4) Private sector enterprises in Egypt operate in a heavily regulated and restrictive environment. Companies with over LE 8,000 in capital, which includes almost all manufacturing establishments, must deal with a large number of Government agencies and institutions, each of which administers its own set of regulations. This regulatory environment is graphically shown in Exhibits 1 and 2. The first shows the complexity of establishing a company or of approving a project. The second illustrates some of the ways in which existing companies must regularly interact with Government institutions. Not only does the total impact of these regulations

EXHIBIT 1

Procedures for Establishing or Expanding a Company

Law 21 Companies

1. Application completed and sent to GOFI.[1] (Data requested includes: location, ownership equipment, production, financial structure, etc.)

- Reviewed by Licensing Department
- Further information requested if necessary.
- Evaluated by Technical Departments.
- Recommendation sent to Licensing Committee
- Signature by Ministry of Industry (Delegated to Deputy Chairman of GOFI).
- License issued by Licensing Department.
- Copies sent to Ministry of Housing and Industrial Control Dept. (Ministry of Industry).

Law 43 Companies

1. Application sent to Investment Authority.[1]

- Reviewed and additional information requested.
- Evaluated by Technical Departments.
- Evaluated by GOFI or other Ministri
- Recommendation to Technical Committ
- Project signed by President or by Chairman of Authority (Minister of Economy).

All Companies

2. Building and Site permits from Ministry of Housing.
3. Electricity permit from Ministry of Housing and Ministry of Electricity.
4. Permit to import raw materials or request for allocation of public sector produced raw material from Industrial Control Department.
5. Approval of price from Industrial Control Department. (Law 21 only).
6. Equipment and materials import permits (Law 21 only).
7. Commercial Registration at Ministry of Supply.
8. Industrial Registration at Ministry of Industry.
9. Registration at Federation of Egyptian Industries.
10. Registration with Social Insurance authorities.
11. Registration with Taxation Department (Tax Card).
12. Notification of Manpower Department regarding job vacancies.
13. Quality seal from Standardization Department (if required).
14. Inscription in Exporting Registry.

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1 Each of the points below (•) is a control point where the project can be rejected or sent back for revising.

EXHIBIT 2

Periodic Reporting or Approved Requirements for Law 21 Companies

Action by SSE	Institution
• Notification of job vacancies	• Manpower Dept. (Ministry of Manpower & Training)
• Submission of annual employment report	• Manpower Dept.
• Submission of labor contracts	• Social Insurance Authority
• Request for worker dismissal	• Manpower Dept. Committee
• Semi-annual reports on illness and accidents	• Manpower Dept.
• Submission of regular reports on minors employed	• Manpower Dept.
• Declaration of taxes (including balance sheets, statements, etc.)	• Taxation Dept. (Min. of Finance)
• Statement of employees and wages	• Taxation Dept.
• Remission of withheld taxes	• Taxation Dept.
• Regular reports on final prices (when required)	• Industrial Control Dept.
• Semi-annual report on production, employment, etc.	• Industrial Control Dept.
• Request for permits to import raw materials and equipment	• Private Sector Purchasing Committee or Facilities Committee
• Request for quota of public enterprise - produced raw materials	• Industrial Control Dept.
• Request for permission to import equipment	• GOFI
• Submission of samples for quality control (selected items)	• Standardization Dept.
• Request for permission to export	• Industrial Control Dept.
• Report to Industrial Registry (every 5 years)	• Ministry of Industry
• Re-registration (every 5 years)	• Commercial Registry

tend to represent a disincentive for the formation or expansion sion of companies, but full compliance represents a heavy burden on the limited resources of an SSE. Although many of the requirements are reasonable, the problem is the large number of different institutions involved and the time consumed in meeting all the legal obligations.

5) Since the formal legal system involves extensive regulations and requirements while providing SSE s with few benefits in return, we believe that there is fairly extensive evasion. Although the extent of this evasion is difficult to document, some examples which were found during field visits or which were cited by other sources include:

- The failure of a significant number of companies to legally establish or register themselves.
- Use of undocumented child labor (under 12 years of age) in violation of the total prohibition of the use of children.
- Evasion of compliance with restrictions on adolescent labor (12 - 17 years of age) such as the requirement for job cards approved by District Manpower Departments.
- Maintenance of mirimal or misleading financial accounts which in turn adversely affect the ability to manage effectively or to obtain credit.
- Bribery or deception of tax collectors, labor, social insurance and health inspectors, quality control and price control inspectors, and other enforcement officials.
- Transfer of assets to close relatives to avoid tax collectors and actions by creditors.
- Restricting formal (declared) employment to a maximum of 49 to avoid the requirements for establishing joint labor management councils and for more complex tax declarations in firms with over 50 employees.

- Claiming less than 10 employees or LE 8,000 in capital in order to avoid industrial registration and compliance with all other regulations associated with manufacturing establishments.

6) In our judgment, the existence of an "informal legal system", and the evasion of the official legal system as described above, has a number of important implications for SSE s. First of all, many smaller companies seek to remain "underground" and unrecognized by the Government. This action results in a significant understating of the importance of SSE s in economic data and consequently in Government policy making. Until the true size and importance of SSE s is recognized, Government policy is unlikely to chann the needed level of attention and resources into this area.

A second major implication is that the management of SSE s is adversely affected. By avoiding or distorting their financial accounting SSEs cannot make effective us of management tools such as cash management, inventory control, and cost control. Furthermore, these practices make access to credit much more difficult.

Third, labor productivity is adversely affected by efforts to avoid the labor laws. Companies use "temporary" workers apprentices, and children or adolescents in order to avoid the strict stipulations of the Labor Laws regarding permanent employees. Such employers thus have little interest in long term training programs, and turnover of personnel tend to be very high.

A fourth implication of "underground" SSE s is that, becaus they are unable to provide all of the necessary documentati it becomes very difficult for these firms to take advantage of official support programs and to obtain credit. Many are afraid to come into contact with these Government related institutions.

Finally, it appears that this situation makes communication and cooperation among SSE s more difficult. Firms that are outside of the formal legal system are likely to want to keep this fact as private as possible.

7) There is almost universal adherence among SSE's to the sole proprietorship or unlimited liability partnership forms of business. Corporate and limited liability forms are avoided, since the latter involve more extensive and complex reporting and regulation. Consequently, when SSEs expand, the formation of a separate sole proprietorship or partnership, frequently in the nominal control of a close reglative, is the usual action taken instead of conversion into a joint stock or limited liability corporation. Although the new Companies Law of 1981 is expected to make corporate forms more attractive, it is not clear yet whether these changes make this form more attractive to SSE's.

B. SUPPORT INSTITUTIONS

1. Introduction and Overview

While the previous section focused on the regulatory aspects of the institutional environment, the purpose of this section is to review ways in which SSE s are either promoted or supported by non-financial institutions. The special case of financial intermediation is taken up in the next chapter.

Before describing the specific institutions that support and promote the private sector, and SSE s in particular, it is necessary to assess the overall climate in which these institutions function. The following principal observations can be made:

1) Government organizations tend to be regulators in their orientation rather than promotional. In part, this reflects the heritage of the pre-Open Door Policy period where the economy was very closely regulated. Since then, Government policy has encouraged the development of the private sector, but under the continued

supervision of Government regulators. Hence, the principal institutions responsible for the industrial sector, namely the Ministry of Industry and its affiliates, such as GOFI and the Industrial Control Department, are primarily regulating organizations. Even the principal institution established to administer Law 43--The General Authority for Investment and Free Zones, dedicates most of its resources to regulatory rather than promotional activities. While the processing, analysis and follow up of applications to the Authority represent the bulk of of its work, investment promotion is a minor department and private sector support is virtually non-existent.

2) The lack of an explicit policy regarding SSE s implies that little attention and resources are dedicated to supporting them. This is manifested in the Five Year Plan where no specific SSE related support programs are mentioned. In fact, the Plan specifies that industrial development strategy is to be centered around the support of large enterprises. Hence, potential support institutions such as the Investment Authority tend to emphasize large projects.

3) Since the Government does not generally recognize SSE's as being a distinct category of industrial establishments there are no institutions (with the possible exception of the Development Industrial Bank) which are oriented towards SSE s. This means that there is no Ministry or Authority for establishing, administering and coordinating SSE support programs, or even for advocating SSE s within the framework of overall Government policy making and planning.

4) Despite these aspects of the institutional environment, there are a number of institutions which provide some level of support to both the private sector in general

and SSE s in particular.

These include:

* The Federation of Egyptian Industries represents all industrial establishments (including public sector) with over 25 employees and/or LE 5,000 in capital. It is organized into 12 industrial chambers which work to promote the interests of their members. The extent to which the private sector and SSE s are assisted varies by chamber .
* The Engineering and Industrial Design Center, affiliated with GOFI, is charged with providing engineering and technical support to industrial companies. Recently there has been increasing emphasis on supporting small companies.
* The National Research Center is the major Government facility for basic and applied research in the natural sciences, but its involvement with SSE s has been minor.
* The Egyptian Organization for Standardization, also affiliated with GOFI, has responsibility to improve and maintain the quality of manufactured products. It has no special programs directed towards SSE s as such, although it interacts with many individual SSE s.
* The Engineering Department of Cairo University provides a resource for possible assistance to SSE s which has as yet not been tapped in an organized way.

Profiles of Support Institutions

a. Federation of Egyptian Industries

The Federation of Egyptian Industries (FEI) is the coo dinating body for twelve Chambers of Industry which re resent firms in different fields of Industry. Any fir public or private, employing 25 or more workers or hav LE 5,000 fixed capital investments is required by law join the appropriate Chamber. Annual fees are assesse

member firms based on their size, and may range from LE 25 to LE 2,000. In 1980 the total membership of the chambers was about 6,200 with 300 public firms. The affiliated chambers are as follows: spinning, weaving and finishing; food; cereals; chemicals; metallurgical; engineering; building and construction; petroleum, mines and quarries; woodworking; leather; printing; binding and paper products; cinema. The last two chambers are not within the industrial sector as defined in this study. Each chamber has a Board of Directors comprised of 15 members serving for 3 year terms, two-thirds of whom are elected from member firms and the remaining one-third appointed by the Ministry of Industry from among those working in member firms of that industry.

The FEI is administered by a Governing Council composed of one member elected from each of the twelve chambers and nine members appointed by Government. The latter group includes a part-time Chairman, usually a prominent industrialist. Reporting to the Chairman is a full-time Director General who has under him a staff of about 50. Although they are employees of the FEI this staff has the same pay scale and terms of employment as Government employees.

The Chambers of Industry and the FEI were created during the nationalization period to assist to GOE's planning by determining the capacity of industry to produce different products and by quantifying the materials requirements needed for this level and mix of production. Today this function of data gathering on industry capacity and materials needs still goes on but reporting to the GOE is made only on the needs for materials which are in critical supply. At present most of the Chambers and the FEI appear to concentrate primarily on the private sector, presumably on the assumption that the public sector firms are being taken care

of by the various ministries under which they operate. The range of current FEI activities is reflected by the titles of the operating divisions supervised by the Director General: Office of the Chairman technical and economic studies; industrial relations; foreign relations; industrial information; legal affairs; public relations.

Interviews with individuals familiar with the staff work of the FEI indicate that, for the most part, the staff do not have the capability to make studies of any substantial analytical depth or breadth. Thus, the Chairman and the Council do not have available the quality of staff support needed for in-depth analyses of the SSE sector and the development of policy guidelines to enhance growth of the sector. The intelligence and experience of a part-time Chairman and Council can be utilized only when challenged by first rate staff work which clearly identifies the issues and the alternatives for policy and action.

Each Chamber is concerned with the problems of its industry and its member firms, both on the technical and economic sides. The quality of Chamber activity appears to vary among the Chambers. Such variation is consistent with the experience of voluntary industry associations in the U.S., where the value to the member firms appears to depend not only on the general state of the industry (e.g., declining or growing) but also on the capability of the general manager of the association. In the interview program very few firms indicated that they directly benefited from the activit of their Chamber or from the FEI, or indicated they thought the FEI was active in support of small industry

However, it appears that some of the most active and effective Chambers are those responsible for industries where the private sector and SSEs play an important role (e.g. Engineering and Leather Products).

Despite the fact that the FEI does not now exert a leadership role with respect to the development of small scale industry, it appears to be positioned such that it has the particular combination of access to specific information sources and to individual firms needed by any body attempting actively to help the SSE sector. It also has the characteristic that it is the only existing official meeting ground for all of the public sector firms and all but the smallest of the private sector firms, and thus is a logical avenue for dialogue between these two components of Egypt's mixed economy.

Whether or how the FEI might be able to develop a leadership role in the growth of the SSE sector is an open question. It is clear, however, that a major increase in staff capability would be a necessary condition for such a leadership role.

Engineering and Industrial Design Development Center

The Engineering and Industrial Design Development Center (EIDDC) is an independent organization affiliated to the General Organization for Industrialization (GOFI) of the Ministry of Industry and Mineral Wealth. The general policy and direction of work is set by a higher Administrative Committee which is chaired by the Deputy Minister in charge of GOFI. The execution of policy and the management of EIDDC is in the hands of the Director General who is also a member of the Higher Administrative Committee. Funds for operation are provided through the Ministry of Industry budgetary process. EIDDC also receives funding from international agencies for specific program purposes and earns some income from services rendered.

The EIDDC has about 430 employees, including about 60 engineers, 40 draftsmen, and many skilled technicians as well as administrative and support personnel. The technical capabilities of this staff are organized into the following ten technical divisions: Product Design and Development, Industrial Design, Capital Goods Equipment Design, Process Design, Production Technology and Tool Design, Workshop for Manufacture of Prototypes and Special Tools, Heat Treatment and Materials Test, Training, Documentation and Information, and Small Scale Industry. It has a schedule of short training programs specialized technical courses for both skilled labor and design level individuals which draws applicants from a number of other countries.

Up until two or three years ago the EIDDC worked mainly with larger companies and, perforce, this meant that it mostly served public sector companies. In the last few years there has been increasing concentration on

building up of support and services to small companies, which are in the private sector and are not assisted in their growth by any other direct government support programs. This assistance has included collaboration with small enterprises in the design of consumer durable goods such as washing machines and water heaters and helping these firms prepare the information needed to obtain GOFI's approval of a project.

In 1979 the World Bank made a loan of $50 million to the Development Industrial Bank with the condition that the DIB would increase the percentage of its overall lending which goes to small scale industry. Attached to this loan was a sum of $250,000 plus LE 100,000 to be used by the EIDDC to develop a pilot project extension service program which would provide technical assistance to small enterprises receiving DIB loans. A five person group including an ILO expert in SSE extension service was organized under the leadership of a senior EIDDC staff member. The group has been in operation for about eighteen months and, in the view of the ILO expert, their experience has demonstrated the utility and feasibility of a larger scale effort. The World Bank has just approved another loan of $120 million to the DIB and has attached a sum of $1,500,000 plus LE 500,000 for expanding this technical assistance service of the EIDDC. The LE 500,000 is to be matched by the Ministry of Industry to provide a total of LE 1,000,000 to finance the transportation and other field costs of six extension teams.

In October of 1981 USAID and the Ministry of Finance signed an agreement which will provide $10 million over a period of 5 years for the creation of an Industrial Technology Application Program (ITAP) at the EIDDC. The obje of this program is to develop an institutional mechanism

for getting technical information into the hands of Egyptians who need and will use the information. The existing capabilities of the EIDDC, including in particular its existing Documentation and Information Division and its growing technical assistance extension service, were factors in making the EIDDC the logical institution to undertake ITAP.

Summing up, the EIDDC is an important resource base for assisting the growth of small scale industry. Although its focus thus far has been mainly on the mechanical field to the exclusion of electrical, electronic, chemical, and metallurgical engineering, this is an imbalance which can be corrected through changes in the composition of its staff and facilities as these other fields become more important to the Egyptian economy. Also, as with all institutions which venture to try new approaches, not all of its divisions have found viable roles. However, these matters are not significant in relation to EIDDC's positive capabilities, not least of which is its capable and dynamic leadership.

National Research Center

The National Research Center (NRC) is the major Government facility for basic and applied research in the natural sciences. Although it is nominally under the supervision of the Academy of Scientific Research and Technology, the NRC enjoys considerable autonomy of action in both program and budgetary matters. Founded in 1956, the NRC is located in Dokki where it has its principal laboratories, pilot plants, support facilities, and administrative offices.

In addition to its broad research program covering many fields of pure science, the NRC has several activities

in applied science which might be of help to small manufacturing enterprises. Among these are industrial research in several fields, mostly in materials and in processing, and academic and applied research in chemical, electrical, electronic, and mechanical engineering.

Although the NRC has not sought applied research work from small enterprises, because of the importance of the small scale industry sector to growth of the economy the NRC considers assistance to this sector as within its province of responsibility, where such assistance cannot be provided by other public institutions such as the Engineering and Industrial Design Development Center. About half of NRC's work is now funded by clients, some of them industrial, which engage it to carry out research programs. Thus, the NRC has developed administrative mechanisms to accommodate small applied research projects from individual enterprises.

1. Egyptian Organization for Standardization

The Egyptian Organization for Standardization (EOS) is a unit within the General Organization for Industry (GOFI). EOS has three functional responsibilities; (1) to establish standard specifications for products in all industrial sectors; (2) to control the quality of industrial products produced in Egypt to assure that they meet the standards for their particular grade; and (3) to maintain measurement standards and to calibrate measurement equipment against these standards. In addition, the Quality Control Center, affiliated to the EOS, was established in 1970 to inspect all exports and to help improve the quality of these products.

An effective standards organization is essential to development of an industrial sector since it provides an effective means through which firms unknown to one another can do business with confidence that the products exchanged will meet certain objective specifications. The EOS was established 25 years ago and over this period has developed a set of standards which meet Egyptian needs and are correlated with international standards to as to facilitate export and import trade. As is the case in all countries, Egyptian standards are under continuing surveillance for changes needed to accommodate developments in manufacturing techniques and processes.

The EOS has a staff of 800, about half of which do laboratory work with the remainder in administration, technical inspection and quality control. In addition to its laboratories, the EOS has quality control centers where products can be taken for inspection. The EOS also sends inspectors to factories where the products must undergo mandatory inspection because of public health and safety considerations. The EOS certifies a company after it ascertains thatthe company's manufacturing methods produce the desired quality of product, and thereafter inspects products in the factory by testing samples from each batch. About 500 companies have been granted certification and their products carry a mark of certification.

Broadly speaking, the standards situation in Egypt is better organized than in most countries which are at Egypt's stage of industrialization and, as a consequence, the EOS has the potential to support the small scale enterprise through several avenues. For example, it could help small enterprises to establish good measure-

ment techniques and standards, it could run training courses in standardization, it could test raw materials to verify that they meet standards, and it could suggest where changes in standards may reduce the cost of the product or increase its quality. However, in order to deliver this potential to several thousand small enterprises EOS will require a well organized outreach program.

e. Engineering Department of Cairo University

The Engineering Department of Cairo University has a well trained faculty consisting of approximately 120 professors, 90 assistant professors, and 150 lecturers. A large proportion have earned advanced degrees abroad and many are actively engaged in research. About 25 of them are working on Egyptian technological problems in collaboration with faculty of the Massachusetts Institute of Technology under the USAID-funded Technological Planning Program.

For some of the technical problems faced by SSEs this faculty may represent the only source of technical expertise available within Egypt. Assistance could be provided through direct consulting arrangements between individual faculty members and SSEs. It is possible, also, that technical problems which are common to many SSE s in a given industrial sector might be taken on by a group of faculty under a research contract arrangement between Cairo University and a group of interested SSEs or one of the Industry Chambers of the FEI.

f. Vocational Training Department, Ministry of Industry

Under this department the Ministry operates a large vocational training program with some 60 training centers. Most of these centers have a common core of training and differ from each other by providing addi-

tional training in some specific field such as mechanical technology or textiles. Three general types of training courses are provided:

- Apprentive training which consists of one year of training in a center and two years in a factory;
- Upgrading training which consists of short special courses dealing with a specific area, often at the skilled worker level;
- Accelerated training of individuals who know little more than how to read and write.

The relatively limited number of graduates (about 5,440 in 1977) is almost entirely employed by the public sector. These centers do not seem to be meeting the extensive SSE requirements for skilled labor. There are no outreach programs specifically aimed at the small scale sector, but there is no inherent barrier to the development of such programs.

g. Other Educational Support Programs

Primary education, provided by the Ministry of Education, is compulsory. Although about 85% of all children are estimated to attend school for at least one year, the effectiveness of primary education is still limited. For example, the 1976 Census indicated that about 36% of all children between the ages of 10 and 15 are illiterate. The Census also estimated that about 56% of all production workers in the private sector are illiterate.

Secondary education is divided into from basic bank programs, general education (for those interested in going on to university), and industrial, agricultural and commercial education programs. The industrial education program consists of about 125 schools

oriented toward training skilled and semi-skilled workers. In 1979-80, almost 140,000 students were enrolled in these industrial schools while the 1980 graduates numbered about 39,000. However, it is estimated that SSEs alone require at least 50,000 skilled and semi-skilled workers annually.

Management training is provided by the Sadat Academy for Management. This institution offers courses to public and private sector managers. However, most of the emphasis to date has been on the public sector. In part, this reflects the fact that SSEs cannot afford the luxury of committing scarce management personnel to these courses. Furthermore, field interviews indicate that SSEs neither perceive the need or the effectiveness of management training.

3. Implications for SSEs

Our principal conslusion is that the support environment in Egypt for the non-Law 43 private sector and for SSEs is relatively weak. This condition originates in both the heavy regulatory (rather than promotional) orientation of Government institutions and the lack of an explicit support program for non-Law 43 private and small scale establishments.

Ideally, SSEs in Egypt would be supported in the following areas:

- Advocacy in policy making;
- Credit/financial support;
- Technical assistance and training services;
- Information and advisory services;
- Marketing support;
- Procurement assistance.

The review of existing support institutions indicates that SSEs can at best count on limited support in most of these areas. More specifically:

- Advocacy of SSEs in terms of a high level organization which represents SSE interests in Government policy making, as well as in the development of support programs, is entirely lacking.

  The FEI's structure suggests it has potential to be a valuable component of such a high level advocacy and planning organization.
- Credit/financial support, as will be discussed in the next chapter, is relatively limited. Only the DIB, among formal financial institutions, attempts to reach SSEs. Private banks are almost entirely oriented toward large projects.
- Technical assistance is very limited although improving through the work of the EIDDC. The capabilities of other institutions should be exploited to complement EIDDC's work. Ways of providing both technical and managerial training to SSE personnel should be developed.
- Information and advisory services available to SSEs are substantially non-existent. There are no adequate sources of information on markets, technology, credit, export opportunities, etc., or adequate mechanisms for disseminating such information.
- Procurement of raw materials and equipment is partially facilitated through a Ministry of Industry allocation of foreign exchange for private sector procurement, as well as through bilateral agreements. However, it is not known to what extent SSEs benefit. Furthermore, there are no support institutions except those which administer regulations for imports and procurement permits.

In conclusion, SSEs are generally left to fend for themselves in the areas outlined above. This lack of support, or even of interest in supporting SSEs, is in sharp contrast to the extensive regulatory apparatus described in the previous section. Both the overall climate

in which SSEs are largely ignored, and the relative absence of support institutions from which to build upon, are matters of particular concern.

Furthermore, the fact that most existing support institutions are associated with Government organizations, mostly regulatory, raises questions about their effectiveness. We have found SSEs to be suspicious of the intentions of Government support efforts, apparently because of concern that involvement could lead to problems with regulatory organizations.

The lack of self-help or participatory organizations also is striking. For example, there appear to be few cooperative efforts initiated by SSEs for marketing and procurement. Only the FEI regularly involves its members in its activities. However, the extent to which the Chambers are active or SSE oriented varies considerably.

VI. FINANCIAL INTERMEDIATION

A. INTRODUCTION

In this chapter, we review and assess the banking and financial sector which represents a critical component of the institutional environment for SSEs. The purpose of the chapter is to describe the structure and performance of the banking sector in order to assess whether it is providing SSEs with the necessary financial support. The focus here is only on the banks and financial institutions which have or could have some relation to manufacturing companies.

The chapter is divided into four parts:

- A review of the banking industry structure which identifies different types of financial institutions and their relative importance;
- A profile of the Development Industrial Bank and its SSE support program;
- Banking industry lending practices; and
- Implications for SSEs.

B. INDUSTRY STRUCTURE AND COMPOSITION

1. Overview

The Central Bank of Egypt heads the banking sector which is composed of both private and public sector institutions. Most of the private banks are organized under Law 43 and can be categorized as being either commercial or investment.

The commercial banks are those which engage in regular banking functions such as mobilizing short term deposits and providing short term credits. Investment banks provide long term credit or take equity positions. The investment banks were created in order to promote the "pooling and promotion of saving for the sake of investment in accordance with economic development plans and policies". An investment bank which operates so as to sacrifice some degree of profitability in order to achieve development objectives is called a development bank.

There are 12 private commercial banks and 25 private investment banks currently operating in Egypt.

Public sector banking in concentrated in four commercial banks and one development bank (The Development Industrial Bank). In addition, there are a number of specialized banks which serve to channel resources into specific sectors (e.g., agricultural banks, housing banks, etc.); these are not considered in this report. It should also be noted that the public sector has an equity position in several of the private investment and development banks, but these are always considered to be private banks.

The following tables provide an overview of the relative importance of public and private sector banks, as well as the distribution of the loans outstanding from private banks. These tables show that:

1) Public sector banks are the dominant financial intermediary with 76% of total deposits and 83% of total loans as of December 31, 1980.
2) Private sector companies account for only 11.4% of public sector commercial bank deposits but have 22.4% of loans.
3) Public sector commercial bank loans are largely channeled to partnerships (36.8%) and Law 43 companies (36%) while sole proprietorships receive only 19.3%.

In addition, we believe that most of the lending by Law 43 banks is to stock companies also organized under Law 43.

These principal conclusions are supported by the data presented below:

1) According to the Central Bank of Egypt, public sector commercial banks are the dominant financial intermediary with 76% of total deposits, and 83% of total loans as of December 31, 1980.

	Law 43 Banks			Public Banks	
	Invest. Banks	Commercial	Sub-Total	Commercial	Total
Loans (LE Million)	443	725	1,168	5,903	7,071
Deposits (LE Million)	670	1,151	1,821	5,754	7,575
% Loans	6.3	10.2	16.5	83.5	100.0
% Deposits	8.8	15.2	24.0	76.0	100.0

2) At March 1980 the private sector accounted for 11.4% of public sector commercial bank deposits, and 22.4% of outstanding commercial bank loans as follows:

	Deposits		Loans	
	LE Million	%	LE Million	%
Public Sector Companies	1,612		1,327	
All Other Public Sector	1,253		1,611	
Subtotal Public Sector	2,865		2,938	
Total Private Sector	670	(11.4%)	903	(22.4%)
Families Sector	2,143		164	
Others	203		24	
Total	5,866		4,028	

3) At this same time analysis of private sector loans outstanding at public sector commercial banks, according to the organizational form of the borrower, showed:

	Private Sector Loans Outstanding (LE Million)	% Total of Private Sector Loans
Partnerships	332	36.8
Sole Proprietorships	174	19.3
Subtotal	506	56.1
Investment Law 43 Companies	325	36.0
Other Companies	60	6.7
Cooperative Societies	11	1.2
	902	100.0

Thus, partnerships and individual firms are the predominate private sector borrowers. As of this date private industrial borrowers accounted for only 22.7% of public commercial bank credit, but the amount of such credit had been increasing in the following way:

	Public Commercial Bank Loans to Individuals, Partnerships (LE Million)	Increases (LE Million)	% Increase
December 1978	220		
December 1979	461	241	109%
March 1980	506	45	10%

Available statistics do not permit detailed analysis of the source and use of credit by the private industrial sector or by the various manufacturing industries.

4) It is interesting to note that public sector commercial banks were extending loans of LE 325 million to Investment Law companies. We have been unable to obtain a breakdown of the outstanding loans at Law 43 banks as between private and public company borrowers. It is our judgment that the business of these banks is heavily weighted toward Law 43 companies. Based on this assumption, we estimate private sector institutional credit in use as follows:

USE OF CREDIT

(LE Million)

Source	Partnerships Individual Firms	Investment Law 43 Companies
Public Sector Commercial Banks*	708	478
Law 43 Banks	-	1,168
	708	1,646

The recent growth in importance of Law 43 companies in combination with their acquisition of new plant and equipment would be expected to impact on bank borrowing statistics. However, we view the above distribution of institutional credit as quite surprising.

2. Regulation

The structure and orientation of the banking sector is greatly affected by Government regulation. Until Law 43 of 1974, the banking sector was entirely nationalized. The structure of the banking sector was further clarified by Law 120 of 1975 regarding the Central Bank and Banking System. This law distinguished between investment and commercial banks, as well as between public and private sector banks.

The law also stipulated that only banks with 51% Egyptian ownership could operate with local currency, thus suggesting that only those banks could effectively take equity positions.

Both interest rates on loans and interest paid on deposits are regulated by the Central Bank and such regulation appears to have provided the banking industry with a favorable gross interest margin, or "spread' in recent years:

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* ADL estimate based on March 30, 1980 percentage of total loans outstanding.

Period	Maximum Loan Rate	Interest Paid on Savings Deposits	Interest Paid on 3-6 Month Certificates	Gross Interest Margin	
				Savings	3-6 Month Certificates
May 1962-Dec. 1975	7.0	2.4	1.8	4.6	5.2
Jan. 1, 1976	8.0	4.0	4.0	4.0	4.0
March 1, 1977	9.0	5.0	4.0	4.0	5.0
June 17, 1978	11.0	5.0	5.5	6.0	5.5
Jan. 1, 1979	12.0	6.0	6.0	6.0	6.0
April 1, 1980	13.0	7.0	7.0	6.0	6.0
June 1, 1980	14.0	8.0	7.5	6.0	6.5
Jan. 1, 1981	15.0	8.5	8.5	6.5	6.5
Aug. 1, 1981	15.0	8.5	8.5	6.5	6.5

A complete analysis of interest rates is attached as Exhibit 3. Additionally, of course, banking industry regulation is directly used as a means of enforcing economic policy decisions. In September 1981, for example, new regulations were issued, for both public and joint venture banks, requiring that proof of legal ownership accompany all foreign currency cash deposits (a step to curb the flourishing black market).

In December 1981, in an effort to curb imports of consumer and luxury goods, all banks were instructed to limit both public and private sector loans to 65% of their total local and foreign currency deposits. An annual growth rate of 9% for loans outstanding was also established.

3. Commercial Banks

During the period when the banking sector was nationalized, the four public sector commercial banks were assigned specialized functions. The banks and their areas of specialization were:

- Bank of Alexandria - Industrial Sector
- Banque du Caire - Construction and Building
- National Bank - Export/Import
- Misr Bank - Internal Trade

EXHIBIT 3

"THE STRUCTURE OF INTEREST RATES IN EGYPT" (1962-1981)

DATE:	May 1962* December 1975 %	1/1/76 %	1/8/77 %	1/6/78 %	1/1/79 %	1980 1/4 %	1980 1/6 %	1981 1/1 %	1981 1/6 %
RATE:									
Rate of Discount in Central Bank	5	6	7	8	9	10	11	12	12
RATES OF INTEREST ON DEPOSITS:									
Period from 7 days to less than 15	-	-	-	-	4	4.5	4.5	5	5
from 15 days to less than one month	1.2	2	2.5	4	5	5.5	5.5	6	6
from one month to less than 3	1.5	3	3	4.5	5.5	6	6.5	7.5	7.5
from 3 months to less than 6	1.8	4	4	5.5	6	7	7.5	8.5	8.5
from 6 months to less than one year	2.1	4.5	4.5	6	6.5	7.5	8	9	9.5
from one year to less than 2	4	5	5	6.5	7	8	9	9.5	10
from 2 years to less than 3	4	5	5	7	7.5	8.5	9.5	10.5	10.5
from 3 years to less than 5	4	5	5	7	8	9	10	11	11
5 years					8.5	9.5	10.5	11	11
Savings Deposits	2.4	4	5	5	6	7	8	8.5	8.5
Rates of interest on loans and borrowings:									
minimum limit	6	7	8	9	10	11	12	13	13
maximum limit	7	8	9	11	12	13	14	15	15

Source:
Central Bank of Egypt

* after tax discount of interest rates on deposits.

After 1974, with foreign banks permitted to come in, such specialization was cancelled and commercial banking activity across industry lines was permitted with the aim of improving client service through competition. The banking industry now can best be differentiated in terms of: 1) Law 43 or private commercial banks, and 2) Government owned or public sector banks.

Until recently public commercial banks were not only permitted to make short term loans (i.e., maturity of less than 1 year) and their service capacity was thus quite limited.

With public sector banks now able to make medium term loans (to 5 years), and to take equity positions, there has been a flurry of activity by both private and public banks. All the public banks have newly established investment departments. The focus to date has been exclusively on the ownership of large, new projects and activity suffers from a lack of personnel trained or experienced in project appraisal work.

4. Investment Banks

The Arab African International Bank (1964) and the Arab International Bank (1971) were the only offshore banks, exempted from the nationalization requirements and Central Bank control, prior to Law 43 of 1974 which created a category of Investment and Business banks. These new banks finance foreign trade operations, may establish investment companies, and, with 51% Egyptian ownership, may also operate with local currency. There are now 25 special banks registered with the Central Bank, 17 branches of foreign banks and 8 joint ventures. (See Exhibit 4 for details).

The aggregate financial position of such Law 43 banks is:

EXHIBIT 4

Principal Financial Institutions Serving Egyptian Private Sector

	Operating Currency d = domestic f = foreign
I. Central Bank (public sector)	d + f
II. Commercial Banks	
A. Public Sector	d + f
1. National Bank of Egypt	
2. Bank of Alexandria	
3. Banque Misr	
4. Banque du Caire	
B. Private Sector[1] (primarily Egyptian owned)	d + f
1. Nile Bank	
2. Suez Canal Bank	
3. Delta International Bank	
4. El Watany Bank of Egypt	
C. Private Sector[1] (joint ventures)[2]	d + f
1. Chase Manhattan Bank of Egypt	
2. Misr International Bank	
3. Egyptian American Bank	
4. Misr America International Bank	
5. Banque du Caire et de Paris	
6. Misr Rumanian Bank	
7. Alexandria Kuwait International Bank	
8. Societe Arab Internationale de Banque	
III. Development Banks (public sector)	
1. Development Industrial Bank	d + f
IV. Investment or Merchant Banks[3] (private sector)[1]	
A. Joint Ventures (50% Egyptian, 50% foreign)	
1. Misr-Iran Development Bank	f
2. Cairo Barclays International Bank	f
3. Credit International d'Egypte	f
4. National Societe Generale	d + f
B. Foreign Branches	f
1. American Express International Banking Corporation	
2. National Bank of Abu Dhabi	
3. Citibank	
4. Bank of America	
5. Grindlays Bank Limited	
6. Bank of Credit and Commerce International	
7. Bank Saderat Iran	
8. Banca Commerciale Italiana	
9. Bank Melli Iran	
10. Arab Bank Limited	
11. Lloyds Bank International Limited	
12. National Bank of Pakistan	
13. Rafidain Bank	
14. Bank of Oman	
15. Bank of Arab Solidarity	
16. Bank of Nova Scotia	
V. Free Zone Banks[1]	
1. Manufacturers Hanover Trust Company	

Exhibit 4 (Continued)

	Operating Currency d = domestic f = foreign
VI. Others	
A. Investment Companies	
1. Kuwaiti-Egyptian Investment Company	f
2. Saudi Egyptian Company for Investment and Finance	d + f
3. Arab Multinational Finance Company	f
4. Arab Investment Company	f
B. Insurance Companies (4)	d + f
C. Nasser Social Bank	d
D. Pension Funds	d
E. Stock Exchanges (2)	d
F. Multinational Banks (headquartered in Egypt but not subject to Egyptian laws and banking control)	
1. Arab International Bank	f
2. Arab African Bank	f
3. Arab Investment Bank	f
G. Representative Offices of Foreign Banks (28)	f

1. Institutions established under Foreign Investment Law No. 43.
2. All these institutions are at least 51% Egyptian owned, with the exception of the Societe Arabe Internationale de Banque, which has primarily foreign ownership.
3. As defined in Article 17 of Banking Law No. 120 and Article 3 of Foreign Investment Law No. 43. Apart from the Misr-Iran Development Bank, which has an established operating policy of long-term project development, these banks operate as commercial as well as investment banks.

Source: R. Nathan Associates, A Study of the Feasibility of a Private Investment Encouragement Fund for the Egyptian Private Sector, September 1979, Table 4, page 50.

	LE MILLION	
	December, 1979	September, 1980
Investments	22	34
Loans due within 1 year	224	386
term loans	52	63
Total Loans	276	387
Total Assets	1,084	1,346
Deposits less than 1 year	430	531
more than 1 year	73	78
Total	503	609
Capital and Reserves	78	107

Source: Bank Control Department, Central Bank

The group of investment and business banks has experienced enormous growth, and may currently be in a period of some retrenchment. The early projects which they financed in 1975-76 (or shortly after the inauguration of the Open Door policy) have now matured to scheduled loan repayment stage, and some rescheduling action has become necessary. Causative factors here appear to be:

- Currency depreciation which forces the need for larger local currency accumulations to meet scheduled foreign exchange payments.
- Construction delays which brought projects into operation later than planned.
- Inabilities to reach projected output volumes.
- Possibly, some unsophisticated project analysis.

Some of the more recent projects in the pipeline have also had to be re-examined and the financial package restructured as inflation (or poor estimates) has significantly escalated total cost. This

situation has necessarily caused some diversion of limited manpower resources away from attention to new business in order to restudy booked business.

5. Islamic Banks

A largely unstudied and unrecognized component of financial intermediation has been the Islamic banks of which the Faisal Islamic Bank is the most important. This bank is 51% Egyptian and 49% Saudi Arabian owned. Its statement shows:

	US $ MILLION	
	November 1979	November 1980
Current accounts	X	132.5
Investment Accts.	X	7.6
Total Deposits	23.6	140.1

	US $ MILLION	
	November 1979	November 1980
Short term loans	--	25.7
Modaraba[1]	24.1	129.2
Total Assets	38.7	197.2
Paid in Capital	10.0	18.9
Net Profit	1.4	9.8

The bank does not pay interest on deposits but returns a distribution of profits. In 1980 the profit distribution was 12.7% (well above Central Bank 1980 deposit interest maximums of 8.0% on savings accounts,

[1]Modarba - Partnership relationships in which profits and losses are shared in relation to equity participation.

and 9% on 1 to 2 year Certificates). Obviously the bank's growth must reflect disintermediation from the western banking system in favor of the Islamic because of a potentially superior rate of return for its depositors.

In its commercial loan and investment operations also, all dealings of the Islamic banks are based on the profit sharing principal, not on the payment of interest and fixed repayment of principal.

6. Development Banks

Exhibit 5 attached is a profile of term credit to private manufacturing companies through development banking institutions. We estimate such credit at U.S. $120 million at this time, principally through the Development Industrial Bank. A number of private investment banks, including several which have received funding from international institutions, are also involved in development banking to the extent that they are committed to help channel capital into socially desirable projects. However, with the exception of the public sector DIB and Misr Bank, the private "development" banks are committed to making a profit return for their investors. As a rule they focus on project finance for Law 43 companies in a size range above U.S. $500,000 (often on a syndicated basis).

The National Bank for Development is to have 24 "subsidiary" banks one in each governate, each with LE 2 million in capital (50% NBD and 50% private investors who must be resident in the governate). However, local operations will consist of commercial banking activities only and all investment decisions will be made in Cairo.

DIB has a non-Law 43, small to medium company focus. As will be developed later, it has recently operated with a very strong level of profit. Misr Bank is included in the development bank category only because it has some special development funding from England and Austria Faisal Islamic Bank operates with social objectives, as well as profit objectives, and is interested in developing a program for providing workshop space for small businesses in the New Communities.

In our view, available funding for further growth does not appear to be a particular constraint for development banking at this time. On

DEVELOPMENT BANK TERM CREDIT TO
PRIVATE MANUFACTURING COMPANIES

EXHIBIT 5

COMMERCIAL BANKING AND THE PRIVATE SECTOR

(Million LE)

Private Sector Deposits:

	DECEMBER 1978		DECEMBER 1979		JUNE 1980	
	LE	%Gross Deposits	LE	%Gross Deposits	LE	%Gross Deposits
Invest. Law Co's	102.3	2.7	219.9	4.3	288.2	4.5
Other Co's	102.9	2.7	111.7	2.2	98.3	1.6
Partnership	106.0	2.8	117.0	2.3	138.7	2.2
Cooperative Soc.	46.7	1.2	71.0	1.3	75.3	1.2
Individual Firms	89.5	2.4	122.7	2.4	139.8	2.2
Sub-Total	447.4	11.8	642.3	12.5	740.3	11.7

Private Sector Loans:

	DECEMBER 1978		DECEMBER 1979		MARCH 1980	
	LE	%Gross Loans	LE	%Gross Loans	LE	%Gross Loans
Law 43 Co's	X		274.0	8.0	324.7	8.1
Other Co.	202.6	8.1	51.7	1.5	60.3	1.5
Partnerships	146.2	5.9	313.9	9.1	332.0	8.2
Cooperative Soc.	5.6	.2	12.1	.4	11.3	.3
Individual Firms	73.9	3.0	147.3	4.3	174.3	4.3
Sub-Total	428.3	17.2	799.0	23.3	902.6	22.4

Source: Central Bank of Egypt, Economic Magazin

December 31, 1980 Misr Iran Development Bank obtained a U.S. $30 million World Bank loan and its 1980 issue of U.S. $10 million in three year floating rate certificates of deposit was fully and quickly subscribed. As noted earlier, the Faisal Islamic Bank's 1980 performance attracted new deposits, and it forecasts 1981 total assets at U.S. $311 million - as against U.S. $39 million in 1979. The National Bank for Development established in July 1980 with the sponsorship of President Sadat and the National Democratic Party has LE 25 million in paid in capital and an LE 150 million line of credit at the Central Bank and is developing its strategic approach to private sector development and investment.

A more obvious constraint within the development banking category is a shortage of trained project analysts, with most institutions experiencing turnover and vacancies due to the high demand and a general reluctance to wait out the normal time period for promotion. If we assume both generous system levels with respect to project appraisal officers (70), and an annual production per officer of 8 major appraisals, system capacity stands at 560 projects per year. Not all of this manpower capacity, however, is directed at industrial manufacturing companies, and the small to medium size concerns obviously suffer from the understandable direction of limited resources into the larger projects.

C. THE DEVELOPMENT INDUSTRIAL BANK

This bank was established August 1, 1976 with the mission of supporting private sector industrial -rowth. In the 59 month operating period to June 30, 1981, DIB approved loans totaling LE 318.4 million of which LE 291.1 million (91.4%) were to the private sector.

The gross loan portfolio has expanded as follows:

	LE Thousand		
Date	Gross Loans Outstanding	Annual Increase	% Increase
12.31.77	29,087	17,010	58.5
12.31.78	46,097	28,963	62.8
12.31.79	75,060	46,768	62.3
6.30.80	101,140		
6.30.81	153,370	52,230	51.6

The bank's credit extension functions consist of three major activity areas:

1) Project Finance

   Project finance operations consist of extending medium (up to 5 years) and long-term (maximum of 15 years) loans in both local and foreign currencies to financially sound and economically beneficial projects (based on World Bank standards).

2) Working Capital Credit

   Short term loans in local currency are extended to project finance clients and to small scale enterprises to support their working capital requirements.

3) Small Scale Enterprise Credit

   In 1979, DIB established a separate department to handle the credit needs of small business. The definitions originally established for this activity were:

   SSE - client fixed assets, excluding land and buildings, not to exceed LE 200,000

   S (small) SSE - fixed assets, excluding land and buildings, not to exceed LE 100,000

However, in the just negotiated 5th World Bank Loan Agreement which provides assistance of U.S. $120 million, the maximum limits of fixed assets are increased to LE 300,000 for SSEs, and LE 150,000 for SSSEs (who are entitled to a concessionary 1% interest rate differential).

Analysis of the DIB loan portfolio at June 30, 1981 by type of activity shows:

Loans Outstanding
(LE Thousand)

	Public Sector	Private Sector			
		SSE	Other	Total	%
Short-term loans	52	13,557	7,997	21,606	14.1
Medium term loans	216	33,666	19,132	53,014	34.6
Long term loans	19,137	3,383	56,230	78,750	51.3
	19,405	50,606	83,359	153,370	100.0

DIB has developed into a highly profitable institution. Net operating profit, after provision for losses and before income taxes, has increased as follows:

	LE Thousand
1977	0
1978	1,092
1979	1,808
1981	4,615

For the year ending June 30, 1981, net operating profit of LE 4,615.000 (after a reserve provision of LE 3,025.000 for possible losses) represented a return on year end assets of 2.9%. After provision for taxes, legal reserves, and employee bonuses, all earnings are returned to the Central Bank.

DIB's S.* Department, which became operational in early 1980, approved 170 loans between July 1, 1980 and June 30, 1981 - an average production of 17 projects by the 10 young appraisers involved. About 60% of the approval volume was in local currency loans, and 40% in foreig currency with an average loan of U.S. $52,000. The department states it can now approve a loan within 3 weeks of the receipt of a final project proposal.

Exhibits 6 and 7 present an analysis of DIB's medium and long term loan activity. For the year ended June 30, 1981, 23.1% of the number of such loans approved were for companies with 10 to 50 employees, with 5.3% in the 50-100 employee category. By amount, however, 56.6% of the project loans approved were to companies with over 100 employees with 17.1% for the 10-50 employee group.

Exhibit 7 analyzes loan activity by industry. For the year ending June 30, 1981, 83% of DIB's project loan activity was with the industrial sector. In our view, a most interesting feature is the fact that in the last 3 years IDB's loans to the leather industry have averaged only .5% of its total of loan approvals. Leather is the industry in which we estimate the private sector has the highest share of total production

(94% and where the SSE share is 95% of private sector output.

A comparison of the number of DIB working capital loans outstandin at June 30, 1981 by industry with our estimate of the number of private companies in those industries shows:

	No. of DIB Working Capital Loans	No. of Private Companies*	% DIB/ Total
Textiles	184	1,600	11.5
Food	91	800	11.4
Metallurgy & Engineering	251	1,935	12.9
Chemicals	214	565	37.9
Chemical Products	94		
Paper & Printing	35		
Wood Products	85		
Leather	69	780	8.8
Building & Construction	47	1,855	2.5
TOTAL INDUSTRIAL	856	7,535	11.4
Hotel & Tourism	44		
Other	110		
TOTAL	1,010		

* Source: Chapter III, Table 9

At this time DIB appears to:

1) have its funding requirements well in hand: in addition to the 5th World Bank Loan of U.S. $120 million mentioned earlier, it has recently been approved for U.S. $30 million by the African DevelopmentBank, and for a loan of 50 million Deutch marks, tied to the purchase to German equipment;
2) be continuing the expansion of its branch network with two new branches under active planning, to bring the total to 5;

EXHIBIT 6

DIB MEDIUM AND LONG TERM LOAN ACTIVITY

Loans Approved by Employment Size

	1979		July 1 1980 June 30, 1981	
	No. of Loans	%	No. of Loans	%
Clients with:				
10-24 workers	125	15.7	167	14.8
24-49 workers	75	9.4	93	8.3
50-99 workers	51	6.4	60	5.3
100 or more	64	8.1	81	7.2
Sub-total	315	39.6	401	35.6
Artisans	481	60.4	726	64.4
Total	796	100.0	1127	100.0

Clients with:	Values of Loans	%	Values of Loans	%
10-24 workers	3,082	6.4	8,480	9.6
24-49 workers	4,693	9.8	6,624	7.5
50-99 workers	8,079	16.1	14,732	16.6
100 or more	28,061	58.7	50,161	56.6
Sub-total	43,915	91.9	79,997	90.3
Artisans	3,873	8.1	8,586	9.7
Total	47,788	100.0	88,583	100.0

Source: Development Industrial Bank

EXHIBIT 7

DIB MEDIUM AND LONG TERM LOAN ACTIVITY

Loans Approved by Industry

	1978		1979		July 1, 1980 - June 30, 1981	
	Value	%	Value	%	Value	%
Building Material	1,791	5.1	6,125	12.9	25,836	29.2
Chemicals	2,333	6.6	2,531	5.3	11,459	12.9
Textiles	6,534	18.5	3,905	8.2	10,551	11.9
Metallurgy, Engineering	3,983	11.3	5,787	12.9	10,111	11.4
Food	9,415	26.7	15,597	32.6	8,859	10.0
Wood Products	2,427	6.9	1,212	2.5	3,925	4.4
Printing & Paper	971	2.7	1,210	2.5	2,433	2.7
Leather	290	0.8	325	.7	79	.09
Subtotal-Industry	26,796	75.8	36,694	76.8	73,236	82.7
Tourism - Hotels	6,203	17.6	9,598	20.1	11,878	13.4
Other	2,329	6.5	1,496	3.1	3,452	3.9
Total	35,328	100.0	47,788	100.0	88,566	100.0

Source: Development Industrial Bank

3) be benefitting from its considerable utilization of consulting services in training and operational review;
4) be increasing the experience level of its staff (with the passage of time).

The bank thus appears to be very well positioned to continue the strong expansion which has characterized its recent performance.

In our judgment, however, the ability to source funds to meet the investment demand of the industrial sector, and a steadily improving operational capability do not necessarily add-up to a broad, balanced development finance role for DIB. To achieve this mission we believe there must also be a "development" attitude or philosophy with respect to risk acceptance.

As the resident advisor at DIB covered in some detail in his 1979-1980 reports, the risk acceptance policies at DIB are much closer to those of commercial banking than to the risk acceptance policies usually associated with a development finance institution. This situation is understandable given:

- the poor credit record of previous developmental finance efforts in Egypt; and
- the unbalanced risk/reward climate which is pervasive in public sector companies.

Moreover, in banking, where large sums of money are at stake, there is always the possibility of corruption. While consultants and developed country bankers may accept the inevitability of some bad loans, the public examiners of Egypt do not easily accept this view. In this conflict of viewpoints, the best self-protective device the senior officials of DIB have available is that of always taking security (collateral). Evidence that independently appraised collateral valued well in excess of the loan was demanded, is the first line of personal defense for any responsible public sector banker against the day when he must justify his approval of a bad loan before the public auditor.

Beyond simply requiring security, the highly conservative bias of DIB with respect to risk assumption may be seen in the following securi policies:

- DIB does not make loans on used equipment.
- DIB does not value leasehold rights for collateral purposes.
- DIB does not make loans secured by property in free zones, because it is unsure of its legal position in foreclosure.
- The Legal Department of DIB is one of the largest and most active departments in the bank and funds are not normally advanced until this department has signed-off on every element of the security package, although by law DIB has an automatic first lien on all assets.

While DIB continually emphasizes employment creation and national economic benefit as priority strategic policies, it is also clear to us that its collateral policies must inevitably bias its loan portfolio toward relatively capital intensive operations which have the inherent capability to furnish the security values on which it insists.

D. BANKING INDUSTRY PRACTICES

1. Lending Practices

Credit Worthiness - The Central Bank's Credit Information Department, is in a position to furnish complete information on a company's borrowing record, payment history and security system. This centralized credit bureau serves as a powerful tool for enforcing borrowing responsibility as it is most unlikely that anyone with a poor history will be able to shift to a new lender.

Maturities - According to Paul G. Clarke (Private Sector Industrial Development Strategy, August 1981, Table 9) total loans by all borrowers had a maturity breakdown as of December 31, 1980 as follows:

Lender	Maturity Less Than 1 Year LE M	%	Maturity Less Than 1 Year LE M	%	Total LE M
Public Commercial	5,826	98.7	77	1.3	5,093
Law 43 Commercial	671	92.4	55	7.6	726
Law 43 Investment	383	86.5	60	13.5	443
	6,880	97.3	192	2.7	7,072

There is some feeling among Law 43 bankers that medium term loan maturities are moving from 3 to 5 years to 5 to 7 years (with up to a 3 year grace period for new projects) due to competition for the large, attractive projects, and some Government pressure. As term loans are match funded out of capital and time deposits, and deposits are predominantly short-term, this is not a generally popular development.

2. Interest Rates

As noted earlier domestic loan rates are controlled by the Central Bank, and the maximum rate has increased from 9% in 1977 to 15% currently. Many private businessmen, and several bankers, note that industrial development is not supported with the 6% subsidized rate which applies to food security and housing.

Foreign exchange rates are set at 1-2% above the London Inter Bank Offering Rate (LIBOR) for Large top quality transactions with second tier credits at 2-2 1/2% over LIBOR. DIB offers concessionary foreign exchange financing, depneding upon the funding source used, and also offers fixed rate loans at the official LE/$ exchange rate.

3. Basis for Lending

Loans are most generally secured by mortgages, and common percentages of advance are:

- 90% on appraised land value
- 75% on appraised building value
- 60-65% on purchase value of equipment.

Debt to equity ratios have traditionally been set at 1:1 with 1.5:1 apparently gaining in acceptability. Some aggressive banks are said to have gone to ratios of 2 and 3:1 in competitive situations.

Overdraft lines, below the very top tier of companies, appear to be offered very conservatively, and are considered to be in the nature of personal loans to the owners based on the pervasive Egyptian friendship networks, rather than on credit analysis. An LE 3,000 overdraft approval limit for a public Commercial Bank branch manager would not be unusual. Some foreign banks prefer to use drafts since they believe fear of a non-payment report to the Credit Information Department is a strong incentive for repayment. A widely offered form of working capital credit is "lock and key" lending against raw materials placed under the physical custody of the bank. The normal rate of advance is 80% with the advance paid out when the materials are released to production. Discounting or advancing on bills of exchange is also practiced although the non-credit nature of inter-company sales does not make this a large activity. (1)

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(1) Note: At least two bothersome constraints on the extension of trade credit are found in the check processing system:

(a) We understand that domestic collection periods easily range up to 30 days. Checks drawn into uncollected funds are, of course, responsible for creating interest expense at the bank rate for loans.

(b) Check transaction charges are levied against the payee, not the maker. Therefore, a trade debtor depositing a payment check must settle for less than the face amount of his bill, or make arrangements to be reimbursed the bank service charge by his customer.

E. IMPLICATIONS FOR SSEs

In the interface between banking and the SSE's we see the following implications with respect to the further growth of the manufacturing sector:

1) The SSE tax avoidance style of financial management creates a lack of integrity in financial statements, and causes the banking industry to place extreme emphasis on security protection.
2) Private sector banks have a minimum client solicitation point well above the borrowing need point of the 10-50 employee group of companies. For example, the average DIB foreign currency loan to SSEs is $52,000, while a project size of about $500,000 is necessary to get private banking attention.
3) Smaller companies, therefore, must find their expansion credit at the public commercial banks, or at DIB. The public commercial banks have traditionally been exclusively short-term lenders and have no experience in term working capital or fixed asset lending. In addition, their short-term lending has typically been with the support of guarantees.
4) As the option available to SSEs, DIB has responded to the challenge and is to be commended for its strong performance. However, it has obvious limitations:
   - As a public sector institution it is not acceptable to many as a repository for confidential information.
   - Its service capacity, in terms of manpower and geographical presence is small when compared to the total market service needs.
   - In our judgment its risk acceptance policies are not significantly different from those used by the commercial banks, and the availability of acceptable security is always a priority consideration.

5) The fact that there is no officially articulated development policy for the private manufacturing sector necessarily means that there is no official policy or program for meeting the expansion credit needs of small manufacturing companies. For example:

- While heavily subsidized credit for food security and housing expansion is available through the banking industry, there are no concessionary credit programs for the expansion of other private manufacturing.
- When the National Investment Bank was established in 1980 as a new key intermediary, it was given no private sector mission. In our opinion, it is noteworthy that the investment program for social security funds (on which the National Investment Bank pays a return of 6% to the Social Security System) has no concept of allocating back to the private sector, through loans, its proportionate share of total social security contributions.
- It was reported to us that only three import Letters of Credit were issued in Egypt in the month following the announcement of new policy controls on foreign exchange, and a Central Bank procedural change mandating prior approval of all new foreign exchange allocations. Frequent changes in banking regulation, of course, complicate the financial forward planning of business, and a proliferation of laws and regulations impacts particularly on SSEs who must continuously struggle to know what the government expects of them.
- The "lock and key" financing of raw materials and the very limited extension of overdraft lines by DIB and the public commercial banks does not, in our opinion, constitute an adequate credit system for financing the working capital requirements associated with manufacturing expansion.

VII. CONSTRAINTS AND OPPORTUNITIES

Looking ahead to Phase II of this study, it would appear that the most useful way to summarize our findings in Phase I would be to single out the factors which are most germane to design of a strategy for development of the SSE sector. In our view, these factors are constraints which impede the expansion of existing firms, or the new establishment of new enterprises, and environmental factors and issues which influence the behavior of SSEs. As a preclude, then, to Phase II, listed below are the constraints and source of change we have identified in our study. We list:

CONSTRAINT	
High Priority	
*	
I-8	• Lack of clear Government policy framework
I-5	• Burdensome legal and regulatory climate
I-6	• Absence of high level entity devoted to SSEs
I-7	• Financial institutions not responding adequately to special problems of SSE lending.
I-7	• Channels for lending to SSE are limited
I-5	• Shortage of industrial sites and inadequate infrastructure
I-5	• High level of machine down-time and low capacity utilization.
I-5	• Skilled labor shortages
	• Lack of assistance in project formulation
I-8	• Technical assistance in form of extension programs
	• Inadequate technical information
I-5	• Deficient management
I-7	• Poor information and data about SSEs
I-4	• Lack of medium-term working capital

* Denotes location in Phase I report where constraints are cited.

Lower Priority

- Limited availability and dissemination of market information
- Inadequate bank staff and skill base for handling SSE loans
- Use of inadequate technology
- Shortages of unskilled labor
- Lack of opportunities for sales to the GOE and sub-contracting to public sector companies.
- Lack of interest in exports
- Aversion to debt
- Preference for family control
- Suspicion of government and government-related activities

Source of Change - Each source of change is a potential opportunity or external pressure for SSEs.

- Expanding market opportunities
- Changing business climate
- Increasing population pressure
- Providing for basic human needs
- Changing technology
- Under utilized capacity
- Availability of outside assistance
- Expanding banking system

Other Opportunities

- Dynamic group of firms
- Innovative entrepreneurs
- Pool of Savings, etc.

Implications for a Comprehensive Development Strategy

Although a development strategy should primarily be oriented towards alleviating constraints, its design should also take into consideration environmental factors and issues which influence the behavior of SSEs. These establishments operate in a changing economic, technological and institutional environment. Each source of change represents a potential opportunity or external pressure for SSEs and any development strategy should be sensitive to these environmental factors. By incorporating programs which either help SSEs to deal with emerging external pressures or to take advantage of market opportunities, a comprehensive development strategy would provide the necessary incentives to encourage expansion and impovements by entrepreneurs in directions which would collectively produce a total SSE sector output consistent with national development goals.

APPENDIX A

PARTICIPATION OF SSEs IN THE INDUSTRIAL SUBSECTOR

1. Introduction

Since data specifically related to SSEs is almost non-existent, it has been necessary to develop an understanding of their role in industry on the basis of a qualitative review of each of the industrial subsectors Aggregate information for the different subsectors is generally available, but it does not isolate the role of different sized firms. In this appendix, we have prepared brief profiles of the subsectors and described the participation of SSEs within them. While the subsector profiles are based on published sources, the estimates of the SSE role has been primarily derived from interviews and primary data from the various Chambers of the Federation of Egyptian Industries. A summary of the SSE role in industry, based on the information developed here, is presented in Chapter III.

Each of the six subsector profiles includes the following information:

- An outline of the subsector structure, including the types of industries included, the total number of firms, and the geographic distribution of firms;
- A brief review of subsector performance, particularly in terms of output and exports; and,
- An assessment of the SSE role, including estimates of the number of firms and the proportion of output and exports accounted for by SSEs.

2. Textiles and Apparel

a. Structure of the Subsector

The textile and apparel subsector is made up of five principal interrelated industries: spinning, weaving, knitting, dyeing and finishing, and apparel. This subsector also includes the manufacture of synthetic

fibres used in textiles (which is often classified as chemicals in other countries), and the manufacture of other textile products.

The textile subsector is closely integrated. The spinning and yarn industry derives its raw materials from domestic cotton ginning and flax mills or from wool and other fiber imports. The output is transferred to woven textile or knitting mills (often the same company as the spinning yarn plant) and then to dyeing, printing and finishing mills (again often the same company). The textiles are sold to apparel and other textile product manufacturers who distribute their products to retailers or exporters.

The public sector dominates the textile subsector, even though private sector firms are important in some areas, particularly apparel. Ministry of Industry data suggest that the public sector accounted for about 75% of the entire industry's productive capacity in 1980. However, if the artisanal sector is included, the relative public sector role decreases slightly to about 70%.

Only 42 of the establishments in the subsector (excluding artisans) are owned by the public sector, and all of these are larger than any private sector company. As shown in Table A-1, the public sector is particularly dominant in spinning (100% of output); weaving (65% of total output); dyeing and finishing (70% of output); and knitting (55% of output). Only in garments (20% of production) is the public sector relatively unimportant. However, it still plays a critical role since all firms must ultimately purchase their raw materials from public sector companies.

The private sector is made up of about 1600 distinct establishments, many of which are involved in more than one aspect of the textile industry. For example, many firms are both in weaving and apparel. Many of the private firms, particularly those in weaving, knitting and dyeing, are highly dependent on a public sector company for the purchase of all their raw materials and for their only market. In addition, to the 1600 establishments shown in Table A-1, there are believed to be several thousand small workshops and artisans, particularly in the apparel area.

Table A-1

Public vs. Private Sector Roles in the Textile Subsector

Product Area	Value of Output, 1980[1] (LE Million)	Public Sector		Private Sector	
Product Area		Number of Firms	Percent of Output	Number of Firms	Percent of Output
Spinning	540	21	100	0	0
Weaving	600	19	65	650	35
Dyeing	20	6	70	35	30
Knitting	50	4	60	650	40
Apparel	170	10	30	300[2]	70
Total[3]	1,380	42	75	1,600	25

[1] Distribution of production among product areas is estimated.

[2] Excludes artisanal firms which number in the thousands.

[3] Many companies are involved in several different product areas. Total shown here reflects Chamber memberships, and private establishments may be underistimated.

Source: Chamber of Spinning and Weaving Industry, Federation of Egyptian Industries and Arthur D. Little estimates.

According to the Federation of Egyptian Industries, the majority of textile companies are located in the Cairo area. A survey of its membership (which includes most, but not all companies) indicates that about 65% of the establishments are located in Cairo, 14% are in Alexandria, and 21% are elswhere in Egypt.

b. Performance of the Subsectors

The textile subsector has long been one of the most important contributors to Egypt's industrial sector. Measured in terms of value of production, textiles rank second (just behind foodstuffs) with approximately LE 1.4 billion in output in 1980. This represents slightly over a quarter of total manufacturing output.

Growth in textiles has been somewhat below average, although from a larger base. Textile production, in terms of current value, increased at a 16.3% annual rate between 1976-1980 compared to a 20.3% annual rate for total manufacturing. It is interesting to note, however, that the private sector has performed better than the public sector. Growth in the private sector has been about 6% greater than in the public sector. As a result, the private sector contribution to total output has increased slowly from about 25% in 1976 to about 27% in 1980. The principal area of private sector growth has been apparel, although private weaving and knitting output has also increased.

In terms of exports, the textile subsector is the most important source of manufactured exports. In 1980, textiles are estimated to have amounted to about LE 308.7 million, or about 48% of total manufactured exports. More importantly, however, textiles exports sold for convertible currencies amounted to LE 171.3 million, or 37% of convertible account exports. In other words, almost half of the textile exports were traded through bilateral trade agreements, particularly with Eastern European countries. Cotton fiber and yarn are the two most important export products.

The private sector accounts for only about 3% of textile exports, although most of these are sold through convertible currency accounts. Of the LE 8 million in private sector exports reported for 1980 by the Industrial Control Department of the Ministry of Industry,

carpets and rugs accounted for about LE 6.6 million.

c. Role of Small Scale Enterprises

There is no specific data which quantifies the role of small scale enterprises in the textile subsector. The following is based primarily on information provided by the Chamber of Spinning and Weaving Industries as well as estimates developed by the consultant. Since the situation varies greatly by product area, a brief description of the principal product areas and the role of SSE's is provided.

• Spinning, primarily cotton yarn, is entirely dominated by about 21 large public sector enterprises. Although there is no SSE role in this industry, the public sector monopoly is of critical importance to SSE's in downstream activities since they must compete with public sector firms for materials and have little control over the quality and timeliness of the materials made available to them.

• Weaving is also dominated by about 19 public sector enterprises, most of which are integrated with the spinning plants. However, according to the Chamber of Spinning and Weaving Industries, there are about 650 private establishments (excluding artisans) which account for about 35% of the output of woven goods. These private firms vary in size from 2 to 100 looms, but only 10 have as many as 100 looms while about 20% have only 2 looms each. We estimate that about 95% of these private firms would have less than 50 employees each and would account for roughly 40% of private sector output of woven goods.

• Dyeing, printing and finishing establishments in the private sector number between 30-35 and account for approximately 30% of total output. The Chamber of Spinning and Weaving Enterprises estimates that 3-4 of these firms have 50-100 employees each while the rest have between 10-50 workers each. The firms with between 10-50 workers are estimated to produce about 55% of the output in this product area.

• Knitting is primarily concentrated in 4 public sector companies which produce 60% of all knitted goods. About 650 private sector companies, excluding artisans, are believed to be producing the remaining 40% of knitted goods. All yarn is purchased from the public sector while the finished goods are sold to wholesalers or retailers. It is estimated that 85% of the establishments have between 10 and 50 employees and

55% of the private sector output. Most of the remaining firms have between 50 and 100 workers each, although there are a few new joint ventures with over 100 employees each.

• Apparel (or garments) is the area where the private sector is most important. The Chamber of Spinning and Weaving Industries estimates that 70% of all apparel is made up by about 300 private sector establishments with over 10 employees per firm. In addition there are believed to be several thousand artisans and workshops around the country. These shops range from those with one tailor or seamster to those which have a handful of sewing machines and the necessary personnel to man them.

Of the establishments with more than 10 employees, approximately half have between 10 and 50 workers each. An additional 25% of the firms have between 50 and 100 workers while the rest have an average employment of over 100. This suggests that firms with between 10-50 employees account for 60% of the apparel produced by the private sector.

In summary, small scale enterprises with between 10 and 50 employees are believed to play a significant role in the textile subsector. Out of an estimated 1,600 private sector establishments, about 1,350 or 84% are SSE's with between 10 and 50 workers. The production from these firms in 1980 is estimated to have been about LE 220 million, or about 49% of private sector output in that year.

3. Food Processing Subsector

a. Structure of the Subsector

The Federation of Egyptian Industries includes six different industrial groups in its Food Industry Chamber. These are: sugar and confectionary products; tobacco and cigarettes; food preservation; edible oil and related products; beverages; and, milk and dairy products. A seventh food group--cereal products--is represented in a separate Cereals Industry Chamber. Most of the products in the industry, notably flour, bread, pasta, starch and glucose are usually considered part of the food processing industry.

The structure and composition of the food processing subsector is shown in Table A-2. Tobacco and cigarettes, which are not really a food group, is the most important industrial group in the sector, with 38% of the value of output in 1977. Other important groups in terms of value include sugar and confectionary products (with 14% of 1977 output); cereal products (13%); edible oil and related products (13%) and milk and dairy products (11%).

Table A-2 also shows that in 1977, the private sector, excluding artisans, accounted for about 21% of the value of output from the food processing subsector. By 1979, the Ministry of Industry data indicates the private sector role to have increased to 25% of output while for 1980, this is estimated to have risen to almost 30%. However, it should be noted that this appears to exclude bakeries for which both total and private output data is lacking. Since bread accounts for 50% of the average calorie intake, this could have an important impact on the data.

The most recent breakdown of the private sector role in food processing is from 1977 Federation of Egyptian Industry data. This suggests that the private sector has been particularly important in milk and dairy products where about 80% of production was private. In the cereal products industry the private sector accounted for 37% of output followed by the sugar and confectionary products industry with a 24% private sector share.

Production is concentrated in the public sector in several areas. This is particularly true of edible oil and related products, tobacco and cigarettes, food preservation, sugar and alcoholic beverages. However, the role of the public sector is much more important than its 79% of food processing output. First of all, the Government plays a critical role in the distribution of agricultural raw materials either domestically produced or imported. Second, the distribution and sale of many food products and particularly staples, is also Government controlled. Heavy subsidies on staples require that producers of these products sell their output to public sector wholesale companies affiliated to the Ministry of Supply. Third, most food

Table A-2

Composition of the Food Processing Industry
(Value in LE thousands)

Product Area	Unit	1977 Production Quantity	1977 Production Value	1977 Private Sector Share (%) Quantity	1977 Private Sector Share (%) Value
I. Sugar and Confectionery					
Sugar & Molasses	Ton(000)	985.3	81,947	6%	6%
Sesame Pastry	"	44.1	15,410	61%	91%
Dry Confectionery	"	28.0	12,649	67%	67%
Chocolate	"	2.5	4,468	15%	15%
Biscuits	"	18.3	7,740	33%	22%
Subtotal			122,204	-	24%
II. Tobacco and Cigarettes					
Cigarettes	Billion	25.0	286,593	-	-
Tobacco Products	Ton(000)	4.5	33,174	-	-
Cut Tobacco	"	1.6	18,483	-	-
Molasses Tobacco	"	3.2	12,354	-	-
Subtotal			340,604	-	4%
III. Food Preservation					
Canned & Preserved Goods	Ton(000)	48.9	29,268	11%	11%
Preserved Seafood	"	3.6	2,767	-	-
Frozen Foods	"	1.9	873	-	-
Dehydrated Foods	"	7.1	7,016	5%	5%
Subtotal			39,924		9%
IV. Edible Oil and By-Products					
Cottonseed Oil	Ton(000)	169.2	20,422	1%	-
Cottonseed Oil Cake	"	436.0	3,310	2%	3%
Other Edible Oil	"	10.1	7,721	11%	6%
Other Oilseed Cake	"	30.1	703	-	-
Margarine	"	133.0	29,793	3%	3%
Soap	"	243.1	43,141		-
Animal Feed	"	716.2	12,450		-
Subtotal			117,540		1%
V. Beverages					
Distilled Alcoholic	Box(000)	3070	10,485	2%	7%
Wine	Ton(00)	1.3	1,202	-	-
Beer	Million Litres	38.8	11,969	-	-
Malt	Ton(000)	1.6	164	-	-
Yeast	Ton(000)	10.0	1,727	-	-
Alcohol	Million Litres	31.6	5,027	-	-
Vinegar	" Litres	9.3	390	-	-
Carbonated Waters	" Bottles	1184	29,007	32%	32%
Subtotal			59,771		20%
VI. Milk and Dairy Products					
Soft Cheese	Ton(000)	137.1	71,835	94%	94%
Other Cheese Products	"	12.6	11,529	32%	38%
Butter	"	1.4	1,751	96%	96%
Milk	"	67.8	6,189		-
Cream Products	"	3.6	3,263	86%	89%
Yoghurt	"	5.3	1,061		-
Other	"	-	404		-
Subtotal			96,032		80%
TOTAL (Food Processing Chamber)			776,275		18%
VII. Cereal Products[1]					
Milling	Ton(000)	5,037	101,131	36%	36%
Pasta		114.3	10,301	76%	76%
Starch and Glucose	"	66.5	8,155	-	-
Subtotal			119,587		37%
TOTAL FOOD AND CEREALS			895,862		21%

are controlled.

The number of establishments in the food processing industry is difficult to estimate although Table A-3 shows that there are roughly 850 establishments with over 10 employees each. Of these, about 800 are private firms while only 40 are private sector companies. It should be emphasized, however, that this figure excludes bakeries of which there are several hundred in Egypt.

In terms of geographic distribution, the membership of the Federation of Egyptian Industries suggests that about 46% of the establishments are located in Cairo, 22% are in Alexandria, and the remaining 32% are distributed elsewhere in Egypt. It is evident that the nature of this subsector lends itself to greater geographic decentralization than is the case with most other industrial subsectors.

b. Performance of the Subsector

In terms of value of production, the food processing industry is the most important among industrial subsectors. As was seen Chapter III the value of total food production in 1980 as estimated by the Ministry of Planning was about LE 2 billion, or almost 35% of total manufacturing output. Although Ministry of Industry data shows only LE 1.5 billion in food output, this figure excludes artisans and some public companies not affiliated to the Ministry.[1]

The food processing subsector has shown continuous growth since 1976, but at a slower rate than the manufacturing sector as a whole. Between 1976 and 1980, the gross value of output in current prices increased at a 17.2% annual rate, compared to 20.3% for all industry. Growth in the private sector, however, was 19% per year resulting in an increase in the private sector share of food processing to almost 30% in 1980 from 24% in 1976.

Food production in Egypt falls far short of meeting domestic demand as is indicated by the trade balance for food items. Both agricultural raw material and processed foods are imported in significant volumes while exports are very limited. The severity of this food deficit

[1]The gross value of output shown here is heavily understated since it excludes the value of Government feed subsidies.

Table A-3

Estimated Number of Establishments in the Food Processing Industry

	Total	Public	Private[1]
Sugar and Confectionary	330	12	320
Tobacco and Cigarettes	142	2	140
Food Preservation	42	4	40
Edible Oil and By-Products	48	9	40
Beverages	17	2	15
Milk and Dairy Products	46	1	45
Cereal Products[2]	215	20	200
Total	840	50	800

[1] Over 10 employees.

[2] Excludes bakeries and rice hulling.

Source: Federation of Egyptian Industries and Arthur D. Little International estimates.

is reflected in the Government's having made food self-sufficiency as the nation's top priority. Private food processing establishments exported slightly under LE 1 million worth of goods, of which almost one-half was preserved foods such as canned juices.

c. Role of Small Scale Enterprises

The participation of SSEs in food processing is described below for each of the principal industrial groups and is largely based on information from the Chamber of Food Industries, recent Arthur D. Little studies in the food subsector, and other available material.

• Sugar and confectionary products include sugar and molasses on the one hand, and sesame pastry, chocolate, biscuits and other confectionary products on the other. Sugar and molasses are entirely produced by large public sector mills although joint ventures for beet sugar have been recently established. These new large scale mills would be classified as private sector establishments. The only small scale establishments in this area produce edible molasses. Located near large sugar mills, these establishments are generally frowned upon by public officials for using materials needed for sugar.

The confectionary part of this industry group is dominated by private establishments, and many of them are small. A recent survey conducted by the Chamber of Food Industries indicates that of 375 firms, 177 have less than 25 workers (about 75 of these have less than 10 workers); 76 establishments employ between 25 and 50 workers; 83 have between 50 and 100 workers; and 39 have over 100 employees. An estimated 10 firms are particularly large and sophisticated.

We estimate that establishments with between 10 and 50 employees account for about 15-20% of the value of confectionary output. In contrast SSE's in the same size range produce an estimated 5% of sugar and molasses which implies that the SSE share of total sugar and confectionary output is about 8-10%.

• Tobacco and cigarettes are produced by 2 large public companies and about 140 private enterprises. The public sector companies produce

all cigarettes and much of the cut tobacco and tobacco products and account for 98% of total output in this industry group. Among the private companies, 10 large firms employing 100 to 300 each produce most of the rest. SSEs which number about 30, produce only a mixture of rough-cut tobacco and molasses for sale to smoke shops. These SSE's produce only 2-3% of the value of all tobacco products.

• Food preservation include all canned, preserved, frozen and dehydrated foods. Four public sector companies produce most canned, preserved and frozen foods. There are only about 40 private companies in this area, mostly in jams, juices, pickles, ice, meat by-products and other miscellaneous products. Although about 35 of these enterprises are small scale, it is estimated that they produce only about 1-2% of the output from this industry group.

• Edible oil and related products involves the processing of oilseeds into edible oil, oilseed cake, margarine, soap and animal feeds. Although there are about 40 private companies, they represent only 1% of total output. Private companies play a small role in soybean and other edible oils, margarine, and oilseed cake. Only 1 firm is believed to have over 50 employees. A much greater private sector role is expected in the future in oilseed processing and animal feeds, but this would involve large scale firms.

• Beverages include alcoholic beverages, carbonated water and soft drinks, yeast, and vinegar. While two public sector companies produce almost all alcoholic beverages, there are a few SSE's producing cheap spirits based on alcohol purchased from the public companies. The private sector is important in the carbonated beverage area, but most of the establishments involved are large. In total, the estimated 12 SSEs account for about 1% of output.

• Milk and dairy products is the industry group where SSEs are most important. We estimate that 80% of the milk and dairy output is produced by SSEs As was seen above, almost all dairy products are produced by private establishments. An estimated 45

of these have over 50 employees. In addition, there are a large number of smaller establishments which produce cheese or other products using milk from their own few cows or those of their neighbors. One public sector enterprise produces all of Egypt's commercial milk as well as some cheese and other products. About 60% of the milk is distributed to private cheese producers.

• Cereal products include flour, bakeries, pasta, and starch and glucose plants. As was noted earlier, data on bakeries is not available, but SSEs are thought to be dominant here. SSEs are also important in the flour milling area, since about one-third of the flour originates in small rural mills. Pasta, particularly macaroni is produced in about 60 private establishments, all of which are thought to have between 10 and 50 employees. Starch and glucose production is entirely public sector. Overall, SSEs are estimated to number about 175 and account for about 30% of all cereal products.

In summary, the total number of SSE in food processing is estimated to be about 650. We estimate that these establishments produce approximately 15% of the total value of processed foods. Dairy and cereal products, which account for 57% and 27% respectively of SSE food output, are by far the most important areas of small scale activity.

4. Metals and Engineering Subsector

a. Structure of the Subsector

Although "metallurgy" and "engineering" products are sometimes treated as distinct subsectors in Egypt, they are also commonly combined. Furthermore, there is no systematic distinction between the products in the two industries. In international classification systems a distinction is usually made between primary metals (metallurgy) on the one hand, and metal fabrication, machinery and equipment on the other. However, available data in Egypt do not clearly make this distinction. Consequently, both industries are treated together here, although efforts are made to describe each one separately to the extent possible based on international definitions.

The engineering products industry is usually broken down into five principal components: metal fabrication, non-electrical machinery, transportation equipment, electrical machinery, and professional and scientific equipment. Table A-4 summarizes the structure of this subsector. It shows that fabricated metal, electrical machinery and transportation equipment are each believed to generate about one-third of the output value of engineering products, while non-electrical machinery accounts for 7% and professional and scientific equipment for 3%.

The private sector, which accounts for about 23% of total engineering production, plays a moderate role in the subsector. This private rate varies greatly from a high of 55% of production for metal fabrication to a low of 5% for transportation equipment.

Approximately 1900 establishments with over 10 employees are involved in the manufacture of engineering products. Of the 1845 private establishments, about 1800 are concentrated in the metal fabrication area. The 56 public sector enterprises include about 12 military factories producing civilian products.

The primary metals industry can be divided into two parts: ferrous and non-ferrous metals. Although ferrous metals, particularly iron and steel, have traditionally been by far the most important component of the primary metals industry, aluminum and other non-ferrous metals now have greater significance.

The public sector heavily dominates the primary metals industry. In 1980, only 10 publicly owned enterprises produced an estimated 94% of the value of primary metal output. Private sector activity is limited to about 90 small foundries and rolling mills.

b. Performance of the Subsector

The metals and engineering subsector as a whole experienced above average growth in the 1976 - 1980 period. In 1980, the value of output (as reported by the Ministry of Industry) reached LE 1.1 billion compared to LE .4 billion in 1976, representing a 26.1% average annual growth rate. In contrast, all industry experienced a 20.3% annual growth rate.

Table A-4

Structure of the Engineering and Metal Products Subsector

Engineering	Total Production 1980 (LE Million)	Public Sector Number of Firms	Public Sector Percent of Output	Private Sector Number of Firms[1]	Private Sector Percent of Output
Fabricated Metal	280		55%	1,800	55%
Non-Electrical Machinery	65		80%	10	20%
Electrical Machinery	280		90%	10	10%
Transportation Equipment	280		95%	15	5%
Professional & Scientific Equipment	25		90%	10	10%
Total	930	56[2]	77%	1,845	23%
Metallurgy					
Ferrous Metals		7		40	
Non-Ferrous Metals		3		50	
Total	430	10	94%	90	6%

[1] Ten or more employees. Excludes over 10,000 workshops.

[2] Includes 12 military factories producing civilian products.

Sources: Federation of Egyptian Industries; Arthur D. Little, An Assessment of Egypt's Industrial Sector; and Arthur D. Little estimates.

Growth in the primary metals area can be attributed to a major raw aluminum complex as well as to some improvements to iron and steel plants. While the output of primary metals has expanded, much of the growth in the subsector has occurred in the engineering products area particularly in metal fabrication. In general, growth in the subsector has been due to heavy public sector investment in basic industries, and the expansion of opportunities for the private sector.

Growth has been more rapid in the private than in the public sector. Compared to an estimated 20% average annual growth in the public sector between 1976 and 1980, private sector growth was about 25% annually. This is partly due to very large joint ventures (which are always considered private even if they include Government participation) and partly to private Egyptian investment.

In terms of trade, the subsector has performed relatively poorly. Except for increasing aluminum exports, the subsector generates only limited exports. However, the private sector exported about LE 17.1 million worth of goods in 1980-1981, mostly aluminum and Khan el Khalily products. This figure represents a relatively significant 38% of private sector manufactured exports.

These exports, however, must be viewed in terms of the entire trade picture. For example, in 1977, imports of engineering products alone amounted to LE 149 million. Imports of automobile parts, construction equipment, industrial equipment, and electrical and telecommunication equipment were particularly important. In addition, about LE 66 million in metallurgical products were also imported in 1977.

c. Role of Small Scale Enterprises

The small scale enterprises in the primary metals and engineering products subsector are highly concentrated in metal fabrication. However, SSEs also represent a high percentage of the private sector firms in other product areas, even though the private sector share of

output in these areas is small. The role of SSE s in each of the sub-sector's component industrial groups is briefly described below.

• Primary metals production is almost entirely dominated by the public sector. Production from private enterprises represents only 5-6% of total output. Most of the private enterprises are small foundries and rolling mills which use both domestic and imported scrap or waste metal as raw material. Of the estimated 90 private sector companies it is believed that about 60 have between 10 and 50 employees while the other 30 have between 50 and 100 workers. The average size is between 30 to 40 workers and LE 100,000 in fixed capital. The firms with 10-50 employees account for an estimated 40% of the private sector output of primary metals.

• Metal fabrication in the private sector is divided into two types of establishments. The first group, which includes as many as 600 private firms, manufactures a fixed line of products. The second group, numbering about 1,200 firms, is largely made up of workshops doing custom-order metal working for clients. In addition to these 1800 private establishments with an average of over 10 employees, there are also believed to be over 12,000 smaller workshops involved in metal working. Items produced by the private sector include screws, nuts, bolts, cutlery, pots and pans, metallic blinds, metal doors and window frames, and other miscellaneous metal parts and products for households and industry.

The Chamber of Engineering Industries estimates that about 55% of all metal fabrication is done by private establishments with between 10 and 50 employees. The largest firms are believed to have about 25 employees and up to LE 250,000 in fixed capital.

• Non-electrical machinery is mostly produced by public sector enterprises. The estimated 10 private establishments account for only about 10% of machinery output. Interestingly, the private establishments are primarily involved in producing machine tools for small scale industry, particularly lathes, bench drills, column drills and woodworking machinery.

All 10 private companies can be classified as SSE s since they have between 15 and 40 employees. However, this industry is considerably more capital intensive and private establishments average LE 100,000-500,000 in fixed capital.

• Electrical machinery is produced by about 10 private establishments. These firms are mostly involved in producing components and accessories such as insulated wire, batteries, fixtures, bulbs and plugs. Some air conditioners, water heaters, and other appliances are also produced by private establishments. Otherwise, the electrical machinery area is dominated by public sector enterprises. Approximately 8 of the 10 private firms have between 10 and 50 employees and these account for about 65% of the output in this area.

• Transportation equipment assembly is also dominated by the public sector. The only role for private sector firms in this area is the manufacture of some automobile and bicycle spare parts. In addition, joint venture companies are involved in truck and bus assembly operations. Overall, the private sector accounts for only about 5% of the transportation equipment production, and SSE s are responsible for an estimated 30% of this. Of the 20 private sector establishments, about 17 have an average of between 10 and 50 employees.

• Professional and scientific equipment manufacturers represent a very small group in Egypt. Total output is only about LE 25 million, and we estimate that the private sector accounts for about 10% of this. There are probably only about 10 private establishments, all of them with fewer than 50 employees.

To summarize, SSE s are relatively important in the primary metals and engineering products subsector. Of the 1940 private firms, approximately 1900 are believed to have between 10 and 50 employees, and most of the rest have fewer than 100 workers. The output of these SSE s in 1980 was estimated at LE 202 million, or 15% of total subsector production. This represented 43% of total private sector production in that year. The SSE participation in this subsector, however, is heavily concentrated in the metal fabrication area.

5. Chemicals Subsector

a. Structure of the Subsector

The chemicals subsector, as generally defined in Egypt, is even more complex than is usually the case in international classification systems. In addition to industries normally associated with chemicals (chemical fertilizers, inorganic and organic chemicals, industrial gases, plastics, paints and varnishes, rubber and rubber products, pharmaceuticals, perfumes and cosmetics, etc.) the subsector is also defined to include pulp and paper, wood and woodworking, and leather and leather products industries.

As was noted in Chapter III, however, some sources isolate woodworking and leather products as distinct subsectors. In tis report we have opted to keep woodworking in the chemicals subsector in order to discuss all components of the forestry products industry together. Since forestry products are considerably different from the rest of the subsector (referred to here as the chemicals industry) we have strived to describe the two industries separately. Leather and leather products are treated as a separate subsector.

The structure of the chemicals subsector is summarized in Table A-5. Total output in 1980 is estimated to have been LE 671.6 million of which approximately 70% is in the chemicals industry and 30% is produced by the forest products industry. The key components of the chemicals industry are pharmaceuticals, rubber and rubber products, chemical fertilizers and plastics. Production of primary inorganic and especially organic chemicals is very limited, indicating that much of the chemical industry is based on imported materials. In the forestry products area, the most important components are woodworking products followed by pulp and paper and wood. Again, it is evident that most raw materials are imported.

The public sector is particularly important in primary and capital intensive chemical manufacturing. Hence, it completely monopolizes areas such as chemical fertilizers, inorganic chemicals, industrial gases, and sawmilling and lumber, while dominating the production of rubber products and pulp and paper. Overall, the public enterprises

Table A-5

Structure of the Chemicals Subsector

Chemical Industry	Value of 1 Output, 1980 (LE Million)	Public Sector % of Output	Private Sector No. of Firms	Private Sector % of Output
Fertilizers	50	100	-	-
Inorganic Chemicals	25	100	-	-
Industrial Gases	10	100	-	-
Plastics	40	60	170	40
Paints, Varnishes & Ink	25	30	15	70
Rubber & Rubber Products	40	85	15	15
Pharmaceuticals	210	75	20	25
Perfumes & Cosmetics	35	20	70	80
Other Chemicals	42.4	70	10	30
Subtotal	477.4	74	300	26
Forestry Products Industry				
Pulp and Paper	75	90	10	10
Wood	20	100	-	-
Woodworking Products	99.2	2	250	98
Subtotal	194.2	46	260	54
Total	671.6	65	560	35

[1] Estimated distribution of 1980 output as reported by Ministry of Industry.

Source: Total subsector output from Ministry of Industry; number of firms and distribution of output from Federation of Egyptian Industries and Arthur D. Little estimates.

account for about 65% of subsector production, including 74% in the chemical industry and 46% of forestry products.[1]

The Chambers of Chemical and Woodworking Industries estimate that there are about 560 private enterprises with over 10 employees operating in the subsector of which about 300 establishments are in the chemicals industry and 260 are in the forestry products area. In addition there are at least 18,000 artisanal establishments in the woodworking area.

Private sector firms account for about 35% of subsector output, including 26% in chemicals and 54% in forestry products. These etablishments are particularly important in lighter industries such as perfumes and cosmetics, simple plastic products, pharmaceuticals, and woodworking.

While the establishments in the chemicals industry are concentrated in Cairo and Alexandria, the forestry products establishments seem to be better geographically distributed. A survey of Chamber of Chemical Industry members indicates that about 75% of the firms are located in Cairo, about 20% in Alexandria, and only 5% elsewhere in Egypt. In contrast, only about 50% of the Chamber of Woodworking members are located in Cairo and Alexandria respectively. A large number, over 35%, are located in the Damietta region while the rest are dispersed throughout Egypt.

b. Performance of the Subsector

The chemicals subsector has shown above average growth in the 1976-1980 period. Total output in current prices reached LE 71.6 million in 1980, compared to LE 292.7 million in 1976 (based on Ministry of Industry data). The implied growth rate of 23.1% per year compares to 20.3% for manufacturing as a whole. With a total expansion in the value of output between 1976-1980 of about 140%, growth in the chemical industry was more substantial than the 100% increase experienced in woodworking.

As has been the case for most industrial subsectors, the private

[1] The Ministry of Industry and Ministry of Planning data presented in Chapter III showed a public sector share of chemicals of 38% and 22% respectively for 1980.

sector has outperformed Government owned enterprises. In the chemical industry, expansion by private firms between 1976-1980 is estimated to have been about 165% compared to about 130% for public sector enterprises. Similarly, private enterprises in the forest products industry showed a superior performance.

In terms of exports, the chemicals subsector, and particularly the private firms have performed relatively well. In 1980-1981, the private sector was responsible for about LE 25.1 million in exports of which LE 24.4 million were in chemicals (particularly cosmetics, jasmine oil and paste and essential oils) and LE .7 million were wood-working products. The chemical subsector generated about 43% of total private sector exports in that year.

However, in the context of the total trade balance for the subsector this export performance is not so positive. Large scale imports of primary chemical and forestry materials are required to supply Egyptian industry.

c. Role of Small Scale Establishments

With a few exceptions, SSE's are believed to represent an important proportion of the private sector establishments and output in the chemical subsector. This role is described below for each of the principal product groups.

Chemical Industry

- Chemical fertilizer production is presently monolpolized by a few large government owned enterprises. Although some joint ventures are anticipated in this area, these would also be very large.

- Inorganic chemicals and industrial gases are both entirely produced by public sector enterprises. There is no SSE role in this area.

- Plastics is an area where the private sector is relatively important. Compared to only two public sector enterprises, there are about

170 private establishments producing about 40% of all plastic products. An estimated 15 private establishments employ more than 50 workers with the largest firm employing about 200 people. The smallest private establishments have 10 employees. Therefore, about 145 firms are considered to be SSE's with between 10 and 50 employees. We estimate that those establishments account for about 75% of private sector plastic output. Products produced inlcude plastic bags, synthetic leather, packaging, and heavy duty plastic sacking.

• Paints, varnishes and inks is another important area for private sector activity. The 15 private establishments account for about 70% of total output while only a few public companies account for the rest. Private companies are particularly important in oils and solvents. Only one private establishment has over 50 employees while the rest average between 10 and 25 workers. It is estimated that SSE's with between 10 and 50 employees would produce about 75% of private output.

• Rubber and rubber products is evenly divided into tires and other rubber products. All domestic tire production is monopolized by one Government owned company. A second public sector enterprise controls most of the production of other rubber products. Private establishments, estimated to number about 15, account for about 15% of production. Many of these produce rubber parts for shoes or transportation equipment. None of the private establishments has more than 50 employees so that all output can be attributed to SSE's.

• Pharmaceuticals are produced by both Government owned enterprises and public-private joint ventures. The latter, mostly joint ventures with foreign pharmaceutical companies, are classified as private sector establishments. It is estimated that these firms account for about 25% of pharmaceutical output. However, none of these is believed to be an SSE.

• Perfumes and cosmetics is a very important area of both private sector and SSE activity. Approximately 70 private establishments currently produce about 60% of all perfumes and cosmetics while 2 public sector enterprises account for the remaining production.

Of the private establishments, 25 have an average of over 50 employees and about 60 have between 10 and 50 workers each. We estimate that the SSE's with between 10 and 50 employees are responsible for about 70% of private sector output.

As was noted earlier, perfumes and cosmetics are a particularly important source of private sector exports. Although data on SSE exports is not available, it is likely that smaller firms contribute significantly to exports of essential oils, perfumes, and other related products.

• Other chemicals include glue and gelatin, chemical agents, insecticides, matches, glycerine, and synthetic detergent. The private sector is active in glue and gelatin (over 90% private), insecticides (about 10% private), matches (5% private) and synthetic detergents (10% private). Overall, there are approximately 10 private establishments which produce about 30% of these products. We estimate that 8 of these firms, representing 75% of private output, are SSE's with between 10 and 50 employees.

Forestry Products Industry

• Pulp and paper is a large industry which is made up of four public sector companies and ten small private mills. The private mills use waste materials to produce recycled paper and crude wrapping papers. This activity represents only 10% of pulp and paper production. All of the private mills have between 10 and 50 employees.

• Woodworking primarily involves the production of furniture and materials for home building such as door and window frames and floor tiles. The Chamber of Woodworking Industries estimates that about 98% of all woodworking is done by about 250 private establishments and as many as 18,000 artisans. Artisanal firms tend to have less than ten workers each, but many are members of large cooperatives which support them in the procurement of raw materials.

The average size of private establishments (with over 10 employees) is about 30 workers. However, about 10 firms have over 250 employees

employees. The remaining 180 SSE's account for an estimated 25% of private sector output.

• Processed wood, particularly composite wood, plywood, synthetic wood, and sawmill products, is all produced by public sector mills. Private woodworking establishments largely depend on these mills for their raw materials.

To summarize, the SSE contribution to the chemical subsector involves about 430 establishments, or 77% of all private firms in the subsector. About 57% of the SSE's are in the chemical industry, particularly in plastics and cosmetics. Most of the remaining SSE's are in woodworking.

SSE's in the chemical subsector account for about LE 83 million or 35% of LE 235 private sector output. About LE 51 million of these is concentrated in the chemical industry while SSE's in the forestry products industry are responsible for about LE 32 million in output.

6. Leather and Leather Products Subsector

a. Structure of the Subsector

The leather subsector in Egypt is defined to include three types of establishments: tanneries, footwear manufacturers, and makers of other leather products. Table A-6, which shows the relative importance of each component, indicates that footwear is by far the subsectors largest segment in terms of value of output. While footwear represents about 86% of subsector output, tanning and other products account for only 8% and 6% of output respectively.

The value of subsector output for 1980 is estimated here to be LE 451.7 million, while in Chapter III, Ministry of Industry data showed output of only LE 413.7 million. The latter figure does not include the estimated 38 million in tannery production. This omission is due to the tendency in Egypt to include all or part of the leather subsector within the chemicals subsector. Here, all leather and leather products are considered together.

Leather and leather products is the subsector where private establishments make the greatest relative contribution to production. There

Table A-6

Structure of Leather and
Leather Products Subsector

		Public Sector		Private Sector	
	(LE millions)	# of Firms	% of Output	# of Firms[1]	% of Output
Tanning	38	2	25	280	75
Footwear	389	1	5	350	95
Leather Products	24.7	-	-	150	100
TOTAL	451.7	3	6	780	94

[1]Excludes artisanal firms with less than 10 employees

are estimated to be about 780 private establishments with over 10 employees each, compared to only 3 Government-owned enterprises. The private firms are responsible for about 94% of total output, including 100% and 95% of other leather products and footwear respectively.

b. Performance of the Subsector

Total subsector output increased to LE 451.7 million in 1980 from LE 183.7 million in 1976. The 146% growth (in current prices) compares favorably with the 110% expansion of total manufacturing. This trend was particularly significant in the footwear area where a 270% growth in value of output was experienced. In terms of quantity, production increased to 56 million pairs from 37 million pairs. Production of tanned leather expanded only 70% in value between 1976-1980.

Since exports of tanned leather were banned in 1979, exports from this subsector are limited to footwear and other leather products. Subsequently overall performance of the subsector in terms of outputs has been somewhat adversely affected. The other implication of this ban is that virtually all exports are generated by the private sector.

In 1980-1981, exports in this subsector were valued at LE 5.6 million. The principal products involved were shoes, leather apparel, and ladies handbags. However, exports of footwear have declined 52% in terms of value since 1976 while exports of leather products declined 33%. This decline appears to be primarily due to decreased trade with Eastern European countries .

c. The Role of Small Scale Enterprises

Of the 780 private establishments in the subsector, we estimate that almost all are SSE's with between 10 and 50 employees. This excludes a large number of artisans which are also active in the subsector. The SSE's are responsible for about LE 402 million or 89% of leather and leather products output. The SSE role is described below for each of the three principal product groups.

• Tanned leather is produced by about 280 private and 2 public sector establishments. The private enterprises, which account for 75% of production, range in size between 2 and 17 tanning drums, and from 5 to 50 employees. About 90% of the private establishments are concentrated in Old Cairo, despite efforts to relocate them elsewhere for health reasons. Production from the public sector enterprises in Cairo and Alexandria has not increased during the past years, resulting in a growing role for private firms.

• Footwear production is all private except for one public sector company which produces very cheap shoes for the mass market. In addition, several joint ventures are being established, but these are not yet fullt on line. Almost all of the 350 private establishments have fewer than 50 employees and it is estimated that SSE's account for 95% of private sector production.

• Other leather products include leather apparel, handbags, wallets, gloves, belts, and other miscellaneous items. This product area is entirely dominated by private enterprises, all of which are very small except for one joint venture company producing ladies handbags. SSE's are believed to account for 90% of production.

7. Building Materials Subsector

a. Structure of the Subsector

The building materials subsector is defined here to include all manufactured products required by the construction industry. This includes cement, gypsum and plaster, cement and asbestos products, bricks, marble, refractories, porcelain and chinaware and glass and crystal. Excluded from this definition are wood products, steel reinforcing bars and other metal products used in construction, as well as the mining of non-metallic minerals used in the production of building materials.

This definition of building materials is similar to the one used by the Ministry of Planning and referred to in Chapter III. In contrast, the Ministry of Industry includes private sector activity in building materials together with glass, ceramics, refractories, and non-metallic minerals, but excludes public sector building material enterprises which are associated with the Ministry of Housing. The Federation

of Egyptian Industries considers all building materials activity, but also includes construction in its Chamber of Building and Construction Industries.

The Ministry of Planning, whose definition of the subsector is consistent with ours, calculates that the value of building materials output in 1980 was about LE 202.5 million. This figure, however, is likely to be underestimated largely becuase the manufacture of clay bricks from agricultural clay has been banned to preserve valuable soil. Although we believe that many establishments would not report this illegal output, we have not adjusted total output for lack of any data on the volume of additional output.

Our estimates of the distribution of building materials output among the different product groups is shown in Table A-7. Cement and glass, which together represent 65% of output, are by far the subsector's largest components. Other important areas include bricks, procelain and china, refractories, and gypsum and plaster.

Government owned enterprises produce about 80% of the value of all building materials. These enterprises account for the total production of cement, gypsum and plaster, and sand bricks although this situation is changing with the establishment of several joint ventures. Public sector enterprises produce more than half of all other building materials except for clay bricks.

We estimate that there are about 1850 private establishments with an average of over ten employees. About 1000 of these are involved in the production of bricks and it is likely that a significant number of additional artisinal firms are active in this area. An additional 700 firms are producing cement tiles. Overall, private establishments are responsible for 20% of the value of building materials production. The private sector accounts for 85% of red and clay bricks, 40% of glass and crystal, and 30% of cement and asbestos products. It has a smaller role in marble, refractories, and porcelain and china.

Table A-7

Structure of the Building Materials Industry

	1980 Output[1] (LE million)	Public Sector % of Output	Private Sector # of Firms	Private Sector % of Output
Cement	86.0	100	-	-
Gypsum and Plaster	10.0	100	-	-
Cement and Asbestos Products	12.0	80	700	30
Clay and Red Bricks	14.0	15	1,000	85
Sand and Other Bricks	5.0	100	-	-
Marble	5.0	75	25	25
Refractories	11.0	75	50	25
Porcelain and Chinaware	13.0	80	20	20
Glass and Crystal	45.0	60	45	40
Other	1.5	80	15	20
TOTAL	202.5	80	1,850	20

[1]Total output from Ministry of Planning. Distribution based on 1977 pattern and estimated 1977-1980 growth.

Source: Federation of Egyptian Industries, Ministry of Planning and Arthur D. Little, Inc. Estimates.

A survey of the 198 members of the Chamber of Building and Construction Industries shows that 61% of these firms are located in the Cairo area while 14% are in Alexandria and 25% dispersed throughout Egypt. However, this distribution excludes most of the brick establishments which are located throughout the Nile Valley as required by local building requirements. Most are probably located in the Delta.

b. Performance of the Subsector

The value of building materials output (in current prices) increased about 60% between 1977 and 1980. For 1977, the Federation of Egyptian Industries reports that total output was valued at LE 127 million compared to the LE 202.5 million estimated by the Ministry of Planning for 1980.[1] This performance is relatively disappointing in view of the tremendous building materials requirements for meeting housing, infrastructure and other construction needs. In order to improve the situation, the Government has made the expansion of the building materials industry one of its top objectives.

Available data is not adequate to measure the relative growth of private and public activity in the subsector. However, it is generally believed that growth has been much more rapid within the private sector. Although some new capacity has been developed in the public sector, much of the investment has been channeled into replacing or improving existing capacity, and into new joint ventures. Since joint ventures are classified as private, these contribute to the performance of private sector activity.

Exports from this subsector are minimal. In 1980-1981, exports of building materials generated by private enterprise amounted to only LE 1 million. The principal export items were clay products and insulating material.

c. Role of Small Scale Enterprises

The contribution of SSE's to the production of building materials is reviewed below for each of the principal product areas.

- Cement has been entirely produced by four large public sector enterprises. Although several joint ventures are being established,

[1] The latter figure includes artisans.

SSE's will continue to have no role in this area.

• Gypsum and plaster is also exclusively produced by government owned enterprises.

• Cement and asbestos products include a range of items such as pipes, bricks, asbestos plates, cement tiles, etc. The public sector produces all these products except for cement tiles which are entirely made by private enterprises. There are believed to be about 700 small establishments involved in cement tiles, and almost all of them have fewer than 50 employees. We estimate that SSE's are responsible for 85% of the private sector production of cement and asbestos products.

• Clay and red bricks combines the small private establishments using agricultural clay and the new desert clay enterprises set up to replace them. The latter are both public and private, while joint ventures are also being sought. Agricultural clay brick establishments, which nubmer about 1000, range in size from 10 workers and LE 5000 in capital to 100 workers and LE 20,000 in capital. We estimate that no more than 10 establishments average over 50 employees each. SSE's produce about 95% of the private share of total brick production. It should be noted that very small brick producers are not included in either the estimates of output or number of firms.

• Marble quarrying and dressing is another area of private sector activity. About 25 small private companies operate quarries and produce about 25% of the value of marble output. These firms range in size from 25 to 1000 employees. The latter is a joint venture company. About 12 companies have between 10 and 50 workers each and these account for an estimated 15% of private sector output.

• Sand bricks, as well as other substitutes for red bricks, are all produced by public sector companies. It is likely, however, that this area will be opened up to private enterprises in the near future.

• Refractories are produced by both public and private enterprises, with the private sector accounting for about 25% of output. An estimate 50 private firms are active in the production of refractories. Of these 10 have between 50 and 200 employees each while the other 40 range in size between 10 and 50 employees each. The SSE's with between 10 and 50

workers are responsible for about 45% of private sector production.

• Porcelain and chinaware is produced by one Government owned company, two joint ventures and about twenty smaller private companies. Private sector output, excluding the joint ventures, is about 20% of the total. The 20 smaller companies range in size between 25 and 100 employees with about 10 fo these averaging fewer than 50 workers. We estimate that SSE's produce 30% of the value of private sector output.

• Glass and crystal of all types are included in building materials, even though most items are not used in construction. Flat glass is entirely produced by one Government owned enterprise, although a new joint venture is being established. About 45 private companies are involved in the manufacture of a variety of glass products and account for 40% of total output. In terms of size, about 10 of these establishments employ an average of between 10 and 20 people; 5 have between 20 and 50 employees, and the remaining 30 have over 100 employees each. Only 10% of the private sector output is produced by SSE's.

• Other building materials, include stones for grinding and cutting, insulating materials and clay products. Stone clay and alabaster handicrafts are excluded from consideration here. There are about 15 private enterprises producing 20% of the value of output in this category. All of these are probably SSE's with between 10 and 50 employees. As noted earlier, much of the private sector exports of building material are miscellaneous items from this category.

In summary, there are about 1855 private establishments in the building materials subsector of which 1792 (97%) are SSE's with between 10 and 50 employees. These small establishments produce about 45% of the private sector's share of building materials output. Based on the 1980 estimate of total output, this would amount to LE 18.3 million which is attributable to SSE's.

APPENDIX B

RESULTS OF THE EXTENSIVE INTERVIEW PROGRAM

A. SUMMARY OF EXTENSIVE INTERVIEW FINDINGS

1. Introduction

A total of 200 companies were interviewed in our extensive interview program using the questionnaire presented later in this appendix. The actual interviews were conducted by a team managed by Mr. Badawi, a principal of an experienced public opinion and survey company in Egypt. The survey itself was designed by Arthur D. Little, International, Inc. and reviewed by ARICON before being submitted to CAMPAS[1] for approval.

This section of the appendix is designed to give the reader an overview of the survey findings. Section B of this appendix describes the methodology and criteria used in selecting the firms that were interviewed, and Section C of this appendix provides a much more detailed account of the survey findings as well as the survey questions.

2. Characteristics of the Sample Firms

About half of the 200 interviews included in this analysis involved enterprises with 11 to 24 employees while an additional 40% of the firms have between 25 and 49 workers. The rest of the establishments interviewed have over 50 employees. This distribution is similar to the proportion of SSEs in the different employment size categories.

The 200 interviews also include firms involved in all industrial sub-sectors. More foodstuff, textile and engineering firms were visited, in contrast to fewer metallurgy and printing establishments. This is consistent with the relative importance of SSEs in the different sub-sectors.

Approximately 25% of the firms interviewed were organized as individual proprietorships, and 68% were organized as either partnerships or limited partnerships (37% and 31% respectively). The sample did include five firms organized under Law 43, and the rest of the sample was made up of several privately held corporations and two publicly held corporations.

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[1] CAPMAS approved most of the questions in the questionnaire, however they did not allow us to ask questions on capacity and working capital (see questions I-J, I-L, and I-M).

The vast majority of the firms sampled had been established prior to 1974 (92%) indicating a slow growth in the number of new firms in the system. However, of the 128 that have expanded operations since their establishment, 72% have done so after 1974, indicating an improved business climate for expansion.

3. Production Constraints

A total of 114 firms, or 57% of the enterprises interviewed, perceived a problem with regards to the adequacy of their production equipment and 48% perceived a problem with the technology or processes being utilized. Among those that expressed problems with the adequacy of their production equipment, the major complaints were: the frequency of machine breakdowns due to the age of equipment; the lack of spare parts with which to fix the machines; and, frequent electrical blackouts or brownouts. These firms believe that new technologies would be useful, but that locating and installing the new equipment would be difficult in the environment in which they operate.

Sixty-three percent of those interviewed responded that maintenance and repairs is not a major problem area, although the lack of both spare parts and trained individuals to service equipment are perceived as the major constraints in this area. The lack of available information which they could use to select new and appropriate technology or processes is also perceived as a problem by 30% of those interviewed.

When asked what problems the enterprise encounters in finding employees, the response shows that while there appears to be little difficulty recruiting foremen, there are acute problems in locating enough skilled labor for the factories. Only 16% of those interviewed believe that they do not have a problem in finding or employing skilled labor. The major constraint is the limited pool of skilled workers, which is attributed as being largely due to the departure of skilled workers abroad.

When asked about the supply and quality of raw materials, approximately 50% of those interviewed answered that there is no major problem in either of these areas. However, the other 50% believe that there are

raw material shortages and supply interruptions, while local materials are of inconsistent quality.

In the area of final product quality, approximately 64% of the respondents believe that there is no problem, while those that do recognize a quality problem argue that it is either due to the quality of the raw material being used in the process, the lack of skilled workers, or the quality and age of the production equipment being used to manufacture the product.

Approximately 80% of the firms interviewed felt that the production constraints that they faced were also faced at least partially by their competitors. The overall production constraints which affected the sample the most in order of importance were: the lack of skilled workers, the non-availability of raw materials in the quantity and/or quality desired, and problems related to the adequacy of the production equipment.

4. Marketing Constraints

Interviewees were asked if they have any problems with sales, distribution or pricing of their products in the marketplace. A very high percentage (approximately 80%) believe they do not have any problems in this area, which appears to reflect the fact that most of these companies are operating in an environment where finished products are typically in short supply (only 38% of those interviewed promote their products). Howerver, companies did mention that competition with imported foreign products is sometimes difficult because there appears to be a preference for manufactured goods of foreign origin within the marketplace. Some companies also mentioned that price controls presented a problem and that unlicensed companies produce lower quality and lower priced products.

5. Financing and Credit Constraints

Only 52 of the 200 enterprises interviewed have used any kind of bank credit in the past 24 months. The few firms that have obtained loans have used them either for the purchase of machinery (76%) or financing working capital (17%). These loans are divided into two types:

those in local currency subject to Egyptian regulated interest rates and terms; and those in foreign currency which are subject to internation rates and terms.

When asked about the type of collateral which has to be offered to secure a loan, respondents believe that loans must be guarnateed with a minimum of 100% collateral. In many cases it is believed that the collateral exceeds the value of the loan by a factor of two or more.

Of those that have not used bank credit, 37% explained that they do not need outside financing, while another 32% mentioned high interest rates as the deterrent for borrowing. Eleven percent felt that the procedures for using bank credit are overly complicated and 10% did not feel comfortable with the fixed burden that borrowing places on the enterprise.

Only fifteen enterprises have been using non-bank loans, and the sources of these non-bank loans are either from family or friends.

Five percent of those interviewed have received supplier credit on purchased machinery and equipment, and twenty-five percent of those interviewed have received supplier credit on raw material purchases. Those receiving supplier credit on raw material purchases appear to be getting approximately one month's full credit on purchases.

Overall, these findings indicate a significant aversion to the use of banks as a source of financing. This is due to severl factors including minimization of risk, unreasonably high collateral demands, conservative loan terms, difficult application procedures, lack of access to banks, etc. However, despite this aversion, there clearly exists a large demand for financing, particularly working capital requirements, as well as for fixed asset financing.

6. Government Regulating Constraints

The responses to questions about constraints related to Government regulations suggest that SSEs perceive these to be a normal part of the business environment. Although there is the normal complaining about specific regulations, SSEs seem to have adapted their businesses to live with this legal climate as well as possible. For example, 95% of

those interviewed believe that project approval and registration are not too great a burden even though these are clearly very complex.

Import regulations are perceived to be a constraint by 34% of the respondents. The major problems are the slow going and complicated measures which are needed to process imports, as well as the frequency of amendments to import regulations, the difficulty in obtaining foreign exchange, and the high customs duties on imported raw materials.

When asked about any problems stemming from the labor laws, 70% of the firms felt that these do not present a major constraint, probably because they have learned to live with them. Some of the concerns mentioned include the perception that the labor laws appear to be more in the interest of workers, and that these give no authority to the employer to make personnel related decisions. A high percentage of the enterprises interviewed believe they do not have a problem with social security laws within the country, except that these do not allow for the existence of a trial period for the employee before having to pay social security, the rates are high, and that the system is slow to respond to changes.

Interestingly, only 33% of those interviewed complained about taxation, and these firms are mostly concerned with the arbitrary nature of the process used in determining the amount of taxes owed. This response also indicates that SSEs have learned to live with Government regulations.

Firms were asked about their awareness of Government assistance programs and support services that are available to SSEs. Approximately two-thirds of those interviewed believed that no government assistance is available for training of administrators and production workers or for technical assistance in general. Few know of any programs at all. However, at least one-third of those interviewed would welcome some kind of training or technical assistance from the Government. Most are particularly interested in assistance in finding or training skilled employees for their factories and in technical assistance for production processes.

When firms were asked what changes they would like to see in the laws or Government regulations which affect their businesses, the major areas mentioned were: simplification of import measures; amendment of the labor laws to give employers greater flexibility; the issuance of laws which would limit the emigration of Egyptian skilled workers abroad; changes in the tax structure to allow incentives and eliminate the randonmness associated with tax calculations; more stability in the overall import laws and Government regulations in general; and, amendment of the social security laws so that the worker is also under an obligation to pay a share of the social security costs.

7. Personnel Constraints

More specific questions regarding personnel related constraints indicates that only 25% of those interviewed are not faced with unskilled labor problems. In contrast, a full 59% believe that unskilled labor is an acute problem, mainly because of a limited labor pool coupled with the fear that once a worker is trained, the individual leaves for another job in a competing factory or abroad. The same pattern applies to the hiring of semi-skilled and skilled labor. However, when it comes to the hiring of supervisors, 78% of the respondents do not believe that this is a problem.

8. Productivity and Labor Constraints

Questions on worker turnover, absenteeism and productivity all revealed that these are major areas of conern. Problems mentioned include the tendency of workers to leave the factory without permission or on unscheduled absences and workers leaving for employment abroad or to other factories. When asked about their experience with female workers, 56% or those interviewed do not employ women mostly because of the nature of the work. However, among the firms that employ women, approximately 50% perceive that women are equal to men in their work performance, while at least 25% responded that females are superior workers to males in terms of turnover, absenteeism and productivity.

9. Management Constraints

Questions were asked of all of the invterviewees as to the problems related to the adequacy of the administrative skills for handling the firm's finance, accounting, production techniques, production planning, sales and distribution or the purchase of raw materials. All responded that they felt that their administrative capabilities were adequate and furthermore, only a few felt that they wanted any assistance in improvir administrative skills. In many enterprises there was visual evidence of poor management, so it is likely that replies to these questions were biased by the fact that interviewees almost always were owner-managers.

10. Expansion Constraints

Eighty-four percent of the sample expressed an interest in increasing their sales, however only 34% of the sample had any specific plans for expanding capacity. Most of those with expansion plans will do so in their present product lines. For those wishing to increase sales within their present capacity the major constraints were the lack of available workers and the lack of readily available raw materials. For those enterprises wishing to increase sales through expanded capacity the major constraints were the lack of adequate space, the need for new equipment and the lack of skilled and unskilled labor.

B. METHODOLOGY AND CRITERIA

1. Introduction

Careful attention was given to the selection of the two hundred (200) firms that were to be interviewed in the extensive interview program. The methodology, which is described in this section, can be broken down into three steps:

- Definition, identification, and categorization of the SSEs in Egypt.
- Selection of the weighting process to be used in determining the number of firms in each industrial subsector which were to be interviewed.
- Actual selection of the individual firms to be interviewed.

In Chapter II, Section C of this report, the process used in defining which firms were to be categorized as SSEs is described in detail. Having defined SSEs as those firms with more than 10 but less than 200 employees, and fixed assets (net of land and buildings) of less than LE 300,000, we were then able to compile a list of SSEs from information provided by the Federation of Egyptian Industries(F.E.I.), and the Industrial Control Department of the Ministry of Industries. The SSEs were grouped by industrial subsector according to the classification scheme used by the F.E.I. (see Table B-1). This list became the population of Egyptian SSEs from which the 200 firms were selected.

TABLE B-1

Federation of Egyptian Industries

Classification of Subsectors in Manufacturing Sector

Subsector	Industries
Metallurgical Industries	Basic sections, nonferrous metallurgical industries
Engineering Industries	Transportation equipment, main metal structures and products, electrical appliances
Spinning and Weaving Industries	Cotton, silk, wool, vegetables fibers, knitwear
Chemical Industries	Fertilizers, plastics, cardboard, gases, rubber products, drugs, soap, cosmetics, other chemical products
Leather Industries	Leather, footwear, leather goods
Food Industries	Sugar and confectionery, milk and dairy products, food preservation, fermentation and distillation, tobacco and cigarettes, oils and oil byproducts
Cereals Products Industries	Husked rice, glucose, starch, alimentary pastes
Woodworking Industries	

2. Criteria for Selecting Firms to Be Interviewed

In the search for the appropriate number of firms in each economic subsector which were to be interviewed, the case team considered several criteria which could be used as a basis for selection. Among the criteria looked at were:

- Number of establishments in each subsector.
- Number of establishments in each governorate.
- Number of employees in each subsector.
- A statistical profile for the 10-24, 25-49, 50-99, and over 100 employee grouping.
- Value of total output in each subsector.
- Value added by each subsector.

The case team chose the value added approach to select the number of firms in each subsector which were to be interviewed. It was felt that value added would represent the best measure of relative economic importance among the different subsectors.

Table B-2 presents the data on total private sector industrial value added in 1977 by various industry subsectors. It should be noted that in addition to the organized sector, this data includes an estimate of the unorganized private sector and hence does not give an accurate picture of small scale industry alone. However, in the absence of any other data on industrial value added this data was taken as a starting point. In order to arrive at an estimate of the value added within the subsector classification scheme used by the F.E.I., this data was regrouped, through separation and reconsolidation as suggested by other sources of information, to produce the value added shown in Table B-3.

Upon examining the various subsector percentages in Table B-3, the team concluded that the Engineering subsector would be strategically under-represented if the firms to be interviewed were allocated among the subsectors according to the value added percentages in Table B-3. Accordingly, the percentage of Engineering firms to be interviewed arbitrarily was increased by 10% and that for Foodstuffs, Beverages and Tobacco was decreased by 10%.

TABLE B-2

Industrial Value Added in 1977: Total Private Sector

(LE 1,000)

Industry Subsector	Value Added by Industry Subsector	% Industry Subsector Value Added to Total Private Sector Value Added
Foodstuffs	112,600	31.5
Beverages	2,500	.7
Clothing, footwear	74,900	21.0
Tobacco	2,200	.4
Spinning, weaving	40,000	11.2
Wood products	33,200	9.3
Paper products	500	.1
Printing	1,300	3.2
Leather products	7,300	2.0
Rubber products	600	.2
Chemicals	25,700	7.2
Non-metallic products	11,300	3.2
Basic metals	5,700	1.6
Metallic products	12,700	3.6
Non-electrical machinery	1,700	.5
Electrical machinery	3,500	1.0
Transport equipment	4,700	1.3
Other manufacturing	6,500	1.8
Total Manufacturing	356,900	100.0

Source: Development Research and Technological Planning Center, Cairo University, as reported by Paul G. Clark in an Industrial Sector Strategy Assessment draft report to USAID, August 1981.

TABLE B-3

Adjusted Industrial Value Added in 1977: Total Private Sector

(LE 1,000)

Industry	Private Sector	Percentage Value Added
Foodstuffs, beverages and tobacco	117,300	32.8
Spinning, weaving and clothing	72,207	20.2
Wood products	33,200	9.3
Paper products and printing	11,800	3.3
Leather products and footwear	49,993	14.0
Chemicals and rubber products	26,300	7.4
Basic metals and non-metallic products	17,000	4.8
Engineering products	22,600	6.4
Other manufacturing	6,500	1.8
Total	356,900	100.0

Source: Regrouped from Table B-2

This decision to increase the representation of Engineering firms is supported by the 1977 study undertaken by the Industrial Development Center for Arab States (IDCAS) entitled "Small Factories and their Strategic Roles in Balanced Industrial Development". The study found that Engineering Industries deserve closer examination and understanding of their characteristics for the following reasons:

- Their roles have been, so far, marginal in Arab countries.
- Plans for industrial development in Arab States concentrate on light and materials industry which are an integral part of Engineering Industries.
- Equipment, tools and fabricated metals industries possess some special characteristics which enable them to be a wide field for the development of small scale enterprises.

Also, experience in other developing countries has shown that small engineering companies are among the growth leaders in the industrial modernization process.

The decision to take the 10% wholly from the Food subsector was made on the pragmatic basis that this would still leave this sector with the largest percentage of firms to be interviewed. Table B-4 shows the results of these modifications in the value added criterion and the resulting number of firms to be interviewed in each subsector. Within each subsector the firms were selected so, as to the extent practical, the sample had the same characteristics as the subsector as a whole in respect to geographical location and percentage of firms in the 10-49, 50-99, and 100 plus employee categories.

TABLE B-4

Number of Private Sector Industrial Firms

For Extensive Interview for Each Subsector

Industry	Percent Value Added	Percent of Firms To Be Interviewed	Number of Firms
Foodstuffs, beverages, tobacco	32.8	23.0	46
Spinning and weaving, and clothing	20.2	20.0	40
Wood and furniture	9.3	9.5	19
Paper and printing	3.3	3.0	6
Chemicals	7.2	7.0	14
Engineering	6.4	16.5	33
Metallurgy	4.8	5.0	10
Leather and footwear	14.0	14.0	28
Building materials	2.0	2.0	4
Total	100.0	100.0	200

Employment Category	Number of Firms Interviewed	% of Total Firms Interviewed
11 - 24	68	34.0
25 - 49	60	30.0
50 - 99	47	23.5
100 -199	20	10.0
200+	5	2.5
Total	200	100.0

C. EXTENSIVE INTERVIEW AND INTERVIEW FINDINGS

Interviewer's Guide For

Extensive Interview Program of Small Scale Enterprises

Interviewer _____ City _____ Date _____

1. Introduction

In order to find ways to assist the Government of Egypt to provide more effective support to small enterprises, USAID has financed a study of the problems that Egyptian small enterprises face. About 200 enterprises are being interviewed and USAID will report the results in summary form and will not identify the answers of individual enterprises.

Your cooperation will enable us to recommend to USAID new support programs for small enterprises which would help you.

2. General Information

a. Name and title of interviewee

Name _____ Title _____

b. Name and address of enterprise, telephone number(s)

*c. Legal structure

25.5% individual enterprises (proprietorship)

37.0% joint liability (partnership)

31.0% simple sponsorship (limited partnership)

5.5% shared sponsorship (privately held corporation)

1.0% limited liability (public corporation)

100.0%

*the sample includes five units established under investment law #43.

d. Dates

Establishment - before 1974 - 92%
after 1974 - 8%

Start production - before 1974 - 91%
after 1974 - 9%

*Expansion - before 1974 - 28%
after 1974 - 72%

*of the 128 that have expanded

e. Products manufactured or services rendered

f. Main raw materials

(the variety of raw materials is too large to be reported i this summary)

g. Sources of raw materials supply

Nationally produced - 53.4%

*Foreign - 46.6%

*Sources of imported raw materials:

47.7% Western Europe
8.4% South East Asia
6.9% United States
6.4% Eastern Europe
3.6% Japan
2.9% Africa
2.4% Russia
14.8% N.S.

h. Personnel

	Male		Female		GRAND
	Men	Boys*	Women	Girls*	TOTAL
Administrators	84.5%	-	15.5%	-	9.3%
Production	75.2%	6.2%	16.7%	1.8%	79.2%
Services	79.9%	3.8%	15.9%	1.6%	11.5%
Total	8285	566	1790	175	10,816
Total personnel	76.7%	5.2%	16.5%	1.6%	100.0%

*under 18 years of age

*i. Approximate fixed investment (LE 1,000)

Buildings and land	19,133	34.6% of total
Machinery	30,901	55.8%
Other	5,287	9.6%
	55,311	100.0%

*14 units gave no data, 107 units take their premises on lease and do not own land or buildings. Average fixed investment is LE 194,000 excluding land and buildings

j. Annual production

(question excluded as per CAPMAS)

k. Length of shifts

Shifts worked per week -	6 shifts	63.0%
	7-11 shifts	12.0%
	12-16 shifts	17.0%
	17 or more	8.0%
Length of shift -	6 hours	3.0%
	7 hours	56.0%
	8 hours	32.5%
	9-12 hours	6.5%
	Other	2.0%
Weeks of operation per year -	40-47 weeks	8.0%
	48 weeks	22.0%
	49 weeks	0.5%
	50 weeks	53.0%
	51 or more	16.5%

l. Annual attainable capacity with present processes, equipment, buildings and personnel

(question excluded as per CAPMAS)

m. Maximum stock held in inventory (at cost)

(question excluded as per CAPMAS)

2. Problems encountered by enterprise

Rank answers according to the following guide:

A = acute problem

B = average (normal) problem

C = small problem

D = no problem

a. Technical aspects

(1) Do you have problems with respect to the adequacy of your production equipment?

A - 27.5% B - 23.5% C - 6.0% D - 43.0%

*Nature of problems:

Power failures	56.6%
Old machinery	15.5%
Lack of spare parts	13.3%
Water stoppage	4.4%
Lack of workers causing machine stoppage	3.7%

*applies to those SSEs that answered A, B. or C only.

(2) Problems with your present technology or processes

A - 22.0% B - 19.5% C - 7.0% D - 51.5%

Nature of problems:

Old machinery	60.0%
Primitive production systems	32.0%
Using no specialized methods	3.0%
Lack of skilled workers that can handle modern technology	2.0%

(3) Problems with maintenance and repair?

A - 16.0% B - 15.5% C - 5.5% D - 63.0%

Nature of problems:

Lack of skilled workers	52.8%
Lack of spare parts	36.1%
Lack of specialized workshops	3.5%

(4) Problems in getting information regarding new technology or processes?

A - 10.5% B - 9.5% C - 10.0% D - 70.0%

Nature of problems:

Difficulty of getting information	58.5%
No competent organization in Egypt	18.5%
No scientific magazines	10.8%
No specialized periodicals	7.7%

(5) Problems with lack of foremen?

A - 13.5% B - 6.5% C - 1.5% D - 78.5%

Nature of problems - foremen:

Lack of foremen	47.7%
Foremen getting jobs abroad	45.5%
Lack of competent foremen able to control modern equipment	4.5%
High salaries	2.3%

Problems with lack of skilled workers?

A - 68.5% B - 12.0% C - 4.0% D - 15.5%

Nature of problems - skilled workers:

Workers getting jobs abroad	60.3%
Lack of skilled workers	19.6%
High wages	6.3%
Moving to other trades	4.8%

(6) Problems with respect to the availability of raw materials in required quantity and quality?

Quantity?

A - 23.0% B - 15.5% C - 10.0% D - 51.5%

Nature of problems:

Shortage of raw materials	73.3%
Quotas less than market needs	13.3%
Continuous increase in price	7.6%

Quality?

A - 20.5% B - 18.5% C - 9.5% D - 51.5%

Nature of problems:

Lack of consistent specifications for available raw materials	38.8%
Low standards of imported materials	14.6%
Low quality in general	13.6%
Poor storage for long periods	5.8%

Machines or methods producing raw material are old 5.8%

(7) Problems related to your product quality?

A - 10.0% B - 12.0% C - 14.0% D - 64.0%

Nature of problems:

Bad quality of raw materials	48.8%
Lack of skilled workers	22.5%
No utilization of modern manufacturing methods	13.8%

(8) Do you believe that these problems affect your competitors in the same way? Also, what problems in your judgment are most common?

Problems have an equal effect on competitors	53.0%
Some problems concern the unit only while others are common	30.0%
Problems concern the unit only	11.5%
Do not know	5.5%

Problems which are most common, in order of importance:

1. Lack of skilled workers
2. Lack of availability of raw materials in quantity required
3. Lack of availability of raw materials in quality required
4. Problems related to adequacy of production equipmer

b. Marketing

(1) To whom do you sell your products or services?

Final users	33.9% of sales
Retailers	18.3%
Wholesalers	41.9%
Exporters	4.4%
Others	1.1%
	100.0%

(2) Do you sell to public sector enterprises?

Yes - 45.0% No - 55.0%

Why:

Large demand from public sector	57.8%
Large volume purchases	11.1%

Why not:

Not enough demand	50.0%
Procedures requested	15.5%
Deal strictly with traders	12.7%

(3) Do you sell to government departments?

Yes - 23.5% No - 76.5%

Why:

Existing contracts	8.5%
Large demand	76.6%

Why not:

No orders	71.2%
Long procedures and routines	9.3%

(4) How do you promote your sales?

38.5% do promote sales, 61.5% do not. Of those that do:

Use TV, radio, newspaper, magazine advertisements	38.7%
Use occasional gifts	22.8%
Use direct contacts with customers	11.9%
Use wall posters	8.9%

(5) Are there any problems with sales, distribution, pricing, Egyptian competition, imported competition, etc.?

Sales -

A - 8.0% B - 9.0% C - 1.5% D - 81.5%

Nature of problems:

Imported competition	17.9%

Cost fluctuation and its effect on prices 15.4%

Recession periods 15.4%

Public sector has low tender prices 10.2%

Supply exceeds demand 7.7%

Distribution -

A - 60.5% B - 8.5% C - 1.5% D - 83.5%

Nature of problems:

No cash sales which affects liquidity 42.2%

Transportation problems 15.8%

Sales exclusive to public sector 15.8%

Consumer preference to imported products 10.5%

No export markets 10.5%

Pricing -

A - 8.5% B - 2.0% C - 0.0% D - 89.5%

Nature of problems:

Prices stated by law and not changed for a long time 59.2%

Prices stated by law and not profitable 31.8%

Export prices are inflexible 4.5%

Risks involved due to supervision of ministry of supply 4.5%

Egyptian competition -

A - 7.0% B - 11.5% C - 7.0% D - 74.5%

Nature of problems:

Small unlicensed units have low quality and prices 24.0%

Some licensed units have low quality and prices 22.0%

Imported competition -

A - 18.5% B - 9.5% C - 3.5% D - 68.5%

Nature of problems:

Imports are of better quality	18.6%
Consumers preference to well-known imported brands	17.1%
Imports are less expensive	15.7%
Many smuggled products	14.3%
Acute competition in price from South East Asian products	10.0%

(6) Do you want to increase your sales?

Yes - 84.0% No - 16.0%

By how much:

From 51 - 100%	41.5%
rom 41 - 50%	11.3%
From 11 - 20%	8.7%
From 21 - 30%	8.7%
From 151- 200%	5.4%

What will you need to do in order to accomplish this

Available skilled workers	28.9%
Purchase of new modern equipment	18.8%
Available raw materials	13.2%
Increase present production	5.3%
Develop production	5.3%
Increase sales outlets	3.9%
Improve infra-structures	3.5%

Why not increase sales:

Present sales are enough	40.7%
Maximum capacity already reached	22.2%
Severe competition	14.9%
Lack of workers	14.8%
Lack of raw materials	7.4%

(7) If you are not exporting your products or services would you like to export?

Yes - 30.9% No - 69.1%

Why:

Increase business turnover	47.4%
Open new markets	31.6%
Increase profitability through exports	17.5%

Why not:

Egyptian market absorb all production	35.7%
Unable to compete	20.0%
Product not suitable for export	17.0%

c. Financial aspects

(1) Have you used any bank credit in the last 24 months?

Yes - 26.0% No - 79.0%

(a) If so, in what amount and to finance what (i.e., machinery, land, buildings, working capital, etc.)?

	Total Loan Amount (LE 1,000)	Percent of Total
Machinery	7,537	76.1%
Working capital	1,686	17.0%
Overdrafts	580	5.9%
Buildings	20	0.2%
Not specified	83	0.8%

(b) From where did you get the loan?

	Local Currency	Foreign Currency	Total
Industrial Development Bank	14	6	20
El-Kahira Bank (Banque du Caire)	13	1	14
National Bank of Egypt	10	1	11
Bank of Alexandria	6	-	6

	Local Currency	Foreign Currency	Total
Bank Misr	3	1	4
Suez Canal Bank	2	1	3
Other Banks	8	5	13
	56	15	71

(c) What information did you have to provide to get the loan

Balance sheet

Factory license

Building property document

Fill the loan request formula

Auditor's certificate evaluating assets

Social security certificate

Tax department certificate

Memorandum of association

M/C supply contract

Feasibility study

Approval of GOFI

Was it difficult to get this information?

Yes - 2.0% No - 98.0%

(d) Conditions of loan:

Interest (local currency)	14.3%	average - local
(foreign currency)	18.0%	
Repayment period -		
Unlimited (overdraft)	32.7%	
Five years	30.9%	
Two years	11.5%	
One year	5.8%	
Unlimited (goods in stores guarantee)	5.8%	
Grace period -		
None	46.9%	
One year	18.8%	
Two years	3.1%	
Not specified	21.9%	

Installments -	
Annual	53.1%
Monthly	15.6%
Semi-monthly	6.3%
Quarterly	6.3%
Not specified	18.7%

(e) What collateral guarantees were you asked for? (66 replies)

Factory's assets (land, buildings, etc.)	21.2%
Mortgage on buildings owned by the owner	21.2%
Factory's machinery	15.2%
Personal guarantee	15.2%
Machinery purchased by loan	12.1%
Goods purchased by loan	7.6%

(f) What was total value of guarantee requested, as a percentage of loan value? (38 replies)

Collateral for 100%	36.8%
151-200%	18.5%
351-400%	10.5%
101-150%	7.9%
201-250%	7.9%
501-600%	7.9%

(g) Was it difficult to get the credit? (52 replies)

A - 3.8% B - 1.9% C - 1.9% D - 92.4%

Nature of difficulty:

Difficult to get someone to guarantee the loan

Long procedures to get the loan

Banks do not stick to dates of loan payouts

(2) If you do not use bank credit, why not:

Do not need loans	37.5%
High interest rates	31.6%

Complicated steps to get loan	11.2%
Do not want to put factory in debt	9.2%
Loans with interest are against religion	3.2%

(3) Have you used any non-bank credit (from family, friends, money-lenders, partners, cooperatives, etc.)? If so, in what amount, from what source, and under what conditions?

Amount of loan	49,167 LE (average)
Source	Family
Conditions	86.7% no conditions
Interest rate	only one unit made a loan at 12% interest to be repaid in four years
Other charges	another unit repayment terms were one year without interest

(15 units, 9 of which did not give amount of loan)

(4) Do you have any credit with suppliers and, if so, what is the nature of this credit:

For raw materials -	Yes - 25.5%	No - 74.5%
For machinery and equipment	Yes - 5.2%	No - 94.8%

(5) Do you prefer a fast transaction with higher interest rate, or slow paper-work with a lower interest rate (e.g., get loan in 2-3 weeks with a 20% interest rate, or in 3-4 months with an interest rate of 14%), and why?

(1) Fast Transaction High Interest	(2) Slow Paper-work Lower Interest	(3) Do Not Want	No Reply
9.0%	41.5%	41.0%	8.5%

Reasons:

(1) Urgent need for loan	72.2%
(2) Need for loan is not urgent	28.6%
Reduce burdens	23.8%
No reason	47.6%
(3) Eliminate burdens	31.7%
High interest	23.0%
Do not need extra liquid funds	12.2%

(6) Would you like to have additional equity capital?

No - 66.5%, why not:

Do not have expansion plans at present	22.0%
Capital is sufficient	20.0%
Do not want to borrow money	13.0%
Do not want to increase capital	12.0%
Non-availability of workers limit expansion plans	8.0%

Yes - 33.5%, from what source

Partners	13.0%
A.I.D.	11.0%
Family	8.0%
Foreign partners	4.0%
Industrial Development Bank	4.0%

d. Government relations

(1) Have you had any problems in dealing with government entities regarding: imports, incentives, registration, labor laws, social security, taxation, etc.?

Imports -

A - 24.5% B - 7.5% C - 1.5% D - 66.5%

Nature of problems:

Slow and complicated import procedures	41.8%
Difficult to obtain hard currency	12.6%
Frequent changes in import systems and laws	11.7%
High custom duties on raw materials	10.7%
Slow procedures to clear goods from customs zone	8.7%

Incentives -

No government incentives were mentioned.

Registration -

A - 10.0% B - 3.5% C - 1.0% D - 94.5%

Nature of problems:

Several government departments require keeping registers	53.4%
Long procedures for registration	13.3%
High levies for registration	33.3%

Labor laws -

A - 19.0% B - 8.5% C - 1.5% D - 71.0%

Nature of problems:

Most laws are in favor of workers	39.1%
Employer cannot fire worker	18.8%
Penalties are not strict enough	17.4%
Nothing prevents worker from leaving work without employer's consent	8.7%
Labor laws are not well studied and employers were not consulted	7.3%

Social security -

A - 15.5% B - 11.0% C - 6.0% D - 67.5%

Nature of problems:

High insurance rates	51.9%
Slow procedures	12.7%
Cancelling subscription is difficult	11.4%
No test period for worker without insurance	6.3%
Employer and employee do not want social security	6.3%

Taxation -

A - 16.5% B - 13.0% C - 3.5% D - 67.0%

Random estimation by authorities	67.2%
High tax rates	19.7%
Late examination of books	5.3%

(2) What kind of government assistance services are available to your enterprise in respect to the following; are you aware of any of these services?

Training administrators -

Training exists	1.5%
Training does not exist	68.0%
Do not know of any	3.5%

Training of production workers -

Training exists	6.0%
Training does not exist	64.0%
Do not know of any	30.0%

Technical assistance for production processes and equipment -

Training does not exist	76.5%
Do not know of any	23.5%

Technical assistance for design of products -

Training exists	0.5%
Training does not exist	72.0%
Do not know of any	27.5%

(3) Have you made use of any of these services and, if so, what was your experience?

Used production workers training programs	11 units
Result was negative	80.0%
Result was positive	20.0%

One unit used the services of the products design center at the EIDDC and the result was positive.

(4) If you have not made use of any of these services, why has this been so?

Enterprises are not convinced that these services will be useful.

(5) Would you like to make use of government services and, if so, which services?

Would like to make use of the services	38.0%
Would not like to make use of the services	60.0%
Undecided	2.0%

Of those that would like to use government services -

Wanted production workers training	66.7%
Wanted technical assistance for production processes	14.9%
Wanted services that improve infra-structure	9.3%

e. Legal and regulatory requirements

(1) What changes in laws or government regulations would be of help to you in your business, and why?

Import regulations pricing	26.3%
Labor laws	22.6%
Social security	22.3%
Taxes	14.7%

Economic - simplify importing procedures; stabilize economic laws and imports decrees; reduce duties on raw materials; impose protective rate of custom duti on competing imported products.

Pricing - reconsider former prices for products impose by decrees and cancelling those imposed prices for certain products.

Labor - limit immigration; better balance between the interests of both the employers and works; not accepting new employees unless employee proves to be cleared from any obligation to previous employers

Social security - oblige worker to pay his share; health insurance is mostly used as an excuse for absenteeism; confirm prepaid amounts.

Taxes - payment on receipt of raw materials quotas; elimination of random estimation system; discount at source; industry should enjoy a reduced rate of taxes compared with other activities, such as trade.

Other - modify imposed working hours; give investment advantages to Egyptian factories.

. Production personnel

(1) Do you have problems regarding availability of production personnel?

Unskilled -

A - 58.5% B - 12.0% C - 5.5% D - 24.0%

Nature of problems:

Lack of unskilled workers	63.8%
Getting jobs abroad	22.9%
Lack of apprentices	9.6%
High wages because of labor shortages	2.5%

Skilled -

A - 69.5% B - 13.0% C - 3.0% D - 14.5%

Nature of problems:

Lack of skilled workers	47.1%
Workers are leaving for jobs abroad	42.0%
Jobs are less appealing	5.2%
High wages due to shortages	2.9%

Foremen (supervisors) -

A - 14.0% B - 8.0% C - 0.5% D - 77.5%

Nature of problems:

Lack of foremen	57.9%
Workers are leaving for jobs abroad	33.3%
igh wages due to shortages	4.4%
Starting workshops of their own	4.4%

(2) Problems regarding performance of production personnel?

Turnover -

A - 46.0% B - 11.0% C - 7.0% D - 36.0%

Nature of problems:

Leaving jobs to work abroad	55.2%
Suddenly quitting work	19.9%
Moving to other factories	11.9%
Leaving without notice	4.4%

Absenteeism -

A - 35.5% B - 22.0% C - 9.5% D - 33.0%

Nature of problems:

Sudden absenteeism	55.6%
Absenteeism, floows payment of wages	18.5%
Deliberate absenteeism being confident of factories need for them	8.1%

Laws are not strict enough 5.2%

Using health excuse under the weak system of health insurance 4.4%

Productivity -

A - 11.5% B - 17.5% C - 10.0% D - 61.0%

Nature of problems:

Low productivity 40.0%

Employer has to impose continuous supervision due to lack of seriousness 25.0%

Workers are not careful in their work 13.7%

Shortage in skilled workers 6.2%

Other -

A - 9.5% B - 7.0% C - 5.0% D - 78.5%

Nature of problems:

Attention paid to work is not complete 34.1%

Continuous control needs to be used on workers 27.3%

Workers are not serious 15.9%

Workers are undisciplined 9.1%

(3) If you have had women production workers, what has been your experience with their performance compared with that of your men workers?

(44% employ women production workers)

	Performance of women compared with performance of men			
	Better	Same	Worse	Not Stated
Turnover	33.0%	42.0%	19.3%	5.0%
Absenteeism	30.7%	42.0%	21.6%	5.7%
Productivity	23.9%	39.8%	27.3%	9.0%
Other	26.1%	51.1%	9.1%	13.7%

Nature of differences:

Some jobs are exclusively performed by women workers	19.8%
No differences in performance	15.6%
Female workers are less productive than male workers	9.4%
Differences in productivity depend on the nature of job assigned to female worker	8.3%
Female workers feel less job monotony	6.3%
Female workers are more disciplined	6.3%

(4) If you have not had women production workers, why has this been so?

(56% do not employ female workers)

Nature of work	73.4%
High turnover rate due to marriage	8.0%
Traditions against mixing with men	8.0%
Men's efficiency is higher	4.4%
Female workers do not progress	4.4%

(5) Does the work in your enterprise require certain levels of education for production workers, and, if so, for what tasks?

(Only 10% require certain levels of education, mainly

in metallurgy and engineering industries and to a lesser degree in chemical and clothing industries. Not required in the rest of the industries interviewed.)

g. Administrative skills

(1) Do you have problems in any of the following administrative skills areas?

Finance -

A - 0.5% B - 0.5% C - 2.0% D - 97.0%

Nature of problems:

Low standard of performance

Less efficiency and need training

No experience

Accounting -

A - 0.5% B - 1.0% C - 0.5% D - 98.0%

Nature of problems:

No experience

Lack of efficiency and need for training

Shortages due to competent persons immigration

Production planning -

A - 0.5% B - 0.0% C - 1.0% D - 98.5%

Nature of problems:

Lack of specialized people

Lack of efficiency and need for training

Low quality of production planning operations

Sales, distribution, etc. -

(2 units have problems = 2%)

A - 0.0% B - 0.5% C - 0.5% D - 99.0%

Purchase of materials -

(Two units have problems = 1%)

A - 0.0% B - 0.5% C - 0.5% D - 99.0%

(2) Would you like to obtain technical assistance to train your administrators to deal with these problems and, if so, in which skill areas?

(5% would like to get technical assistance)

Areas mentioned:

Production planning

Accounting

Cost accounting

Organization and administration

(3) Would you be willing to pay for such assistance?*

(70% would be willing to pay for such assistance)

*If answered "yes" to the previous question

. New Opportunities

a. Do you have any plans for business growth?

34% have tangible business plans for growth. Of the 68 firms wishing to grow, 31% expect that shortages of workers will affect their ability to expand.

b. If you have plans for business growth, do you have any plans for expanding your present line of products?

61.3% wish to expand in their present line.

c. If you have plans for business growth, do you have plans for introducing new products?

38.7% wish to introduce new products.

d. What do you need to do in order to increase unit sales of your present products?

More workers	40.5%
Better availability of raw materials	25.0%
Marketing advice	16.8%
Increase production capacity	9.9%
Available liquidity and stabilize exchange rate	7.8%

e. What additional resources will you need in order to expand your production?

Larger building	21.3%
New machinery	25.8%
Additional administrators	5.2%

Additional production workers -

Skilled	20.2%
Unskilled	16.7%
Additional sources of raw materials	10.8%

f. Do you think the availability of workers will restrict your ability to expand production?

A - 30.5% B - 10.3% C - 7.3% D - 51.5%

g. To what extent do you think the strength and number of your competitors will restrict your ability to carry out your expansion plan?

A - 3.0% B - 1.5% C - 7.3% D - 88.2%

h. To what extent do you think price control administration would impact your profits if you were to expand?

A - 1.5% B - 1.5% C - 1.5% D - 95.5%

4. Information Problems

What type and extent of information do you think you need besides what is not available to you, for example:

a. Management techniques

(11% wish to get additional information)

Materials requested in order of importance -

Cost accounting

Accounting

Stock control

Incentives

Production planning and control

b. Technical

(16.5% wish to get additional information)

Materials requested in order of importance -

New equipment and processes

Maximum utilization of equipment

Training methods

Know how

c. Marketing

(12% wish to have additional information)

Information requested in order of importance

International market trends

Local market trends

Promotion

Pricing

d. Other information

Effect of open door policy:

(1) On sales -

No effect	43.0%
Reduced sales	21.9%
Not stated	18.0%
Increased sales	16.6%

(2) On availability of raw materials -

Better availability of raw materials	52.3%
No effect	33.2%
Reduced availability of raw materials	9.9%
Not stated	4.6%

APPENDIX C

INFORMATION SOURCES REGARDING SSEs

1. Introduction

Because the Government of Egypt does not officially define SSEs as being a distinct category of industry, the available information sources rarely break data down by size of establishment. In general, industrial establishments are defined as having over LE 8,000 in capital while all other establishments are considered to be artisanal.

In order to develop an understanding of the SSE role in industry, it has been necessary to piece together a profile from a wide variety of sources. The principal data sources used, together with a brief review of the type of information provided, and the principal strengths and weaknesses of the sources, are outlined below. However, we will first comment on a few general features of the available information sources.

- Virtually all statistics are generated by Government sources.
- Statistics prepared by different agencies are often inconsistent, and extreme care must be used in comparing or reconciling different sources.
- Data is usually collected through regulatory control points such as permits, approvals, required reports, etc. Although this system could result in roughly accurate data for public sector activity, we believe that it seriously underestimates private activity because of either: (1) complete evasion of these regulatory control points; or (2) underestimation of production, income, investment and employment in reports submitted to regulatory organizations.
- Raw data collected by Government agencies is usually tabulated manually and with minimal attention to disciplined data processing and modern information system techniques. The lack of quality control in the tabulation process also raises further questions about the reliability of information sources.

- Government employees often treat statistics as personal (or their agency's) property and do not release it willingly unless they perceive some personal gain.

It should also be emphasized that the nature and shortcomings of available data have adverse implications for SSEs. First, the lack of any statistical data base on SSEs reflects the absence of an explicit policy framework for supporting these establishments. Second, it is unlikely that SSEs will benefit from the attention of policy makers unless information is developed indicating the important SSE role in the economy. However, interest in developing information on SSEs is unlikely given that no institution has promotion (or regulation) of SSEs as its primary objective. Hence, no agency has any clear mission for developing this information.

2. Principal Information Sources

a. Central Authority for Public Mobilization and Statistics - (CAPMAS)

This agency is responsible for collecting and compiling data from all other Government sources and as such can be considered to be the central and "official" source of information in Egypt. However, since this agency has been affiliated with the Ministry of Defense, it tends to be very careful and selective in releasing data which it treats as a national security problem. Published information, therefore, is very limited.

This source is particularly useful for macroeconomic data and particularly national accounts. We have used its material for developing tables on:

- Gross domestic product;
- Employment by sector;
- Investment by sector; and
- Industrial establishments and employment by subsector (1973)[1].

CAPMAS could be one of the best sources of information regarding SSEs since it occasionally conducts industrial and household surveys.

[1] 1977 data was requested but has not yet been prepared.

The World Bank's 1977 Survey of Small Scale Industry is based on these sources. However, these surveys are infrequent, processing the data takes several years, and gaining access to the information is difficult. The World Bank Study, for example, relied primarily on 1966-67 (and to a lesser extent 1970-71) data even though it was published in 1977.

b. Ministry of Planning

The Ministry of Planning prepares the Five Year Social and Development Plans which provide a statement of Government objectives and policies. The document is also a useful source of information since it draws from CAPMAS and other sources and presumably provides "official" statistics. This source also develops short term projections. Information used in our study include:

- "The Five Year Economic and Social Development Plan, 1980/81 - 1984/85";
- Gross Domestic Product;
- Employment by sector;
- Investment by sector;
- Gross value of industrial production by subsector; and
- Private and public sector share of industrial production.

The industrial production statistics provided by this source have the advantage that they include output from public sector companies affiliated with all Ministries. Their principal disadvantage, from the perspective of this study, is that they include artisanal activity.

c. Ministry of Industry and Mineral Wealth

This Ministry and its affiliate, the General Organization for Industrialization (GOFI), are the primary sources of industrial activity data. We have used the following types of information developed by this source:

- Gross value of industrial output by subsector, 1976-1980;
- Public and private share of industrial output by subsector, 1976-
- Industrial sector exports, public and private, by subsector, 1976
- Industrial establishments, public and private, by subsector, 1976
- Industrial employment, public and private, by subsector, 1979; an
- Industrial projects approved.

The Ministry of Industry must be relied upon as the most complete source of industrial statistics. However, the following shortcomings must be emphasized:

- Public sector activity is limited to enterprises affiliated with the Ministry of Industry and excludes those organized within the Ministry of Housing and Reconstruction, the Ministry of Defense, etc.
- Private sector activity statistics are limited by the extent to which private establishments comply with regulatory and reporting requirements. We believe that private activity, in terms of numbers of establishments, value of output and investment, and employment, is seriously underestimated.

The Industrial Control Department, also affiliated with the Ministry of Industry, compiles industrial statistics from its administration of price and raw material controls. However, its statistics of industrial activity are so low that they were not relied upon in this study.

d. Federation of Egyptian Industries

This institution is one of the most important and underutilized information source in Egypt. It publishes an annual Year Book which provides detailed information on industrial activity by subsector. Although the publication of the Year Books is usually one or two years behind, up-to-date statistics can be prepared upon request. Although much of the data is drawn from the Ministry of Industry and other sources, it is presented in extensive detail by subsector and industry. The Federation can also provide valuable insight into the number of establishments and employment on the basis of its membership lists. Finally, and most important, each of the Federation Chambers can provide estimates of the relative importance of various sized establishments within the different industrial groupings.

e. Other Sources

An extensive number of secondary sources on Egyptian industry have been prepared over the past few years. It is not our intention to provide a complete bibliography of this literature which in general is

based on the same primary sources as those outlined above. However, a few sources have proved to be of particular importance to our assessment of the SSE role in the Egyptian economy, and these include:

- The six sector studies (Food Processing, Pulp & Paper, Building Materials, Engineering, Metallurgy and Textiles) which were prepared by various consultants for GOFI in 1977-78;
- World Bank reports, particularly the 1977 Survey of Small Scale Industry:
- The Private Sector Industry Strategy papers prepared by Boston University consultants for USAID;
- Robert Mabro and Samir Radwan, The Industrialization of Egypt, 1939-1973;
- Arthur D. Little, Inc.'s 1978 An Assessment of Egypt's Industrial Sector; and
- The papers and reports prepared by the M.I.T.-Cairo University project.

Other sources which may be of interest to those studying small scale industrial establishments in Egypt include:

- Belden Hull Daniels, "Preliminary Analysis of the Feasibility of New Development Finance Institutions to Support the Small Scale Industry Sector in Egypt", City and Regional Planning Dept., Harvard University, December 1978.
- Suzanne Berger, "Problems and Prospects of Egyptian Small-Scale Industry", M.I.T., August 1978.
- "Employment and Development of Small Enterprises", World Bank Sector Policy Paper, February 1978.
- Delwin A. Roy, "Private Industry Sector Development in Egypt: An Analysis of Trends", Preliminary Draft, 1977
- Salah El Sayed, Egypt-Strategies for Investment, American University in Cairo, 1977
- An International Compilation of Small Scale Industry Definitions' Mimeo., Georgia Institute of Technology, Engineering Experimental Station, Atlanta, 1975.

APPENDIX D

PRIVATE SECTOR EXPORTS

As set forth in Chapter III, the private sector's relative performance in the area of industrial exports has been less favorable than is the case with several other measures of performance. In the course of our study, we found a general awareness of the potential economic benefits of increased industrial exports among the bankers and government officials with whom we had contact.

We were frequently told: "Look at Korea, Taiwan and Hong Kong; Egypt can achieve growth through export emphasis too." In such conversations, three industries were commonly cited as being "natural" for private sector export expansion: ready-made garments, shoes, and processed foods.

While we applaud this interest in possible acceleration of industrial exports, we believe that some serious constraints exist with respect to the potential of the three "natural" industries cited. In the following sections, we offer our comments.

Ready-Made Garments

The manufacture of garments is a last stage process within the textile industry, following after spinning, weaving and finishing. Competitive success in world markets depends, therefore, on beginning the final manufacturing process with goods which meet world standards with respect to quality and design. Up to this time in Egypt, almost all spinning and finishing capacity is in the public sector. Until these companies can move to internationally competitive levels, and provide the last stage producer with an attractive, high quality, timely supply of raw material, we see only a limited export potential for the garment industry.

A number of public sector finishing companies are interested in joint venture operations with foreign companies in order to acquire technical and managerial expertise. In due course, this thrust may serve to create a satisfactory supply network for the garment industry. An interim possibility, therefore, would be to ship greize goods outside the country for finishing on a contract basis. Such a program would reduce the

value added benefits found in an integrated in-country system, but might serve to build export experience in the garment industry. No experience base exists at this time, as 1980/81 exports of ready-made garments by the private sector were only LE 191.000.

Shoes

The shoe industry differs from the textile industry in that its raw material (leather) is largely purchased from private sector tanneries. However, leather produced for export must be of higher quality than that produced for the price controlled domestic markets. Therefore, expansion of shoe exports is initially dependent on the willingness of the tanneries to (1) assume the risk of investing in new equipment to increase production of export quality leather, and (2) to operate two different product lines.

The shoe industry does not appear to have recovered from the trauma associated with 1976 termination of Eastern Block export orders. In our judgment, therefore, it is presently unlikely to give the long-term supply contracts that the tanning industry would require to justify its investment in new production equipment.

Processed Food

Private sector exports of preserved food amounted to only LE 402.000 in 1980/81, and thus constitute only a miniscule activity. We believe, therefore, that the general enthusiasm for the export potential of the food industry equates with an awareness of the national importance of agriculture (57.5% of gross domestic product in 1979). This knowledge is then translated into an understandable emotional desire to use agricultural strength for the benefit of the balance of payments situation.

However, the key national goal of self-sufficiency with respect to food stands formally at odds with a program to export processed food. Moreover, it is generally agreed among foreign consultants that the agricultural sector of Egypt has been a closed loop - a society lacking

(1) See Problems and Prospects of Egyptian Small-Scale Industry, Dr. S. Berger, 1978, page 34.

innovative forces. Productive capacity remains superior to second step storage and shipment/distribution capability with little experience in product marketing.

While a private sector base in food processing does exist, it is not directed toward export activity. We suggest this situation arises from the fact that the exporting of processed food represents an industry containing two very dissimilar businesses:

- the export of "commodity" products
- the export of specialty products.

Success in a commodity business (such as the export of canned tomatoes) depends on:

- a large capital investment in advanced technology equipment. The buying decision is made on the basis of price (with quality assumed). The international market belongs to the low cost producer, who normally gains his efficiency through capital investment and high volume.
- Control over raw material production in order to integrate supply quantities with the factory production schedule.
- A good physical procurement system to assure the receipt of quality food for processing, and an efficient low cost system for delivering production to the foreign market.

Success in exporting specialty items depends on marketing skills, the identification of market segments, product promotion, establishment of a distribution system, and regular attention to resupply requirements.

In our judgment, the critical determinant with respect to the relationship between private sector manufacturing growth and export activity is the fact that the domestic market is growing so rapidly that most manufacturers can grow as rapidly as they wish by:

- growing with the total market
- cutting away modestly at the public sector share of their particular market.

This is essentially a strategy for taking advantage of the easiest opportunity. In contrast, an effort to begin exporting demands:

- An up-front investment in marketing to win product entry in a new area.
- Probable development of a new system of quality control to meet the generally higher off-shore standards.

In our judgment, therefore, until a manufacturer can identify clear, significant profit differentials in the export market, he will continue to satisfy his growth desires in the domestic market unless some form of governmental action redefines his opportunity perception.

This situation leads us to believe that in the near-term the private sector has a greater potential for balance of payments assistance with respect to import substitution activities than with respect to increased export activity.