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19371

DP/ID/SER.A/1543  
24 January 1992  
ORIGINAL: ENGLISH

PREPARATION OF INDUSTRIAL PLAN FOR THE PRIVATE SECTOR  
AND PREPARATION OF SMI PROJECT PROFILES AT THE  
GENERAL ORGANIZATION FOR INDUSTRIALIZATION (GOFI)

DP/EGY/89/001/11-51

ARAB REPUBLIC OF EGYPT

Technical report:  
Design of an industrial development plan for private sector  
private sector supporting consultancy\*

Prepared for the Government of the Arab Republic of Egypt  
by the United Nations Industrial Development Organization,  
acting as executing agency for the United Nations Development Programme

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V.92-50514

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### List of abbreviations

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CAPMAS	General Agency for Public Mobilization and Statistics
DIB	Development Industrial Bank
DSS	Decision Support System
EBA	Egyptian Business Association
ENSTINET	Egyptian Nat. Scientific Technical Inform. Network
FEI	Federation of Egyptian Industries
GAFI	General Authority for Foreign Investment in Free Zones
GOFI	General Organization For Industrialization
HIPCO	Handicraft Industries and Productive Co-operatives Org.
IDDC	Industrial Design Development Center
IDSC	Information & Decision Support Centre
ILO	International Labour Office
IMF	International Monetary Fund
ISSI	Institute for Small Scale Industries
LE	Egyptian Pound
NPC	National Project Co-ordinator (UNIDO project)
PEM	Project Executive Manager (UNIDO project)
PVTC	Productivity and Vocational Training Center
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization
USAID	United States Agency for International Development
WB	World Bank

## 1- AIMS OF ASSIGNMENT

---

1-1 The General Organization For Industrialization (GOFI) has been entrusted by the Ministry of Industry to prepare a five-year development plan for private sector, which will be in force in the period 1992/93 to 1997/98.

In this frame, GOFI has asked a related support to UNIDO for design and computerization of a simulation model for policy testing and analysis of the industrial growth until 2000.

1-2 The terms of reference of this consultancy assignment have been enlarged. The Department of Industrial Operations of UNIDO has requested a survey of constraints to small and medium scale entrepreneurship development, and asked for recommendations for suitable remedial actions at policy, institutional and enterprise levels.

1-3 Such a task implies to know and appreciate the whole data on private industrial sector in Egypt, to briefly evaluate how GOFI operates and what are the projects undertaken by donors' agencies, as well.

1-4 The 24 day span of investigations in Egypt, from november 22 to december 16, was just enough to have a bird overview of all the outstanding problems, and this has been done thanks to GOFI staff who unstintingly brought his assistance in all fields of this assignment in spite of a slow-moving environment.

1-5 After reading lot of in-depth reports and surveys, popping in some private industries and gathering personal assesments of various persons, both from private and public sector, a newcomer in Egypt has not necessarily to repeat all what he has found during field work.

1-6 We have only collected and underlined key-points related to the purpose of study. So, on-going assumptions should not be regarded as offering a complete explanation to every facet of the reality.

## 2- PROJECT OUTLINE

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2-1 The United Nations Development Program (UNDP) has decided to assist GOFI and The United Nations Industrial Development Organization (UNIDO) has been selected as executing agency due to its long-standing experience in the industrial promotion.

The UNDP project DP/EGY/89/001 is forecast to assist GOFI in preparing

an industrial plan for private sector investment and studying project profiles for small and medium sized industries.

2-2 This project has been signed on may 1990 for a duration of two years and for a UNDP financing part of \$ 320,000.

2-3 The host country implementing agency is GOFI, an agency under the Ministry of Industry.

The GOFI's main involvements are :

- formulation of plans and policies,
- industrial information and registration (public and private cy's)
- selection of technological and investment opportunities,
- industrial pre-feasibilities
- examination of any new project of industry
- promotion of capital goods manufacturing in Egypt

2-4 The National Project Co-ordinator (NPC) is the Deputy Chairman in charge of GOFI, Dr Eng M.A.E.F. Mongi, who has appointed Mrs Fatima M.Nazmy, General Director for Conferences Affairs, as Project Executive Manager (PEM) for day-to-day commitments.

2-5 The project aims four objectives : training GOFI staff, design development plan, prepare project profiles and enhance internal information control.

2-6 Equipment has been supplied to GOFI. The major part of tasks has been sub-contracted to national consulting companies as follows:

Contract 21-01

Object : training of GOFI staff in the preparation of project pre-feasibility and feasibility studies,

Duration: 6 months over one year

Starting date: June 1991

Expected completion: may 1992

Selected company : PIEMCO

Contract 21-02

Object : design of a development plan for industry within coordinated, fully comprehensive and integrated approach to private sector development

Duration: 9 months

Starting date: June 1991

Expected completion: march 1992

Selected company: MEAG

Contract 21-03

Object : to prepare project profiles within sub-sectoral parameters and opportunities outlined in the private sector plan as formulated in the contract 21-02

Duration: 15 months

Starting date: July 1991

Expected completion: september 1992

Selected company: MEAG

Contract 21-04  
-----

Object: develop and enhance GOFI information and reporting system

Duration: 12 months

Starting date: June 1991

Expected completion: may 1992

Selected company: EMCO

2-7 Up to now, it seems that sub-contracts are performed in normal conditions and no delay is expected for completion, even though several progress reports are not detailed enough.

2-8 Implementation of the present consultancy assignment has required mutual information with 21-02 and 21-03 sub-contractor.

It has not been done in the spirit of evaluating works in progress but mainly to acquire information and advices from local consultants.

### 3- PLACE OF THE PRIVATE SECTOR -----

3-1 The reports in hand (see bibliography) display many figures and various comments about the place of private sector in the Egyptian economy.

We only stress the points which may help the understanding of this survey.

3-2 Prior 1987, the fall of local private investment was particularly sharp for industry, averaging 30 percent, compared to a decline in the economy as a whole, of 15 percent annually.

3-3 The public sector still dominates and controls the bulk of production, but this is slated to change as measures to encourage development of private sector take effect.

3-4 So far, the public sector represents 70 percent of GDP, while private industries would contribute over 35 percent of the total industrial production.

3-5 Besides 200 major industrial companies in public sector, there would be over 15,000 smaller ones in the private side, and an unknown but great number of cottage industries in uncontrolled field of economy usually called "informal sector".

3-6 However, this present situation has to be interpreted after analysing the manpower involvement, the structure of industrial private enterprises and constraints which prevent or inhibit their expansion.

#### 4- POPULATION INVOLVED IN PRIVATE SECTOR

---

4-1 Concentrated on some 30,000 square kilometers of fertile land, i.e. 4 percent of total area of Egypt, the population counts about 55 million inhabitants, with an annual growth rate of 2.3 percent. Greater Cairo now has 14 million and Alexandria about 4 million. In order to inhibit urban sprawl which encroaches on scarce arable land, the Government has established some satellites cities to provide convenient sites for new ventures and residential areas.

4-2 It is believed that 25 percent of population live in economy of subsistence, mainly in rural areas. GDP per capita which was estimated at \$ 690 is suspected to drop to around 550.

4-3 Thus, the total laborforce availability could be in the region of 15 to 18 million. Several observers believe that, in urban population, the workers employed in the informal sector should exceed 45 percent of the total laborforce in the manufacturing sector. New graduates arriving on the labor market every year are about 40,000 highly educated ones. In 1990, they were 25,000 with a commercial degree, and 15,000 with a high level technical background.

4-4 According to a World Bank report, private employment has grown from 7.3 in 1981/82 to 8.1 million in 1987/88, while in public sector, from 4.2 to 4.5. In agricultural sector, employment is estimated steady at 4.2 to 4.5 million, and in industry (petroleum, mining and manufacturing) it climbs from 1.4 to 1.8 for the same period. It is to be noticed that employment in distribution and services sectors totalizes 5.5 million, which is 3 times as in industry. Up-dated figures could not be found. They will be significantly affected by consequences of Gulf crisis events and by return of skilled manpower from troubled areas to Egypt.

4-5 These events have large effects on unemployment. Central Bank data show a rate of 7.6 percent for 1989/90. CAPMAS indicates a rise to 8.9 percent in december 1990. Recent ILO study estimates a range of 15 percent, and some observers think of 20 percent in 1991.

4-6 On an other side, it is estimated that at least 400,000 new jobs are needed annually to accomodate Egypt's ever increasing population.

4-7 Thus, there are, obviously, not only large manpower opportunities, but also necessity and urgency to create new jobs. A real emphasis is on promoting a proliferation of small scale ventures as the panacea to critical jobless situation which may generate social and political troubles if no way is found in a near future.

### 3- STRUCTURE OF THE PRIVATE SECTOR

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5-1 As a consequence of the "open-door policy" initiated in 1974 by late President Sadat, the investment of private sector in industry has gradually grown from 4 to 24 percent of total investment in 1981/82. The laws 97 in 1983 and 203 in 1991 on privatization of public enterprises have contributed to the extension of the private sector. Output of private sector would be around 32 percent of the total.

5-2 Value added, according to CAPMAS, would be 30 percent for enterprises having more than 10 employees, and 70 percent for small scale ones, which seems impressive but to be clarified. In a recent survey (see Egyptian Small Enterprise Foundation), it was estimated that industries employing less than 10 persons number about 250,000 and those employing 10 to 50 persons number about 13,000. These figures have to be considered with regards to the 80,000 industrial electric power subscribers, and the 120,000 industrial insurance policy owners. Taking into account that large companies are often inefficiently managed, that would be a new purpose to extend small and medium scale activities in Egypt. As Greater Cairo and Alexandria contain 75 percent of all small enterprises. extension should be recommended out of large cities.

5-3 Private sector has invested in all fields of industrial activities. It counts few large companies but it encompasses most of medium and all the small scale activities. As an exemple, there are 32 public major companies and 2000 private ones in textile activities. It has the major part of labor-intensive and low technology enterprises.

5-4 No clear definition of what is medium and what is small enterprise is given in reports. Generally, they may be considered as medium sized entities those which employ between 25 and 50 persons, with movable assets above LE 25.000.

Below these figures, they are designated as small ones.

5-5 Most of smaller enterprises work on a cottage or family basis. They belong to the informal sector. This sector can be defined as a collection of economic activities conducted without formal Government recognition, without licensing or payment of taxes. These micro enterprises operate quite freely, buying, processing and selling goods and services, and then contribute to the financial activities in the neighborhood.

5-6 Rules and regulations being made for large companies, they require some efforts to small entrepreneurs not accustomed to bureaucracy. This is why they stay in informal economy as long as possible.



5-7 Banking facilities exist for medium enterprises. The Development Industrial Bank (DIB), founded 1974, receives resources from various origins, Central Bank, World Bank, donor countries as well. Since beginning, DIB has served about 12,000 credit facilities to private sector. However, Bank procedures are asked to be more efficient and faster than before.

5-8 These banking facilities do not generally apply for smaller businesses. As a result, there is proliferation of small lenders in informal sector using exorbitant rates of interest, and dealing out of any control of official banking authorities. That probably represents a lot of money, as some experts believed that 30 to 50 percent of the Egyptian economy is in the informal sector.

#### 6- FINANCIAL CAPABILITIES OF THE PUBLIC SECTOR

---

6-1 At this step of inventory, it becomes obvious that the private industrial sector may be divided into two sub-sectors, the medium enterprises and, on an other hand, the small ones. Each of them with specific problems requires different solutions.

6-2 Most of the medium sized enterprises, as large private ones, are set up as exclusively money makers, using any source of fiscal and banking facilities to do business. They are accustomed to high investment return projects. They refrain from investing when they expect a fall in profitability, or when they suspect any social and political risk.

6-3 The small and micro projects are often generated by necessity, either because a good opportunity has appeared to someone who looks for his own social promotion, or only by attempt to live or to survive. Banking facilities are scarce and replaced with the informal costly lenders.

6-4 Nevertheless, while Egypt is considered as an indebted country, the Egyptian private sector appears as a very rich and potential investor.

6-5 The private entrepreneurs have liquidity. Several reports show that foreign currency deposits, on an annualized basis, have grown each year and are now estimated to be in the region of \$ 12 billion. Private companies and individuals, an other recent report says, have an estimated additional LE 35 billion in accounts in commercial and investment banks in Egypt.

6-6 According to an Arab Thought Forum report dated 1989, unlisted exports of capital and outflow during 1976-1982 has been over \$ 3,9 billion, i.e. 34 percent of increase in external indebtedness (OECD figures)

6-7 The sub-sector of small entrepreneurs has almost no way but private and family savings or underground economy to mobilize investment for their projects. For instance, community savings plans are usual in various towns and villages of Egypt, and cater to individual consumption or equipment needs.

## 7- PRIVATIZATION OF PUBLIC COMPANIES

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7-1 As advised by the IMF and the WB, the Government has decided, in 1980's, to privatize some totally or partly state-owned companies.

7-2 This program involves:

- sale of Government shares in some 245 joint companies, the accounting value of which is about LE 2.6 billion
- sale the 1900 companies belonging to Governorates, with an accounting value estimated at LE 529 million
- privatization, partly or totally, of public enterprises governed by special rules (the law 203 of 1991 says that these enterprises are considered as "private" sector projects, even if they include public sector equity)

7-3 Up to now, implementation in progress, which may concern private medium scale enterprises, has started as follows:

- the Ministry of Agriculture has sold 833,000 acres to private sector. Some agro-based industries have also been sold.
- the Ministry of Industry, which seems to be more reluctant to privatizations, has only sold minor assets, shares in joint-ventures and unworking facilities. That totalizes LE 14.7 million out of LE 450 million of assets to be privatized, representing 34 enterprises
- most of enterprises belonging to Governorates, 1170 out of 1900, have already been sold, mainly due to underevaluation of cost of land, compared to productive capacity.

7-4 These changes will not occur without affecting private sector, mainly the sub-sector of medium scale industries. The sub-sector of small and micro units will only benefit from the inferred consequences.

7-5 Changes will not immediately be tangible on an increase in manpower employment but they may allow better industrial output if private entrepreneurs are actually more efficient than previous owners.

## 8- INVESTMENT IN NEW CITIES

---

8-1 During the last decade, new cities have been built to help industrial sector to grow, by installing industrial estates and residential areas.

8-2 In the city of 10th of Ramadan, about 400 private industries have been already set up. A technical institute related to these industries has been installed under private initiatives.

8-3 Three other cities have also been created, 6th of October city, Sadat city and Ameriya city, and they are under development in the same way.

## 9- INVESTMENT IN FREE TRADE ZONES

---

9-1 To attract and oversee foreign investment and to facilitate processing of local or imported inputs for exports, several free zones have been designated in Cairo, Alexandria, Port Said and Suez City.

9-2 Major incentives include indefinite tax exemptions, no exchange control restrictions, exemption of customs duties and procedures, and authorized warehousing activities.

9-3 The General Authority for Foreign Investment in Free Zones (GAFI) has been established in 1974 to supervise those different matters, under the Ministry of Economy .

9-2 However, it soon became apparent that prospective investors perceived a number of adverse factors. They were complaining about:

- bureaucratic confusion in obtaining final Government approval for the project,
- lengthy clearing processes with customs
- complicated tax interpretations and procedures
- conflicts with public industries concerning market shares and pricing policies
- difficulties in finalizing site location
- interpretation of customs regulations
- conflicts over provision of infrastructural services to projects

9-3 These rather bad experiences are not to encourage newcomers. However, since the fiscal and customs regulations are clarified, free zones may become a tarmac for exports to neighboring countries. Many medium sized firms may be interested, either from local capital or from joint ventures with foreigners.

## 10- CONSTRAINTS OF THE PRIVATE SECTOR

---

10-1 As described in a working paper prepared by EBA, and confirmed during interviews, private entrepreneurship is faced with major constraints related to trade and regulatory environment. This has been reported in "industrial sector memorandum" of the WB (June 13, 1989) as shown in the following para 10-2 to 10-7.

### 10-2 Investment laws

----- Egypt has a complicated and cumbersome investment approval process. Various Government Agencies are involved. Frequent revisions in legal framework governing investment have occurred since 1974, both new laws and amendments to old laws. The result is considered by private sector as a body of inconsistent, occasionally contradictory laws and regulations, involving multiple administrative and supervisory organizations.

### 10-3 Discrimination

----- In spite of what it is written in the laws, public companies, or "private" but predominantly owned by the government, are, in practice, able to negotiate reductions in their input costs and obtain protection from import competition. That undoubtedly pose a strong constraint to private investment.

### 10-4 High investment costs

----- Lack of a functioning capital market and of legitimate venture capital institutions has made very difficult for private entrepreneurs to undertake large investments (over LE 20 million) or medium companies to extend their activities. One particularly adverse consequence of this situation is that it has encouraged public sector to keep a major place in heavy industries. Medium sized enterprises are consequently affected by that situation.

### 10-5 Freedom of entry and exit

----- In the past, the government designated certain sectors as "strategic", thereby excluding private sector from investment in these industries.

Throughout the 1980's, the government has been relaxing these restrictions. However, certain sectors may still be closed to private investors due to underutilized capacity in existing industries which prompts the Investment Authority to deny new project request.

At the same time, freedom of exit is restricted, because public enterprises cannot, by law, be declared bankrupt by their creditors, and the banks are reluctant to liquidate troubled private companies. If ailing, inefficient firms cannot be made to close down, it becomes increasingly difficult for new entrants who may be more efficient to enter into these activities.

As a consequence, consumers must bear costs of sustaining inefficient industries.

## 10-6 Regulations

----- The government's ex-post investment supervision of companies is cumbersome, and its enforcement of various regulations is highly inconsistent with respect to important operations affecting a company's performance (i.e. foreign exchange use and retention, import procedures, duty drawbacks for exports and credit approvals).

The combination of these factors makes ex-ante estimates about profits highly uncertain.

## 10-7 Access to credit

----- Since 1987, access to short-term credit has become increasingly restrictive.

We must add our own comment to this WB statement: so far, permanent major disincentive remains in the fact that a riskless bank deposit generates a very high interest per annum, which is never accessible to any industrial venture.

10-8 Another matter hindering expansion of private factor in industry is that many private industrial investments undertaken since ten years have shown disappointing results due to implementation delays and heavy reliance on imported goods and equipment.

Like public enterprises, private companies are suffering from consequences of macro-economic distortions and the sharp devaluation of the Egyptian pound, which makes it difficult for them to service their foreign debt.

So, both investors and banks are more reluctant to undertake medium and long term investments, particularly in industry.

10-9 In 1991, several decisions of the government aim to install equality of chances for both public and private sectors, such as:

- last february, creation of a new exchange market which limits at less than 5 percent the various currency rates of exchange applicable to public and private enterprises: last october, market has been totally unified

- on may 10, the government has abolished authorizations and controls related to private investments which are no more subject to authorization but to declaration only. Few exceptions remain.

- on june 30, there are no more restrictions to manpower management. Private firms may engage manpower freely.

- by the end of this year, production licences will be cancelled. Few exceptions will remain.

10-10 Thus, a slowly-coming improvement seems to be on the way to alleviate strong constraints which have, up to now, hampered the normal development of private industry as a whole.

## 11- CONSTRAINTS INHIBITING SMALL ENTREPRENEURSHIP

---

11-1 The following constraints are common to medium and small sized enterprises but they specially affect the sub-sector of smaller ones. Their collection has been made from several interviews. Findings are in conformity with those expressed in many reports.

11-2 There is a permanent demand of information. It appears that market opportunities are not displayed and communicated to small businessmen, either because of lack of accessible databases or rather because marketing research bodies refrain from submitting valuable information extensively. Consequently, avoidable redundancies generate waste in investment.

11-3 Official supporting agencies are considered as unefficient by private promoters.

There are two major organizations, the state-owned GOFI, and the private-managed Federation of Egyptian Industries which has its own council in every industrial city.

According to all private sources, it seems that there is a "mutual reluctancy", both in GOFI and in the FEI, to meet together out of formal meetings. Co-operation is needed, requested by both parties, but communication is scarce.

This is certainly an excessive assesment, but it clearly signifies that co-operation has to be, at least, stimulated between these organizations.

11-4 Dealing with governmental entities constitutes " a big headache" for small entrepreneurs, mainly about solving questions of taxes, customs and social insurances.

A report says: "none of the officials gives a chance to representatives of private sector to discuss matters affecting them...The private sector is exposed to sudden visit by a group of officials who claim a certain amount of money due to government and force the owner to pay.....also red tape still causes a severe pressure on new entrepreneurs".

Even if these assesments are not fully true, they are significant of the gap which separates public authorities and private people.

11-5 There are also complaints about relations with bankers who are supposed to exaggerate in the securities they demand before granting any credit, as well as with informal lenders using incredible interest rates.

11-6 Shortage of managerial competences and technical skills is not considered as a major problem, most probably because small private businessmen are not aware of possible improvement of their capacities.

## 12- SUPPORTING AGENCIES TO PRIVATE ENTREPRENEURSHIP

---

12-1 Various and numerous entities exist to assist entrepreneurs either on management or technology improvements. That does not go without overlappings between them.

The following list has been hastily established and it is, by far, not exhaustive.

12-2 Several Ministries have their state-owned or parastatal organizations to secure their part of private sector.

12-3 Depending on the Ministry of Industry, we have counted:

- GOFI, as described para 2-3
- GAFI, as shortly described para 9-3
- IDDC, an Industrial Design and Development Center, which provides private enterprises with technical and managerial assistance in many fields of activity
- ISSI, an Institute for Small Scale Industries attached to IDDC
- PVTC, a Productivity and Vocational Training Center
- HIPCO, the Handicraft Industries and Productive Co-operatives Organization

12-4 The Ministries of Interior, of Tourism, of Agriculture, of Military Production have also their own entity devoted to small and medium scale industries.

Every Governorate has also a special department for this sector.

12-5 Obviously, something is to be done to co-ordinate all these institutions, to improve efficiency of very costly separate organisations and to solve this multi-responsability situation. Can that be done through a common "General Organization for Small Industries"?

12-6 Several banking institutions have also services specializing in small and medium projects.

DIB, the Development Industrial Bank (see para 5-7) is oriented toward small industrial ventures, with special funds from the WB.

12-7 The private sector is represented by:

- FEI, the Federation of Egyptian Industries coordinating twelve chambers of industry,
- EPA, the Egyptian Business Association

12-8 Foreign donors are funding many projects through most of the above-mentioned agencies, such as:

- the World Bank group, which has granted loans to NIB
- UNDP, the United Nations Development Program, with UNIDO and ILO as executing agencies

- USAID, the US Agency for International Development, which funds:
  - private sector feasibility studies project
  - private enterprise credit
  - business support and investment project
  - assistance projects with the US Investment Promotion Office (USIPO) and the International Executive Service Corps (IESC)

12-9 The European Community Commission seems to be more oriented towards non governmental organizations, but no figures were available during the survey.

12-10 Some other countries, Japan, Germany (GTZ), Sweden (SIDA) have also their own projects which were not identified during this assignment.

12-11 Some foreign Non Government Organizations would come to Egypt but there are not, up to now, aware of possibilities offered by the country.

As an exemple, see SIDI (Societe d'Investissement pour le Developpement International), a french capital venture company specializing in small projects in developing countries (47, quai des Grands Augustins, Paris).

Similar ones exist in other european countries.



### 13- LOCAL MARKET OPENINGS

---

13-1 It is not intended to carry out a comprehensive survey of all the industrial sectors, to determine what should be the new opportunities of industrial production for local demand in the coming years. Many recent reports have analysed all the aspects of the industrial situation of the country.

The 21-02 and 21-03 project sub-contracts are supposed to submit the guidelines of an industrial plan and to screen the most suitable profiles in the most promising sectors.

13-2 We would only like to underline the key-points which appear as favourable to medium and small scale ventures, to a foreign visitor, after a four week visit in Egypt. These points are not exclusive of any other matters which should be pointed out, after a much longer and in-depth survey.

13-3 There are five aspects of the present situation that strike a newcomer. At first, the fast growing unemployment and the shortage of land, then, the urgent need of restructuring large industrial firms, then the lack of integration of the productive network, and the fact that imports represent three times the amount of exports.

13-4 During our various interviews, we have noticed that emphasis is made on development of the most sophisticated industries, electronics, engineering industries, capital goods manufacture, etc. This is surely one of the most valuable ways of the economical growth. That should become easy as soon as the private local and foreign investors find favourable legal, fiscal and customs conditions. The high quality of manpower will permit a fast implementation of new projects in these fields.

However, sophisticated industries exist in other sectors which seem to have priority, for currency saving reasons. Egypt's increasing imports of wheat, wheat flour, maize, frozen meat, dairy products, refined sugar are very impressive. They have reached more than LE 5 billion in 1990.

Therefore, it seems obvious and urgent to create or extend agro-industrial complexes producing and processing at least a part of these currency-costly products, as it has been successfully done for wheat in Qassim and El Kharg regions of Saudi Arabia, for instance.

This type of venture does not involve traditional agriculture but require some high technology methods specially adapted to arid and semi-arid climates. Agronomic, climatic and economic conditions are not identical as those in Saudi Arabia and they have to be adapted

Comparing cost of such projects with foreign exchange savings has probably been done. It has to be up-dated regularly and implementation encouraged with attractive incentives.

13-5 The agro-based industries generate a lot of feeding industries such as production of plastic pipes, valves and faucets, computer-controlled systems for irrigation in arid areas, pumps and others devices which provide sales and jobs to existing medium sized firms.

On an other hand, these new products may introduce use of land-saving hydroponic industrial cultures, as it has been done, for long, in Japan.

13-6 There may be a room for soya production. If so, apart soya cakes which are used for animal feed, soya milk may be substituted to imported powdered cowmilk for human consumption. This is just a question mark, because we have had no time for further investigations.

13-7 Engineering industries are probably equipped to undertake a local production of capital goods which have been up to now imported. There is space for locally made farm implements, tools, anti-pollution devices such as tanks, air and liquid filters, micro-filters, dioxyde preventing apparatuses, etc, under or without foreign licences. This could be better done by looking for specific capital goods exactly adapted to local conditions, such as solar energy driven evaporating and filtrating screens, distillers, etc.

That implies some long run research, and the country has its own R/D laboratories since long. Incentives must also be created, taking into consideration the foreign exchange savings originated by these new products.

13-8 Applications of solar energy and wind generators are probably in progress in Egypt. Alternative geothermic energy seems not in use in Egypt, so far.

We would like to draw attention to municipal waste recovery. Cost of electrical energy has jumped during past months, and present situation may become favourable to production of electricity from town solid waste.

Major examples come from the USA where special tax shelters have been allowed for this purpose. So, private companies have invested in such plants and they process most of solid waste into steam and kilowatts.

These plants are connected to the local electrical network. They must be as large as possible in order to get the maximum profit, but they involve many medium and small scale firms for collecting and sorting various types of waste materials, as well as processing materials which cannot be burnt and transformed into steam. This type of project has been surely contemplated, but has it been updated and re-evaluated?

We have noted that compost production from refusals is existing in Egypt.

13-9 Restructuring large industrial firms will surely expand number and competitiveness of medium and small scale ones acting as sub-contractors.

The quest of efficiency will ask decentralization of production responsibilities through multiple sub-contractors which have to supply spares and sub-units in due time.

The "zero stock" or "just in time" methods in use in most of automotive and electronic companies in Japan, in the USA and in Europe have to be applied in Egypt with necessary adjustment to local conditions.

The UNIDO project called "sub-contracting exchange project", driven by IDDC, may bring a major contribution to this development.

13-10 An other promising way should be to co-ordinate productions of small/medium companies with micro enterprises working in the informal sector.

This has been done for years in countries such as Malaysia, Indonesia and Italy, specially in textile products.

Several internationally reputed firms have started as small entities sub-contracting totally the manufacture of the products to micro units, providing them with necessary inputs, design and methods of work, renting small equipment and controlling quality of the end products.

They started business as simple traders. Then they have integrated gradually a part of the most productive micro sub-contractors. They are now owners of a well known trademark, they use large advertising in their own country and abroad.

Some legal conditions and tax reductions are the best incentives to this kind of integration.

That is surely done in Egypt already, but more development could be found when launching a trademark of new consumer goods such as garment, knitware, leatherware, advertising devices, food products, papersheet and cardboard products, perfumes and many other commodities.

13-11 Waste paper recovery can also be made on a medium scale basis for production of wrapping kraft paper and corrugated cardboard. This is generally made on a large scale in Europe, but, due to specific conditions of Egypt, medium sized machines (newly built or re-constructed) may be found for the local market.

13-12 An other line of research would be the labor-intensive equipment, in spite of the general opinion on the priority to high technology.

The reason is the other priority of providing employment to the highly growing number of jobless people.

With a well trained manpower, simple equipment can make good quality products.

Examples of such industries can be found in Malaysia, Indonesia, Brasil and India. These countries also manufacture their own equipment and machines, as it can be done in Egypt.

These technologies are fitted to many fields such as agro-based industries, textiles, chemicals, plastics processing, paper converting, wood and natural fibre products (compressed papyrus partition walls?) and many construction materials, etc.

13-13 At same time, improvement of packaging products should be undertaken, in terms of quality, solidity and locally made origin. Better and more attractive display would increase sales and facilitate exports.

13-14 A list of 121 project profiles is under study by GOFI sub-contractor.

Many of these profiles are for import-substituted commodities. There are probably in accordance with priorities indicated by GOFI.

A further step should be to insert these profiles in the actual industrial network, to locate them in every industrial center, and to appreciate overlappings and possible duplications with existing underutilized equipments in the same area.

An other step should consist of getting in touch with large companies in order to consider how to find appropriate markets to such medium industries as sub-contractors.

Most probably, this first list of profiles has to be extended to all the priority sectors defined by GOFI and following to strategy of the forthcoming plan now under study.

#### 14- SUGGESTIONS TO ACCESS EXPORT MARKET OPENINGS

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14-1 With over 55 million consumers, Egypt not only has the largest single market in the region, but its industrial capabilities may act as sprigboard to the rest of the Middle East. So, a very promising way of developing private industrial sector would be to expand exports and extend business links between local and foreign investors.

14-2 The on-going UNIDO project for development of a "transnational economy" (EGY/91/012) foresees several activities which may be successful after evaluating all aspects of their implementation.

14-3 We have submitted the following lines of research and development of this project to the UNDP office in Cairo, without pretending to exhaust the matter:

14-4 The R/D would involve, at first a preliminary study on:

- close co-ordination between Ministries concerned and private sector representatives, with clear definition of what is to be undertaken for the benefit of local enterprises with assistance of Public Authorities
- inventory of legal rules and procedures and their expected improvement in due time
- inventory of fiscal and customs procedures and incentives, either for local and foreign partners, on setting-up companies and branches, establishing joint-ventures, technology transfer links and any other form of partnership, specially in the free zones, and their expected improvement in due time
- survey of local banking facilities proposed to any form of partnership, taking into account on-coming resources from abroad (EC, USA, Japn, etc)
- co-operation with the Egyptian Office of Standards
- co-operation with the Export Development Bank of Egypt

14-5 This study will introduce an action plan including:

- market survey to determine the country targets and suitable fields of business investigations, taking into consideration political and diplomatic implications
- preparation of a marketing campaign oriented towards Commercial Sections of Embassies, foreign Chambers of Commerce and foreign Federations of Industries
- application for an egyptian representative in several UNIDO investment offices in the world (Zurich, Washington, for exemple)

14-6 The action plan will determine new ways of transnational business such as:

- opportunity for special export houses to channeling products of small scale industries exclusively, mainly in the fields where specific fancy hand-made products are in demand (textiles, perfumes, jewellery, etc)
- co-operation of medium firms with cottage enterprises operating in the informal sector and used as sub-contractors (examples in Italy, Thailand, Corea, Malaysia, Indonesia)
- enlarge fields of "transfer industries" (local manpower, hi-tech, inputs and end-products exported), mainly in free zones, using inputs partly from abroad, for re-export after assembly (type Singapore, Hong-Kong, Mauritius) to surrounding countries
- search of international companies looking for decentralization (for instance, Swissair company has transferred a part of its accounting department to Bombay, in order to benefit from lower paid personnel as highly qualified as those in Zurich, also ATT company is considering to set up a part of its financial services in India for similar reasons)
- enquiries on technical agreements with the European Community on industrial sub-sectors such as chemicals, textiles, perfumes (refer to recent agreements between EC and Poland, Hungaria, Czechoslovakia)
- research of joint-ventures between international and egyptian consulting firms with arabic speaking countries in perspective
- set up an voluntary program showing industrial sub-sectors involved and sites selected for testing transnational projects
- prepare a suitable strategy and corresponding scenarios, and determine five-year targets.

## 15- DESIGN OF A SIMULATION MODEL

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15-1 In the terms of reference of this assignment, GOFI has asked to UNIDO an advisory support for "design and computerization of a simulation model for policy testing and analysis of the industrial growth of the private sector until 2000".

15-2- A short survey has been undertaken on existing capabilities in Egypt, namely those in GOFI. Various assessments from several private and public sources of information have been collected, in order to submit some comments not too far from reality, in this very short period of investigation.

15-3- Existing capabilities:

- IDSC, the Cabinet Information and Decision Support Center, created 1985, with main objectives:
  - to develop information and decision support systems for the Cabinet and top policy makers
  - to assist the establishment of support centers in existing ministries and to make more efficient and effective use of available information resources
  - to encourage, support and initiate informatics projects that will accelerate management and technological development of Egyptian ministries and government agencies
  - to participate in international co-operation activities in concerned areas

Its role includes sectoral, national and international fields (a DSS model has been established for developing countries)

Among several other projects, IDSC has performed the "Production Information and Decision Support System Project" (PIDSSP) which created a comprehensive database within a one-year period which included 16,000 industrial companies.

The database (from GOFI) defined the major characteristics of each company, their available resources, production and underutilized capacities.

This project has published directories on feeding industries, manufacturing capacities, design capabilities and engineering services.

It is reputed to have established a link between research centers and production facilities.

- IDDC database on private industries
- Several Ministries have databases on private sector related to their specialities (agriculture, interior affairs, finance, supply and internal trade, electricity, insurances, military equipment, etc)
- FEI, the Federation of Egyptian Industries has its own data records (not investigated during this assignment)
- The Cairo University may have include private sector informations in ENSTINET, the Egyptian National Scientific & Technical Information Network

15-4 GOFI database collects major informations on private companies for registration (generals, investment, working capital, machinery/equipment details, breakdown of all operating costs, revenue,

polluting agents, technology)

Registered firms are now about 20,000.

The computer department has been created 1986.

IDSC has supplied hardware, software and training.

That database has been used for implementation of above-mentioned PIDSS.

Industrial gaps are presently calculated by hand, separately, according to strategic commodities defined by the Ministry of Industry and priority commodities indicated by GOFI

Informations are transmitted every month to IDSC.

#### 15-5 Comments of various observers:

- reliable data on aggregate output for years 1986 to 1990 is lacking: the private sector seems very cautious about accuracy of figures displayed by Government Bodies

- A US Embassy report says: "a major problem in estimates of economic growth is the large informal sector partly or totally escaping to government regulations and measurements.....some experts have estimated that as much as 30-50 percent of egyptian economic activity is in the informal sector.....if so, GDP in current prices would be well in excess of LE 100 billion, rather than the LE 77 billion estimated in 1989-90"

- financial statements of private companies are not collected by the Ministry of Finance... even so, these statements would not reflect reality

- sector of medium and small scale industries is very fluctuating in a short period (one or two years).

Some small industries become medium sized, many of them disappear, either to colapse or to move into the informal sector, some others may re-appear with an other form or an other name.

#### 15-6 So, we have reached several provisional conclusions which are:

- a simulation model of the private sector should represent an excellent tool for the decision-makers, provided its works from the actual facts and not as an academic business game

- this model must be very simple to be efficient and fit for use on immediate request

- the list of informations collected by GOFI is a good starting base, provided it is regularly and frequently up-dated.

Up to now, it exists only one point (two for elder ones) per parameter for the curves of life of every enterprise, from the data given when it is registered.



At least four to five points have to be known, to follow the impact of the decision under study.

- a law under preparation will fix an up-dating every two years, which seems a reasonable frequency, but that implies at least two conditions:

- quality and reliability of collected data will depend greatly upon the competence and ability of the inspectors who have to be trained specially for this purpose

- incentives have to be supplied by the Authorities to the entrepreneurs to be sure that informations are not false but in conformity with reality.

As an exemple, incentive should be for GOFI to display some data about sector's competition and new openings to entrepreneurs during or after interviews: that would develop friendly relations between GOFI staff and privates

- the model must take into account the related macro-economic data, and include data of industrial public sector and several scenarios of growth/drop of informal economy

- major parameters of the model would proceed directly from the existing GOFI roster. They should be:

- inputs, origin, volume and value
- energy, KW, oil, petrol, alternative
- manpower, number, wages and salaries, social charges
- sales, amount, break-down of types of products, categories of customers, local and export markets
- stocks, for raw materials, through-puts, end-products, their fluctuations during the period
- spare parts, consumption and fluctuation of stocks
- corporate taxes and others.
- and other parameters on request

Findings shall be crosschecked with databases from different origins.

15-7 How and where to choose a simulation model?

According to UNIDO, one of the suitable model should be DYSMAP2 constructed by the University of SALFORD, UK (pamphlet transmitted to the sub-contractor)

Another could be the DYNAMO package copyrighted by PUGH ROBERTS, USA.

IDSC has probably studied other models, and, most probably, the Ministry of Planning does too.

The Cairo University and the American University have surely created their own models. We have had no time for further investigation.

## 16- CONCLUSIONS AND RECOMMENDATIONS

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16-1 Thus, whatever the present economic situation is, the most urgent and the major target appears to be the development of entrepreneurship in the private sector.

Giving the privates the room for free enterprise is opening the bottleneck which, up to now, has stifled free initiatives.

Frequent misunderstandings between privates and public bodies would be alleviated in a more convivial atmosphere.

So, our recommendations will be in that line, for planning design matters, for remedial actions to the constraints of private small and medium firms, at policy, institutional and enterprise levels.

### 16-2 Planning design and policy testing

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16-2-1 The informal sector is, by far, the most unknown one. It plays a major role in the Egyptian economy.

It seems essential to up-date various studies on this sector and to assign a permanent body, or a committee with both private sector and public authority representatives, to follow fluctuations of the underground economy and to advise decision-makers on its trends.

16-2-2 Data collected by GOFI on small and medium firms will become valuable for planning purposes when they are frequently up-dated. The GOFI figures are suspected not to be reliable by private sector representatives, not accustomed to co-operate with government authorities.

It is recommended to actualize these data, as it is forecast by a coming law, in order to build an indicative five-year plan for the private industrial sector (specially the smaller enterprises) on an accurate basis and in the manner of a rolling plan.

It is highly suggested to closely involve the private sector in the preparation of the plan which is mainly directed to it.

16-2-3 Having accurate and regularly up-dated inputs in co-ordination with private sector representatives, having regularly trend estimates and scenarios of the informal economy, a simulation model can be undertaken with a chance to stick to reality.

It is also recommended to associate the private sector to construction and use of the model.

16-2-4 Outlines of plan design and simulation model should be submitted to foreign donors, during information meetings, say, every six months. Their own recommendations should be welcome and analysed.

16-2-5 The indicative five-year plan for private industrial sector will be set up, according to the strategy of Government.

It will contain usual calculations related to its impact on macro-economy.

However, besides public authorities, the major end-user shall be the private sector.

So, at least a part of documents of the plan, those usable by privates, must be displayed in a form readable by privates.

Firms and individuals who are looking for spending or investing their own savings expect to find attractive and accurate information on small or medium sized projects in these documents.

### 16-3 Remedial actions for private firms on policy level

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16-3-1 It appears that the major constraints hampering the development of the private industry are correctly evaluated by Government.

Corresponding new laws are under way. They should be issued gradually and decisions taken.

But the private sector seems not aware of that.

So, the only recommendation in this matter should be to launch a information campaign to privates, as soon as the plan is ready, to stress the existing/ forthcoming incentives and decisions taken to alleviate the inconveniences of the past.

16-3-2 Taking into consideration the gap in mentalities between public and private sector, attractive advertising campaign would create the necessary impetus to the wake-up of entrepreneurship.

So, it will be underlined that the Government's role becomes a catalytic role of facilitator, providing environment and not inhibiting as it has been in the past.

### 16-4 Remedial actions on institutional level

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16-4-1 GOFI plays a capital role in the field of private enterprises and, so, has to adjust its capabilities by the time the new plan is issued and advertised.

However, several present problems hamper GOFI and they have to be alleviated, namely cumbersome bureaucracy, slow moving habits, underpaid manpower, poor quality contacts with privates.

We recommend creation of a special taskforce devoted to promotion of the plan, permanently in contact with private sector, which will constitute a close link between GOFI and private entrepreneurs.

This taskforce would consist of several junior staff, managed by one or two seniors, chosen from GOFI personnel.

Special training would be carried out under supervision of joint-committee (GOFI and private representatives) with the assistance of some foreigners having experience in planning promotion in their own country.

16-4-2 The staff should be duly equipped and correctly paid. Precise targets shall be defined and results will be checked regularly by the above-mentioned committee.

The duration of this taskforce's assignment would be two years, beginning as soon as the plan document is issued, and extension required in case of successful achievement

Funding of such taskforce may be asked from foreign donors, both from international agencies and bi-lateral co-operation.

#### 16-5 Remedial actions on enterprise level

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16-5-1 IDDC and several other training schools prepare many young egyptians for the day-to-day management of an enterprise. So, when an entrepreneur wants to extend his activities, he is basically prepared to perform feasibility study of his project. In a very near future, GOFI will be in a position to assist him very closely (see COMFAR and PROSPIN training).

In addition to that, we suggest, as requested by many private sources, GOFI to complete its assistance in issueing not only gaps in local supply, but also up-dated and open information on what are the projects starting or under registration to avoid redundancies and facilitate opportunity research of the entrepreneur. By the same way, a catalog on products in demand abroad should be recommended, with special attention to products using local raw materials.

16-5-2 Many of automotive and engineering industries are on the way to be privatized. That involves a large number of technologies and equipments, as well as many technicians. They are not fully integrated and often need new feeding industries.

The five-year plan under preparation will not be sufficient to inform large, medium and small firms on the whole possibilities in these industries.

We did not find any in-depth technical survey, analysing the present situation and showing the medium term prospects.

We recommend such a study, the findings of which should be of great interest for listing project profiles under preparation.

16-5-3 As many observers said to us, "the entrepreneurship has been killed in this country". That probably overstated assesment, nevertheless, shows how urgent is to re-activate the spirit of undertaking challenging projects.

By far, the new graduates, mainly those with few years of experience as government employees, seem to be the most motivated.

We recommend to study and to launch a program of small and medium sized industries, which would be managed by such young qualified entrepreneurs.

Funding projects with them can be found in DIB (Saudi Arabia has granted \$ 15 million loan at low interest rate for junior entrepreneurs).

Foreign venture capital companies should also be interested for specific projects, specially in agricultural and agro-based industries in arid or semi-arid areas, carried out by promising and dynamic junior entrepreneurs showing productive incentives (a new frontier policy?).

Agricultural activities would employ many unskilled and semi-skilled workers driven by enthusiastic managers.

Related industries to be created involve a lot of sophisticated technics. So, many potentialities exist for export of processed end-products as well as implements, equipments and, why not, typically egyptian technology.

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