Final Report

Enhancing Egypt's Exports: Annex
Economic Analyses of Five Industries

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PREFACE

This Annex to the report is based on a study conducted by the Development Economic Policy Reform Analysis (DEPRA) Project, under contract to the United States Agency for International Development, Cairo, Egypt (USAID/Egypt) (Contract No. 263-C-00-96-00001-00).

The DEPRA project is intended to encourage and support macroeconomic reform in Egypt through the provision of technical assistance and services to the Ministry of Trade and Supply with particular focus on international trade and investment liberalization, deregulation and financial sector strengthening.

The main report was compiled and authored by a team from Nathan Associates Inc., Dr. James H. Cassing, Team Leader, and Mr. Denis Gallagher, and from Allied Corp. - Egypt, Dr. Ahmed M. Moharram, working under contract, and a team from Cairo University, Dr. Hanaa Kheir El Din, Dr. Samiha Fawzy, Dr. Omnia Helmy, and Dr. Mona El Garf, working under a purchase order agreement.

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The authors are solely responsible for all opinions expressed in this report, and the conclusions and recommendation do not necessarily reflect opinions or policies of either the Government of Egypt or the U.S. Agency for International Development.

Table of Contents

Executive Summary **i**

1.0. Industry Efficiency **1**
1.1. Efficiency and Protection 1
1.2. Trends in output, Employment, and Efficiency 3

2.0. Trends in Exports **5**
2.1. Export Performance by Sub-category of Industry 5

3.0. Industry Profiles: Survey Data, 1997 **11**
3.1. Food Processing Industry 11
3.2. The Leather Shoe Industry 40
3.3. Software 69
3.4. Wood Furniture 69
3.5. Textiles 73

4.0. Summary of Findings, Firm-Level Analysis **75**
4.1. Constraints to Exports 75
4.2. Efficiency Factors 76

5.0. Policy Implications **78**
5.1. Tariffs and NTB's 78
5.2. Government Facilitation of Industry Performance 79

Statistical Appendix **80**

Statistical Appendix

Tables 1 ⇨ 12 Processed Food Industry: Capital, Employment, Production and Efficiency Measures, by size of firm, 1992 – 97.

Tables 13 ⇨ 16 Leather Shoes: Capital, Employment, Production and Efficiency Measures, by size of firm, 1992 – 97.

Tables 17 ⇨ 24 Wood Furniture: Capital, Employment, Production and Efficiency Measures, by size of firm, 1992 – 97.

Tables 25 ⇨ 30 Software: Efficiency Measures for 29 Software Companies, 1997.

Tables 30 ⇨ 39 Textiles: Capital, Employment, Production and Efficiency Measures, 1992 – 97.

Tables 40 ⇨54 Textiles: Summary of Balance Sheets of the 15 Firms.

NOTE: Because of its large size, the Statistical Appendix is contained in a separate PDF file.

Executive Summary

This Annex to the Report: "Enhancing Egypt's Exports (June 1998)", adds a firm-level analysis, based on a sample survey of firms drawn from the five industries. Aggregate data drawn from CAPMAS and other official sources are also reviewed and the new dimension of firm-level responses was added to add depth and color to the statistical analysis. Industry efficiency, trends in exports, company profiles, and policy implications of the analysis are explored in depth. Forty-one statistical tables are appended to the Annex, covering summaries of industry-level data and measures of industry performance.

Industry Efficiency

Generally speaking, the five target industries are operating relatively efficiently and all (except furniture) have a strong comparative advantage, as measured by domestic resource cost (DRC) coefficients. However, the effective rate of protection (ERP) for each industry exceeds 40 percent, except for processed food. Growth in exports appears to have been higher for these five industries (except for furniture) than in "other" manufacturing.

Trends in Exports

Export growth was healthy, but the record is mixed. Total processed food exports grew at an annual rate of over three percent, canned food exports doubled annually, frozen food grew at 30 percent per year, but exports of dehydrated foods decreased. Exports of shoes declined, furniture exports declined by 32 percent, but most categories of textile exports increased substantially.

Industry Profiles (Survey and Interview Data)

The most important single constraint to exports, as cited by individual firms in each industry was:

- Food Processing: local markets are more profitable.
- Leather Shoes: lack of skilled marketing staff and lack of a marketing strategy.
- Wood Furniture: local markets are more profitable.
- Textiles: high costs of production relative to prices.

Efficiency factors most often cited by firms responding to the questionnaire were:

- Food processing: variability of international demand.
- Leather shoes: management of quality factors for exporting.
- Wood furniture: high raw materials costs and high tariffs.
- Textiles: high rate of idle capacity.

Policy implications

Interviews with individual firms revealed that high tariffs and non-tariff barriers to imports of raw materials are considered constraints to producing for export, as the effect is to substantially increase costs of production. What the firms did not say directly, but which was

implied by the statement that “domestic markets were more profitable” is that high tariffs and non-tariff barriers to trade (NTB’s) translate into an implicit tax on exports, which is estimated to be over 30 percent on the average over all industries.

Lack of knowledge concerning export market demand seems to be the next most important constraint to exports. In this regard, it is abundantly clear that a partnership between private enterprise and private sector export promotion entities and GOE export promotion entities could pay substantial dividends in enhanced export performance.

Annex to the Report: Enhancing Egypt's Exports

1.0. Industry Efficiency

1.1. Efficiency and Protection:

Ignoring for the moment the many inconsistencies that have shown up in the data, both official and from surveys taken in the course of this study, two tables have been prepared in an attempt to draw policy inferences from the analysis. Table 1 lists summaries of industrial efficiency measures for the five priority industries and "other" Egyptian manufacturing.

According to estimates of the capital/output ratio, each of the five industries is relatively efficient. They are also labor intense (except for textiles) and above average in terms of output per worker.

Generally speaking, the five industries appear to be operating efficiently. Moreover, turning to Table 2, exports have grown at rates above the average for other manufacturing sectors, except for furniture. DRC's of less than 1.0 indicate a strong comparative advantage, except for furniture. The effective rate of protection exceeds 40% in all industries, except for food processing, where the ERP is quite low. Growth in exports seems to be positively related to high comparative advantage (low DRC), lower levels of protection and production efficiency (Table 1). The growth in textile exports was high despite the very high rate of protection, probably because of the special arrangements available for waiving duties on raw materials that are used to produce ready-made garments for export.

A summary of efficiency measures is presented in Table 3 by size of firm and industrial sector. Detailed data are found in Appendix Tables 1-35. For the most part each of the five industries falls well within the efficiency range, as measured by the K/O ratio. Large sized leather shoes companies and medium-sized fabric producer seem to be exceptions, with K/O ratios of 1.7. Generally, smaller firms seem to be more efficient in use of capital than large firms.

Except for frozen food production, the amount of capital used per unit of labor appears low, indicating relatively high labor intensity in the five industries overall.

Table 1. Selected Efficiency Measures,
Five Industries and Other, 1997

INDUSTRY	Efficiency of Capital [1]		Efficiency of Labor [2]		Labor Intensity (K/L)
	K/O	Productivity	Output/worker	Productivity	
1. Food Processing	0.6	0.9	132	16	22
2. Shoes	0.6	0.3	25	2	12
3. Software	0.2	1.5	50	8	25
4. Furniture	0.7	0.4	32	7	29
5. Textiles	0.8	0.5	47	8	52
6. Other	0.6	0.6	18	18	30

1] Capital/output ratio computed from official CAPMAS and GOFI input/output tables. Productivity independently estimated by Dr. Samiha Fawzi, University of Cairo. Ratios.
2] Output per worker from CAPMAS and GOFI input/output tables. Productivity estimated independently by Dr. Samiha Fawzi, university of Cairo. L.E. Thousand per worker
3] Capital employed per worker.

Table 2. Performance Indicators and Policy Barriers to Exports,
Five Industries and other, 1997

Industry	DRC[1]	RCA[2]	ERP[3]	Growth in Exports 1992 - 97
1. Food Processing	0.75	3.50	6.5	14.7
2. Shoes	0.94	0.25	43.8	13.4
3. Software	--	--	--	--
4. Furniture	1.70	0.41	63.3	5.3
5. Textiles	0.82	22.0	53.1	12.2
6. Other Manufacturing	0.45	--	17.5	9.0

1] Domestic resource cost of acquiring $1 in foreign exchange, computing value added at world prices.
2] Revealed comparative advantage: compares Egypt's share of world exports of a certain product with Egypt's overall share of world exports.
3] Effective rate of protection.

Table 3. Efficiency Ratios, 1997[1]

	K/O[2]			L/O[3]			K/L[4]		
	L	M	S	L	M	S	L	M	S
1. Processed food									
A. Canned	.6	.3	.3	.02	.11	.07	23	23	23
B. Dehydrated	.9	.7	.6	.2	.02	.07	4	28	9
C. Frozen	.8	.3	.2	.01	.005	.007	73.	65	22
1. Leather Shoes	1.7	.6	.4	.14	.05	.09	12	12	4
2. Wooden Furniture									
A. Office	.9	.5	.8	.12	.04	.10	7	12	7
B. Home	.4	.6	.5	.04	.04	.08	12	13	7
1. Software		.9							
2. Textiles									
A. Fabric	.7	1.7	.9	.08	.07	.05	9	16	18
B. RMG	.6	.6	.5	.17	.07	.05	3.5	8	11

1] Source of data: CAPMAS, Large, Medium and Small Firms
2] Capital/Output ratio
3] Labor/Output ratio
4] Capital/Labor ratio

1.2. Trends in Output, Employment, and Efficiency

Using macro-economic data provided by CAPMAS and other official sources, performance over time of the five industries was analyzed (Table 4). Growth in output from 1992 – 1997 was very high for canned and dehydrated food, exceeding 30 percent per year. Output of frozen foods was stagnant over the time period. Employment declined in the canned food industry, as apparently the industry became more capital intensive. This is borne out by the fact that the K/L ratio for the canned food industry increased during the period. The frozen food industry was virtually stagnant during the period, with little change in any of the indicators.

Leather shoe and furniture output grew nicely at over 12 percent per year, employment grew and some improved efficiency in use of capital was noted. It should be pointed out, however, that growth in real deflated output was slightly negative. In other words, growth in value of production was caused entirely by inflation.

The large, mature textile industry showed some increase in output and employment but little change in efficiency of capital use. RMG showed a healthy increase in both output and employment, while the yarn and fabric industry remained relatively stagnant.

Detailed data tables on production, employment, and efficiency are found in Appendix Tables 1-35.

Table 4. Trends in Output, Employment and Efficiency, 1992 – 1997

	Output (%/yr.)	**Employment (%/yr.)**	**Capital/Output (Annual Change in Ratio[2]])**
1. Processed food			
• Canned	+46	-6	-.03
• Dehydrated	+36	+17	-.004
• Frozen	+1	+2	0
2. Shoes	+12	+4	-.01
3. Furniture, Wood			
• Office	+14	+4	-0.05
• Home	+13	+1	0
4. Software	NA[1]]	NA	NA
5. Textiles			
• Yarn & Fabrics	+1	+1	+.010
• Knits	+7	+4	-.002
• RMG	+7	+6	-.002

1] Not available
2] Negative figure means improvement in the capital/output ratio

2.0. Trends in Exports

As shown in Table 2, above, growth in exports for the five industries was at a higher rate than for other manufacturing (9%), except in the case of furniture, where exports grew roughly half as rapidly as it did in other manufacturing. In the case of furniture, there is a highly significant difference between growth rates calculated from GOFI versus CAPMAS data. Exports actually declined at a rate of 12 percent a year, based on CAPMAS data, but increased at 5 % a year according to GOFI estimates.

2.1. Export Performance by Subcategory of Industry

2.1.1. Processed Food

Processed food exports increased from LE153 Million in 1992 to LE181 Million in 1997, after dipping to LE150 Million in 1994. Processed food exports as a percentage of total merchandise exports fell from 1.48% in 1992 to 1.36% in 1997, after having increased to 1.8% in 1993. During this 6-year period, 1993 was the best year for these exports as they increased both absolutely to LE 189 Million as well as increasing as a percentage of total merchandise exports (Table 5).

Canned food exports performed dramatically well during this period, increasing from LE 8 Million in 1992 to LE 65 Million in 1997. Canned food exports as a percentage of processed food exports went up from 5.2% in 1992 to 35.9% in 1997. As a percentage of total merchandise exports, canned food exports increased from .07% in 1992 to .48% in 1997.

Frozen food exports performed well, increasing from LE 36 Million in 1992 to LE59 Million in 1997. Their share in processed food exports increased from 23.5% in 1992 to 32.5% in 1997. As a percentage of total merchandise exports, frozen food exports increased from .34% in 1992 to .44% in 1997. .

Dehydrated food exports decreased from LE50 Million in 1992 to LE 46 Million in 1997, a decrease of almost 9%. Their share in processed food exports decreased from 32.6% in 1992 to 25.4% in 1997. The share of dehydrated foods within total merchandise exports also fell from .48% in 1992 to .34% in 1997.

In summary, total processed food exports increased about 20% in 6 years. Canned food exports grow most rapidly, eight-fold in six years, while frozen foods less than doubled and dehydrated foods decreased, pulling down the whole category of processed food export performance during this period.

See Appendix: Tables 1-12 for detailed data on production, employment and efficiency for the processed food industry.

Table 5. FOOD PROCESSING INDUSTRY IN EGYPT

Egyptian Exports of Processed Foods 1992-1997

VALUE: L.E MILLION

ITEM	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	Change(%)92-97
MERCHANDISE EXPORTS	10286	10464	11590	11704	12004	13286	**29.17**
PROCESSED FOOD EXPORTS	153	189	150	170	175	181	**18.30**
PROC.FOOD EXP. AS % OF MERCHANDISE EXI	1.49	1.81	1.29	1.45	1.46	1.36	**-8.43**
CANNED FOOD EXPORTS	8	7.4	10	44	55	65	**712.50**
CANNED FOOD EXP. AS% OF MERCHD.EXP.	0.08	0.07	0.09	0.38	0.46	0.49	**529.65**
CANNED FOOD EXP. AS% OF ***PF*** .EXP.	5.23	3.92	6.67	25.88	31.43	35.91	**586.81**
FROZEN FOOD EXPORTS	36	34	29	36	37	59	**63.89**
FROZEN FOOD EXP. AS % OF MERCHD.EXP.	0.35	0.32	0.25	0.31	0.31	0.44	**26.92**
FROZEN FOOD EXP. AS % OF ***PF*** EXP.	23.5	17.98	19.33	21.17	21.14	32.59	**38.68**
DEHYDRATED VEG.EXPORTS	50	42	59	60	60	46	**-8.00**
DEHYD. VEG.EXPORTS AS% OF MERCHD.EXP.	0.486	0.40	0.51	0.51	0.50	0.35	**-28.76**
DEHYD. VEG.EXPORTS AS% OF ***PF*** . EXP.	32.67	22.22	39.33	35.29	34.29	25.41	**-22.22**

SOURCE: CAPMAS

2.1.2. Leather Shoes

Exports of leather shoes decreased from LE 76 Million in 1992 to LE 27 Million in 1997, while total production for these years was LE 270 Million and LE 167 Million, respectively (Table 6). As a percentage of total merchandise exports, leather shoes went down from 0.74% in 1992 to 0.20% in 1997. Major constraints were: lack of skilled labor, increasing prices of both local and imported raw materials, high taxes on imported equipment and materials, lack of middle management, high prices of finished shoes, inability to compete in western markets, low local demand caused by high prices, low capacity utilization, and foreign manufacturers opening their retail outlets in Egypt.

See Appendix: Tables 13-16 for detailed data on production, employment and efficiency for the leather shoes industry.

2.1.3. Furniture

Wood Furniture exports declined by 32 percent from 1992 to 1997. Moreover, furniture exports as a percentage of total merchandise exports declined from .75 percent to .39 percent over the same period (Table 7).

Furniture manufacturers surveyed indicated, by order of importance, the following reasons for declining exports: 1) quality requirements of foreign markets, 2) high domestic prices for wood furniture, and 3) high costs of raw materials. Not specified by the firms interviewed but surely having a major negative impact on furniture exports was the high effective rate of protection (ERP) (83%), which translates into an implicit tax on exports of approximately 60%.

See Appendix: Tables 17-26 for detailed data on production, employment and efficiency for the leather shoes industry.

2.1.4. Textiles

Exports increased from LE 256 Million in 1992 to LE 773 Million in 1997. In the Ready Made Garments Industry production increased from LE 2,333 Million in 1992 to LE 3,171 Million in 1997, while exports increased from LE 235 Million in 1992 to LE 642 Million in 1997 (Table 8).

The major constraints to exports are: high cost of imports due to custom duties and phytosanitary controls on raw cotton imports, sales taxes and fees, and preferential treatment to producers who manufacture exclusively for export, which acts as an entry barrier to other, potential exporters.

The macro data, which was received from the GOE, was segregated into three categories. The first was cotton yarns and fabrics, the second was knitted goods and the third was ready-to-wear garments. In the initial stages of this study the objective was to study yarns and fabrics as two single categories in addition to ready to wear garments.

Table 6. DEVELOPMENT OF EGYPTIAN EXPORTS OF LEATHER SHOES

VALUE:L.E MILIION

ITEM	1992	1993	1994	1995	1996	1997	Change(%)92-97
MERCHANDISE EXPORTS	10286	10464	11590	11704	12004	13286	29.00
LEATHER SHOES EXPORTS.	76	51	42	36	41	27	49.76-
SHOES EXP.AS% OF MERCH.EXP.	0.739	0.487	0.36238	0.308	0.342	0.203	0.54-

SOURCE:CAPMAS

Table 7. DEVELOPMENT OF EGYPTIAN EXPORTS OF WOOD FURNITURE

VALUE:L.E MILLION

ITEM	1992	1993	1994	1995	1996	1997	Change(%)92-97
MERCHANDISE EXPORTS	10,286.00	10,464.00	11,590.00	11,704.00	12,004.00	13,286.00	29.17
WOOD FURNITURE EXPORTS	77	61	48	41	44	52	32.47-
FURNITURE EXP.AS% OF MECH. EXP.	0.74859032	0.58295107	0.41415013	0.35030759	0.36654449	0.39138943	47.72-

Source: CAPMAS

Table 8. DEVELOPMENT OF EGYPTIAN TEXTILES EXPORTS
1992-1997

VALUE:L.E MILLION

ITEM	1992	1993	1994	1995	1996	1997	Change(%)92-97
MERCHANDISE EXPORTS	10286	10464	11590	11704	12004	13286	29.17
TEXTILES EXPORTS	2057	2098	3668	3370	2604	2189	6.42
TEXT.EXP. AS% OF MERCH.EXP.	20.00	20.05	31.65	28.79	21.69	16.48	17.61-
SPIN.,WEV,DYN.&FINSH.EXP.	1147	942	1722	1396	911	1238	7.93
SPIN.,WEV,EXP.AS% OF MERCH.EXP.	11.15	9.00	14.86	11.93	7.59	9.32	16.44-
SPIN.,WEV,EXP.AS% OF TEXT.EXP.	55.76	44.90	46.95	41.42	34.98	56.56	1.43
KNITTED GOODS EXP.	256	367	433	527	645	773	201.95
KNITTED EXP.AS% OF MERCH.EXP.	2.49	3.51	3.74	4.50	5.37	5.82	133.77
KNITTED EXP.AS% TEXTILES EXP.	12.45	17.49	11.80	15.64	24.77	35.31	183.74
RMG EXPORTS	235	342	397	494	523	642	173.19
RMG EXP. AS% OF MERCH.EXP	2.28	3.27	3.43	4.22	4.36	4.83	111.50
RMG EXP. AS% OF TEXTILES EXP.	11.42	16.30	10.82	14.66	20.08	29.33	156.72

SOURCE: CAPMAS

Note :Spining,Weaving,Dying & Finishing=Cotton Yarns & Fabrics

The evolution of these three sub-sectors within merchandise exports for the period 1992-1997 was as follows. Textile exports as a percentage of merchandise exports was 20% in 1992, went up as high as 32% in 1994 and went down to 17% in 1997. In absolute amounts textile exports went up from 2 billion in 1992 to 3.6 billion in 1994 and down to 2.2 billion in 1997. Among the three categories the export of cotton yarns and fabrics was the weakest, going up from 11 million pounds in 1992 to almost 15 million in 1994 and down to 9.3 million in 1997.

The performance of knitted goods and ready to wear garments during this period was much better than cotton yarns and fabrics. Knitted goods exports went up from LE256 million in 1992 to LE773 million in 1997, almost doubling its share in merchandise exports from 2.49% in 1992 to 5.82% in 1997.

Ready made garments export performance was similar to that of knitted goods, increasing its share of merchandise exports from 2.28 in 1992 (235 million pounds) to 4.83% of merchandise exports (642 million pounds) in 1997.

See Appendix: Tables 28-35 for detailed data on production, employment and efficiency for the textile industry.

3.0. Industry Profiles: Survey Data, 1997

The purpose of these industry profiles is to add shape and depth to the analysis of industry efficiency based on aggregate published data. The firm-level data serves as a reality check in terms of individual efficiency measures, provides a detailed picture of the variability among firms, and helps identify constraints to growth and development as viewed by individual entrepreneurs.

Industries were selected according to the priority given by the Ministry of Trade and Supply. The sample of firms in each industry (not intended to be statistically representative) were drawn from lists of firms provided by MOTS/EEPC.

Each of the following sections is organized by industry. A description of each industry or industry subgroup is followed by findings, conclusions, and recommendations.

3.1. Food Processing Industry

The selection of industry subgroups was in line with the preferences expressed with the Ministry of Trade and Supply and DEPRA. These three sub-groups were Frozen Foods, Canned Foods and Juices and Dehydrated Foods. An initial universe of 48 companies in these three groups was established, ensuring the presence of private and state ownership as well as large, medium and small firms. Interviews with the sample of firms focused on three issues:

1. Constraints to exports: If the firm was not exporting at present, why weren't they and what would it take to initiate exports. If the firm was exporting what would it take to increase exports.
2. Productivity: The importance of using reliable data to calculate it and its bearing on competitive advantage.
3. Efficiency: The importance of reliable efficiency measurements in determining the kinds of policy changes needed to promote exports.

The following sections present brief descriptions of each company interviewed, including data we were able to get from these interviews, and a summary of findings, conclusions and recommendations for this industry.

3.1.1. Micro Analysis of the Food Processing Industry

Thirteen food processing companies were interviewed. Six of these were companies involved in the manufacture and sale of frozen foods, four canned fruits and juices and three produced dehydrated vegetables. The quantity and quality of information varies, but the individual data sheets for each company provide a useful cross-section of key business parameters, product lines, business success and exports.

3.1.1.1 FPI/01

This privately owned company was established in 1963 with a capital investment of LE15,000 and a factory to process fresh onions into dehydrated onion powder and flakes. The company started and continues to be a two person partnership. It produced 500-700 kg./day of dehydrated onions, fulfilling most of the requirements of the Egyptian armed services in the 1960s and 70s.

In 1963 production was 150 tons of dehydrated onions with a total sales revenue of LE 60,000. The conversion ratio of fresh to dehydrated has been kept at 10 to 1. Ten tons of fresh onions produce one ton of dehydrated onion powder.

In 1996 total production was about 600 tons, having purchased and processed 6000 tons of fresh onions. The cost of raw materials was estimated at LE450 per ton or LE2,700,000. The processing cost was estimated at 1,500,000 including labor, resulting in a total cost excluding transportation and capital cost of L.E. 4,200,000. The best onions for dehydration in Egypt are grown in the Assiut area. The company has the raw material transported to Cairo at a cost of LE40/ton.

In 1996:

Cost of raw materials	*: LE 2,700,000*
Proc. cost, labor, transportation & capital cost	*: LE 1,500,000*
Total production cost	*: LE 4,200,000*
Total sales	*: LE 4,335,000*
Gross profit	*: LE 135,000*

Sales revenue was estimated on the following basis:
First Class 300tons @ US$2250/ton = $ 675,000
Second Class 150 tons @ US$2150/ton = $ 322,000
Third Class 150 tons @ US$ 1850/ton = $ 272,000
Total sales =US$1,275,000 or LE 4,335,000

In 1997 the company bought only 3000 tons of fresh onions at the relatively good price of LE400/ton. As the season progressed the prices of raw materials went through the roof due to

the unexpected entrance of Russia into the market. Russia usually buys its onions from India. However, due to a draught, Indian production was down and Russia bid up the price in Egypt to a high level, causing processors to stop buying. Since imports were not available, the picture in 1997 was as follows:

Cost of raw materials 3000T@ LE400/T	*= LE 1,200,000*
Processing, labor and capital cost	*= LE 750,000*
Total cost	*= LE 1,950,000*
Sales revenue	*= LE 2,167,500*
Gross Profit	*= LE 216,500*

We were not able to get data on current capital, number of workers or total labor cost. The numbers above indicate that the company earned LE 135,000 in 1996 on sales of LE 4,335,000, processing 6000 tons of fresh onions into 600 tons of dehydrated onions. In 1997, the company made a wise business decision by buying 3000 tons of fresh onions while the prices were low, producing enough to fulfill its initial export commitments. The partners in this way processed less and increased their profits by 70%. The company exports primarily to the following markets: Holland: 30%, UK and Germany 15% each and 40% to Greece and Israel.

The major problems inhibiting the expansion of exports are the continuously rising prices of raw materials in Egypt while international prices of dehydrated onions has been stable over the last three years. The company's strategy is to buy as much fresh onions as possible early in the season when prices are the lowest and export only those quantities whose raw materials have been purchased at low cost. The only relevant ratio calculated for this company, seen in the data sheet, was *K/O* = 0.96 in 1996 and 1.54 in 1997. Slightly more inputs were used in 1996 over 1997 to get a unit of output which indicates an improvement in efficiency in 1997 over 1996.

Firm Level Productivity Calculation Sheet

Company: *FPI/01* **Ownership:** *Private* **Sector:** *Dehydrated Veg.*					
ITEM		**Start in** 1963	1990	1996	1997
Capital :					
	Fixed Assets				2,000,000.00
	Working Capital				1,000,000.00
	Total	15,000,00			3,000,000.00
Production:					
	(Q) Ton	150			300
	(V) LE	45,000.00			1,950,000.00
No. Of Workers :					
	Permanent				150
	Seasonal				150
	Total	30			300
Raw Materials :					1,200,000.00
Cost of Labor: (Annually)					500,000.00
Annual Capital Cost:					250,000.00
Capital Per Worker :					
Production Per Worker:					
	Q/ Wk.	5			1
	V/ Wk.	1,500.00			6,500.00
Wages:					
	Min				150
	Max				800
	Average				200
Sales:					
	Local	60,000			
	Export				
	Total				2,167,500.00
1) Capital/ Output					0.96
2) Labor / Output					0.26
3) Capital / Labor					6.00
4) Output / No. Workers					6500

3.1.1.2. FPI/ 02

This privately owned company was established in 1987 at about 130 km from Cairo. Its major product lines are: Canned Beef and Fish, Fruit juices and Canned Beans. It is a family owned business organized as a limited liability company — a partnership of two brothers.

The company started off with LE 4 million in capital evenly divided between fixed assets and working capital. This is a large modern establishment, which looked clean and efficient except that it seemed to be working substantially under capacity.

In 1987, raw material costs were estimated at LE1.6 million or 80% of total costs of LE 2,140,000. Processing costs at 15% or LE 300,000 was accompanied by LE 240,000 of labor cost. The labor force in 1987 consisted of 15 skilled and 65 unskilled workers.

In 1997 total working capital was estimated to be LE30 million with LE20.00 million in fixed assets and 10.00 million in working capital. Total sales were LE29.5 million for a total production of 5000 tons in all product lines. 95% of production was sold in the local market and 5% was exported. Of the 5% exported, 3% was exported directly and 2% through intermediaries-trading companies.

The number of workers increased from 90 in 1987 to 550 in 1997. However, during our observation tour of the premises in May 1998 there seemed to be about a third of this labor force.

The basic numbers for 1997 were as follows:

Raw materials	*: LE 19,200,000*
Total wages	*: LE 4,000,000*
Processing cost	*: LE 1,500,000*
Gross profit	*: LE 4,800,000*
Total revenue	*: LE 29,500,000*

The company performance improved measurably during its first decade of operations as evidenced in the company data sheet presented at the end of this section. It is important to note that the Capital/output ratio went down from 1.83 in 1987 to 1.03 in 1997. This means that for each LE of output the amount of capital used by the company went down from 1.83 to 1.03, an increase of 44% in efficiency of capital utilization.

Total revenue increased almost fifteen fold in ten years and output per worker tripled from LE16,875 to LE52,727 despite the increase of workers from 90 to 550. This is also reflected in the increase of total capital from 4 to 30 million while working capital increased only five fold from 2 to 10 million, fixed capital increased ten fold to 20 million. This is indicative of substantial resources invested in capital intensive production technologies over the ten years of the company's existence.

Average wages went up from LE 2 per hour (666/yr./worker) to LE 7 772/yr./worker while wage cost as a ratio to output went down from 5.63 in 1987 to 0.14 in 1997. This indicates that the contribution of labor versus capital over ten years decreased many-fold. The capital/labor ratio decreased from 16.6 in 1987 to 7.5 1n 1997. This indicates that the company started with capital intensive technology involving 16.6 units of capital per unit of

labor. Over the years, as the operations increased the labor force, the ratio went to 7.5 pounds of capital for each pound expended on labor.

It is important to note that despite the tremendous growth the company has experienced, it has no sales and marketing department. Products are sold through exclusive regional distributors to wholesalers and then to retailers. The company has undertaken very limited exports to date. Their efforts were concentrated on the local market, where they were quite successful. They are considering investing some resources to start exporting to Africa. The mackerel imported from Scandinavian countries and the tuna fish from Thailand and local Egyptian markets was found to be of good quality and cooked in the can under state of the art technologies. Canned juices such as mango juice with 16% solids was pasteurized and packed under highly sanitary conditions. One of the two owners interviewed seemed to be a workaholic, understandably proud of the firm's accomplishments. Although we did not get capacity figures, operational capacity in May 1998 when we visited this firm seemed less than half of full capacity. As raw materials and other input costs rise, 1998 may be a slower year due to consumer reaction to higher prices and decreased purchases concomitant with increased production capacity (from new entrants and expansion of older firms) and increased competition for market share.

Firm Level Productivity Calculation Sheet

Company: *FPI/02* **Ownership:** *Private* **Sector:** *Juices, Canned Meat & Fish*					
ITEM		**Start in** 1987	1990	1996	1997
Capital :					
	Fixed Assets				20,000,000.00
	Working Capital				10,000,000.00
	Total	4,000,000.00			30,000,000.00
Production:					
	(Q) Ton	540			5,000
	(V) LE	1,350,000.00			29,000,000.00
No. Of Workers :					
	Permanent				
	Seasonal				
	Total	80			550
Raw Materials :		1,600,000.00			19,200,000.00
Cost of Labor: (Annually)		240,000.00			4,000,000.00
Annual Capital Cost:		300,000.00			1,500,000.00
Capital Per Worker :					
Production Per Worker:					
	Q/ Wk.	6.8			9.1
	V/ Wk.	16,875.00			52,727.27
Wages :					
	Min				
	Max				
	Average				
Sales:					
	Local	60,000			27,550,000.00
	Export				1,950,000.00
	Total				29,500,000.00
1) Capital/ Output		1.83			1.03
2) Labor / Output		5.63			0.14
3) Capital / Labor		16.67			7.50
4) Output / No. Workers		16,875			52,727.27

3.1.1.3. FPI/ 03

This State Owned Enterprise was established in 1961 with an authorized capital of LE300,000. The equipment and technology to dehydrate primarily onions was purchased from Bulgaria 37 years ago. At the time the company was visited in May 1998, 55% of the shares were privatized through the Cairo Stock Market (3 years ago), 35% continues to be owned by the government and 10% of the shares were sold to the employees. The Chairman of the company has been in charge for 12 years and there have not been any major changes in the management of the firm, though the number of employees has been reduced.

Raw materials procurement is done through both direct purchases from farmers and from wholesalers. As prices of inputs have risen the company has cut down on production, working less than 50% of capacity in 1997. As can be seen from the attached company data sheet, the capital structure showed a substantial increase in working capital and a slight decrease in fixed assets. Between 1996 and 1997 the cost of labor decreased almost 20% while exports decreased almost 45%. Production went down from 4578 tons to 2304 tons. Exports decreased from LE21.9 million in 1996 to LE13.2 million in 1997. Local sales declined slightly. The capital/output ratio was 1.09 in 1996 and 1.4 in 1997. The labor/output ratio went from 0.27 in 1996 to 0.44 in 1997, indicating a decline in labor efficiency as well as capital use efficiency. This was apparently related to production declining more rapidly than capacity. Production, in turn, declined. This was caused in part by a sharp increase in raw materials costs.

The ability to increase exports is related to three factors. The first is the international supply and demand conditions that establish a price which clears the market. The firm must meet this price. The second factor, related to the first, is the cost of raw materials in Egypt. If the cost of raw materials, such as onions, is at a level which allows the firm to earn a profit after adding processing cost, then under normal circumstances it will process and export dehydrated onions. Raw material supply was affected by the drought in India and extraordinary purchases by Russia.

This had an overall negative effect on the dehydrated onion-producing sub-sector. The third factor influencing exports is management. The ability of management to foresee conditions and avoid commitments which would lead to losses is important. Also the management should be resource conscious and profit oriented. The management of this company has remained the same throughout the last decade although majority ownership passed over to stockholders three years ago. Stockholders in Egypt are not sufficiently organized yet to affect substantial changes on management and operations following such types of privatization. Consequently, when the company incurred losses during the last two years, it sold a number of assets which were kept at very low book values but had a much higher market value. The sale of these assets at high prices allowed the company to declare a profitable year and distribute dividends despite the losses incurred in processing and exports. Although we are not certain, the increase in working capital may have been financed from the sale of fixed assets.

Company Fact Sheet

Value: LE 1,000 *FPI/ OS*

ITEM	95/96	96/97
Investment Capital (Registered)	8000	8000
Fixed Assets	9728	9697
Working Capital	4083	4895
No. of Workers		
Perm.	794	739
Temp.	1066	481
Cost of Labor	6296	5073
Exports	21905	13248
Local Sales	785	730
Add. Income Sources	547	731
Actual Production (Ton)	4578	2304
Max. Capacity (Ton)	6000	6000
Available Production	4700	3900
Deposits	7300	7300

Source: Data provided by company FPI/03

Firm Level Productivity Calculation Sheet

Company: *FPI/03* **Ownership:** *Public* **Sector:** *Dehydrated Veg.*					
ITEM		**Start in** 1961	1990	1996	1997
Capital :					
	Fixed Assets				
	Working Capital				
	Total	300,000		25,000,000.00	22,201,500.00
Production:					
	(Q) Ton			4578	2,304
	(V) LE			23,000,000.00	11,500,000.00
No. Of Workers :					
	Permanent			794	739
	Seasonal			1066	481
	Total			1860	1220
Raw Materials :				1,000,000.00	600,000.00
Cost of Labor: (Annually)				6,296,000.00	5,073,000.00
Annual Capital Cost:					
Capital Per Worker :					
Production Per Worker:					
	Q/ Wk.				
	V/ Wk.				
Wages :					
	Min			170	190
	Max			3000	4000
	Average			400	450
Sales:					
	Local			1,461,000.00	1,332,000.00
	Export			22,000,000.00	13,200,000.00
	Total				
1) Capital/ Output				1.09	1.93
2) Labor / Output				0.27	0.44
3) Capital / Labor				4.00	4.38
4) Output / No. Workers				12,366	9,426.00

3.1.1.4. FPI/ 04

This privately owned dehydrated garlic producer was established in 1988 with equipment purchased from local sources based on English designs. Initial registered capital was LE 100,000. During the initial years of operation they worked one shift, eight months per year. Only since 1996 have they been able to work a shift 12 months per years.

Current working capital (1997) was LE 600,000. Fixed assets in 1997 are unknown. Total production is estimated at about 190 tons of dehydrated garlic in 1997, with 144 tons or (80%) of production being exported and 36 tons sold in the domestic market.

The company utilized artificial forced air and natural sunlight drying methods that incur substantial savings in energy. At the start of the season, when the moisture content of raw garlic is at the maximum, it takes 15 tons of fresh garlic to produce one ton of dehydrated garlic. In the middle of the season 10 tons of raw material provide one ton of dehydrated product and at the end of the season the ratio is 6 to 1. Raw materials are procured both from farmers and wholesalers.

At the end of 1988, the maximum capacity of the firm was 120 tons of finished product per year. Within ten years capacity had gone up to 190 tons and actual production to 180 tons per year, a respectable 95% of capacity utilization. Despite its success this seemed like a low-key business. Headquarters staff consists of only a few people. The labor force consists of 10 permanent and 50 seasonal workers. In 1997, summary of operations was as follows:

Local Sales	*: 36 tons @ LE6250/ton*	*=LE 225,000*	
Export Sales	*: 144 tons @ LE8500/ton*	*LE1,224,000*	*=@US$2500/T*
Total sales	*:*	*LE1,449,000*	

Total sales in 1997 were just under LE1.5 million, of which 75% accounted for raw materials, 10% for labor, 5% for processing, marketing and management and 10% for gross profit. Dehydrated garlic is primarily an export-oriented business, with the domestic market being very limited due to the relatively small market for industrially prepared foods and limited amounts used by the Egyptian consumer. However, Egyptian garlic has foreign customers who prefer its unique fragrance and flavor over competing sources.

Estimated labor productivity was calculated as follows:
75% of LE 1,449,000 = 1,086,750 labor cost.
1,086,750 / 1,449,000= 0.75

If we assume that fixed capital is equal to working capital and total capital is LE 1.2 million. Then LE 1,200,000/1,449,000 =0.83 would be an educated guess for the capital/output ratio.

Discussion of export related problems identified the following issues:

1. Most exports are carried out through intermediary export trading companies, which absorb part of the company profit. From time to time it deals with SOE-export trading firms which are inefficient and pay after very long delays.

2. Low demand in the local market is bothersome. Consumer habits are not oriented towards the consumption of foods with heavy garlic content.

3. The company stressed the lack of information about conditions in foreign markets. The company would like to know the raw material supply and demand conditions and prices in countries that compete with Egypt. They would also like to know changes in prices and quantities traded of dehydrated garlic in international markets to utilize such information in their business decision making process.

Firm Level Productivity Calculation Sheet

Company: *FPI/04* **Ownership:** *Public* **Sector:** *Dehydrated Veg.*					
ITEM		**Start in** 1988	1990	1996	1997
Capital :					
	Fixed Assets				
	Working Capital				
	Total	60,000.00			600,000.00
Production:					
	(Q) Ton	750			2700
	(V) LE	175,000.00			4,000,000.00
No. Of Workers :					
	Permanent				
	Seasonal				
	Total	50			140
Raw Materials :		122,500.00			4,000,000.00
Cost of Labor: (Annually)		18,000.00			200,000.00
Annual Capital Cost:					
Capital Per Worker :					
Production Per Worker:					
	Q/ Wk.				19.29
	V/ Wk.				31,429.00
Wages :					
	Min				
	Max				
	Average				150
Sales:					
	Local	480,000.00			5,100,000.00
	Export				
	Total				
1) Capital/ Output					0.06
2) Labor / Output					0.05
3) Capital / Labor					1.25
4) Output / No. of Workers					31,429.00

3.1.1.5. FPI/05

This large, privately owned firm, established in1981 as a share holding company, is a subsidiary of a group of companies owned by Kuwaiti investors. The foreign investors own 85% of the shares and 15% are owned by Egyptian shareholders. In 1981 the registered capital of the firm was LE500,000 while the real capital was LE1 million, 70% of which was in fixed assets and 30% in working capital.

The product line is Canned Meat, including different types and sizes of sausages and luncheon meats, cold cuts and frozen processed meats. In 1981, raw material procured was 80% of sales revenue, processing cost was 8% and labor 5%. The company employed 15 full time workers.

In 1997 total capital investments increased to LE6 million, fixed assets were at 10 million and working capital at 10.7 million. Sales in 1997 were LE 30 million, equivalent to 2700 tons of finished product. The approximate cost structure in 1997 was as follows:

Raw materials :	*LE 23 million*
Labor cost:	*LE 1.3 million*
Processing cost:	*LE 4 million*
Total cost:	*LE 28.3 million*
Total sales:	*LE 30 million*
Gross profit:	*LE 1.7 million*

The technology utilized shifted from German to French in 1995. In 1994 , 1995 and 1996 the company worked two shifts per day, reducing it to one shift in 1997 as total sales decreased to 2300 tons. Frozen meat is purchased from European suppliers. Exports are limited. The majority of exports are through an export trading company, which is a member of the foreign investor group of companies. The export trading company is based in Kuwait and most exports are to the Gulf countries. Currently, the company is planning to initiate exports to West African countries. In 1997 capital/output was 0.25, labor/output was 0.050 and capital/labor was 4.62

The major objective of this company is to supply the local market and export to the Gulf countries. Increase in exports will depend on changes in market conditions.

Firm Level Productivity Calculation Sheet

Company: *FPI/05* **Ownership:** *Private* **Sector:** *Canned Beef*					
ITEM		**Start in** 1981	1990	1996	1997
Capital :					
	Fixed Assets	700,000.00			
	Working Capital	300,000.00			
	Total	1,000,000.00			6,000,000.00
Production:					
	(Q) Ton				2,700
	(V) LE				24,000,000.00
No. Of Workers :					
	Permanent				
	Seasonal				
	Total				185
Raw Materials :					23,000,000.00
Cost of Labor: (Annually)					1,300,000.00
Annual Capital Cost:					4,000,000.00
Capital Per Worker :					
Production Per Worker:					
	Q/ Wk.				15
	V/ Wk.				129,730.00
Wages :					
	Min				200
	Max				2,000.00
	Average				500
Sales:					
	Local				30,000,000.00
	Export				
	Total				
1) Capital / Output					0.25
2) Labor / Output					0.05
3) Capital / Labor					4.62
4) Output / No. of Workers					129,730.00

3.1.1.6. FPI/ 06

This State Owned Enterprise was established in 1940 and privatized in 1998. It produces canned products and frozen vegetables. Reportedly negotiations for privatization were concluded in April 1998 and transfer of ownership occurred three days after our visit. Conversations with one of the executives of the company indicated that it has been getting ready for privatization for the last two years.

The company was under pressure during the last two years to cut costs in order to maintain competitiveness in the domestic and export markets. During this period raw material costs increased, competition got stronger and they continuously lost market share.

Over the last five years their major buyer, who purchased 30% of their output, built its own plants and discontinued purchases. The Egyptian military built canned and frozen vegetable plants to fulfill its own needs and became a strong competitor in the market. While there were only two operators in this market in 1950, the number increased to 15 in 1997. Only three are left which are owned by the government. With the exception of the company owned and operated by the military, one was privatized recently and the other is expected to be divested in the near future.

In 1997 total sales amounted to LE77.5 million with 25% (LE19.4 million) derived from exports and 75% (LE58.1 million) derived from local sales. Total production was estimated at 20,000 tons of finished product. Cost of labor in 1997 was estimated at LE23 million. The number of workers was reduced from 4000 to 2000 in two years with a savings of 10 million pounds in payroll. Costs of raw materials were estimated in 1997 to be LE45 million and the gross margin at LE9.5 million. The basic numbers for the company in 1997 were as follows:

Capital	Unknown, declined to divulge
No. of workers	**2000**
Cost of labor	**LE 23 Million**
Average cost of labor	**LE 11,500/YR/Worker**
Output	**LE 77.5 Million**
Capital/Output	**0.36**
Labor/Output	**0.30**
Output/Labor	**LE 38,750**

Average cost of worker was LE 11,500/year and output per worker was LE 38,750, three times as much. Under the new owners the company is expected to resolve its problems in the near future and become more competitive.

Major export problems were listed as follows:

1. Raw material price increases affected the company's ability to keep foreign buyers.
2. Severe competition from all the other 14 companies in domestic and foreign markets.
3. Lack of detailed and continuous information about supply, demand and prices. Both in domestic and export markets.
4. Export markets have special requirements which change over time. Information is needed from each specific foreign market, practically on a daily basis.

Firm Level Productivity Calculation Sheet

Company: *FPI/06* **Ownership:** *Public* **Sector:** *Frozen Veg., Juices, Canned Food, etc…*					
ITEM		**Start in** 1940	1990	1996	1997
Capital :					
	Fixed Assets				
	Working Capital				
	Total	15,000.00		28,000,000.00	28,000,000.00
Production:					
	(Q) Ton			20,000	20,000
	(V) LE			77,500,000.00	77,500,000.00
No. Of Workers :					
	Permanent			3,000	2,000
	Seasonal			1,000	500
	Total			4,000	2,500
Raw Materials :					45,000,000.00
Cost of Labor: (Annually)				44,000,000.00	23,000,000.00
Annual Capital Cost:					
Capital Per Worker :					
Production Per Worker:					
	Q/ Wk.				8.00 (ton)
	V/ Wk.				31,000
Wages :					
	Min				170
	Max				10,000.00
	Average				4500
Sales:					
	Local				58,100,000.00
	Export				19,400,000.00
	Total				77,500,000.00
1) Capital/ Output				0.36	0.36
2) Labor / Output				0.56	0.30
3) Capital / Labor				0.63	1.22
4) Output / No. of Workers				19,375.00	38,756.00

3.1.1.7. FPI/ 07

This is a privately owned firm with 10 shareholders, one of whom is a Saudi partner with 50% equity. The firm was established in 1988 with LE 100,000 registered capital. The real capital in 1988, including land, machinery and working capital was LE 500,000. In 1998 the fixed capital of the company had grown to LE2 million and the working capital to LE1million. The product line of this firm is somewhat unique. It produces and exports pigeons and ducks. It also produces poultry for the local market.

¨ ***Pigeons***

Annual production of 80 tons is exported in its entirety. Sales values is LE2million. And the major buyer is Saudi Arabia.

Raw Materials	*LE 1,600,000*
Processing Cost	*LE 200,000*
Total Production Cost	*LE 1,800,000*
Gross Profit	*LE 200,000*
Total Sales	*LE 2,000,000*

Major problems in increasing exports are raw material procurement. When the company tries to purchase larger quantities to respond to the request of foreign buyers, it faces substantial price increases over and above the quantities it traditionally buys. The reasons are quite interesting from a marketing point of view. Only baby pigeons up to 6 to 8 weeks who have never flown or eaten anything except from their mothers, are slaughtered for the market. The local market for pigeons is more lucrative and pays the grower higher prices. Consequently, exports are a residual market and absorbs the unsold quantities in the local market. If the exporter wishes larger quantities than made available to him, he has to offer a premium not just higher than his regular price, but higher than the price paid by the local restauranteurs and catering businesses. When this premium is calculated into the export price the importer balks at such price differentials between normal and larger quantities offered.

Marketing, given the supply, demand and pricing conditions is a problem. One possible solution would be for the exporter to go into the business of raising pigeons. However, this has limitations as well. The high value of the Egyptian pigeon is believed to be due to the farmer feeding the mother pigeons not just bird feed but the food leftovers of the family. It is believed that this sharing of the farmers diet is what makes the meat of the pigeons so delicious and sought after. Their taste is considered to be different than birds fed commercial feed. This limits the ability of the exporter to raise pigeons commercially unless he can invest considerable resources, time and effort in organizing farmers to be his exclusive suppliers. However, once established, it is practically impossible for the exporter to control the leakage into the local market.

♦ ***Ducks***

Two types of ducks are processed and marketed. The first, denominated local black duck, is more favored in local markets than the white *Peking duck*. In 1997 production of both were as follows:

	Black	***Peking***
Production	*30 ton*	*40 tons*
Purchase price	*LE7/kg*	*LE4/kg*
Processing cost	*LE 1.3/kg*	*LE1.3/kg*
¨ *Waste*	*25% of Gross weight for both*	
Raw materials and Processing cost:	LE 10,300/ton	6,600/ton
Selling price:	LE12/kg	LE7.5/kg

It is interesting to note that Peking duck is much more expensive in the Chinese restaurants not due to the type, per se, but due to the complexity in its preparation.

¨ ***Poultry***

Live chickens are purchased at LE4.5/kg. The processing cost is estimated at LE0.5/kg. Profit margins range from 0-4% or about LE 0.2/kg. Selling price ranges from LE5.2 to 6.0/kg. Production capacity of the plant is 60 tons/month and at full capacity with one shift 7200 tons/year. All production is sold in the local market.

Total Sales of this company in 1997 was LE 7.7 million with LE 5.3 million derived from the local market and LE 2.3 million from the export market. The capital/output was 0.42.

Major Export Problems:

The company has to get an array of permits and certifications from the Ministry of Agriculture for each export shipment. Even more important was the size and frequency of invisible fees which need to be paid to undertake exports.

Firm Level Productivity Calculation Sheet

Company: *FPI/07* **Ownership:** *Private* **Sector:** *Frozen Fowls*					
ITEM		**Start in** 1988	1990	1996	1997
Capital :					
	Fixed Assets				2,000,000.00
	Working Capital				1,000,000.00
	Total	500,000.00			3,000,000.00
Production:					
	(Q) Ton				840
	(V) LE				7,200,000.00
No. Of Workers :					
	Permanent				60
	Seasonal				100
	Total				160
Raw Materials :					
Cost of Labor: (Annually)					5,000,000.00
Annual Capital Cost:					500,000.00
Capital Per Worker :					
Production Per Worker:					
	Q/ Wk.				5.25
	V/ Wk.				45,000.00
Wages :					
	Min				100
	Max				800.00
	Average				450
Sales:					
	Local				5,340,000.00
	Export				2,340,000.00
	Total				7,680,000.00
1) Capital/ Output					0.42
2) Labor / Output					0.69
3) Capital / Labor					0.60
4) Output / No. of Workers					45,000.00

3.1.1.8. FPI/ 08

This is a privately owned limited liability company, established in 1983, in the producing and selling frozen vegetables, juices and tomato paste. When it was established in 1983, 80% of the shares was owned by the *National Development Bank* and 20% by the general public which defined it as a State Owned Enterprise, since the bank is government owned. Due to financial problems the equity structure of the company changed in 1991.

The restructuring in 1991, (which may have been a complex multi-party debt for equity swap) provided 67% of equity to the ***Islamic Faisal Bank***, 13% remained with the *National Development Bank* and kept the 20% public share intact. The understanding between the National Bank and the ***Islamic Faisal Bank*** in relation to the utilization of equity and loan funds was to be on the basis of **MOSHARKAH**, a type of profit sharing in the absence of interest which is prohibited under Islamic law.

The infusion from IFB allowed the company to renew its technology by buying new equipment from Italy and Germany. Nevertheless the company continued to have problems in the fields of production, management, financial management and marketing. In 1997 the company presented the following picture:

Production Type	***Full Capacity Ton/Yr***	***Local***	***Exp.***	***Total production***	***(%) Cap. Utilized***
Frozen Veg.	3700	1250	1250	2500	68
Canned juices	6000	1500	500	2000	33
Tomato paste	5000	700	300	1000	20

Procurement of raw material is done primarily from wholesalers. The labor force consists of 350 permanent workers and 300 seasonal workers. The initial capital in 1983 was LE 4 million and the total capital in 1997 was LE 30 million. Fixed assets are high and working capital is low within the present capital structure. The company has suffered from a continuous working capital shortage that prevents it from buying raw material when its price is low. The company is also highly indebted to IFB. The debt service, though in a form of profit sharing or cash flow deductions seemed to place a heavy burden on company finances. Cost structure in 1997 was as follows:

Raw materials @ 71% of output of LE27Million:	LE 19.20 million
Capital cost @ 59% of output:	LE 17,55 million
Labor cost @ 13% of out put:	LE 4,00 million
Value of total 1997 sales:	LE 29.50 million
Domestic sales:	LE 27.55 million
Export sales:	LE 1.95 million

We tried to point out that capital cost seemed somewhat out of line in its dimension. Our respondent emphasized it was the principal problem for the company. The capital/output was 0.98 and the labor/output = 0.13.

Major export markets for frozen vegetables have been Saudi Arabia (60%), with the rest going to USA, Australia and Sweden. The major market for canned juice exports is Lebanon with 70% and the rest going to Saudi Arabia and Jordan. Tomato paste is exported to Saudi

Arabia which imported 30% of the total production of 1000 tons equivalent to 300 tons in 1997.

Major export problems were listed as follows:

1. There is a serious lack of experienced sales and marketing staff both in domestic and export operations.
2. The company has no refrigerated cars, only insulated vehicles to transport frozen vegetables to retail outlets.
3. The severe working capital shortage has affected all aspects of production and marketing including exports.

Firm Level Productivity Calculation Sheet

Company: *FPI/08* **Ownership:** *Private* **Sector:** *Juices, Canned Meat & Fish*					
ITEM		**Start in** 1983	1990	1996	1997
Capital :					
	Fixed Assets				
	Working Capital				
	Total	4,000,000.00			30,000,000.00
Production:					
	(Q) Ton	540			5,500
	(V) LE	1,350,000.00			29,500,000.00
No. Of Workers :					
	Permanent				
	Seasonal				
	Total	80			650
Raw Materials :					19,200,000.00
Cost of Labor: (Annually)		240,000.00			4,000,000.00
Annual Capital Cost:					17,550,000.00
Capital Per Worker :					
Production Per Worker:					
	Q/ Wk.	6.8			9.1
	V/ Wk.	16,875.00			6,000.00
Wages :					
	Min				
	Max				
	Average				
Sales:					
	Local				27,550,000.00
	Export				1,950,000.00
	Total				29,500,000.00
1) Capital/ Output		3.00			0.98
2) Labor / Output		0.18			0.13
3) Capital / Labor		17.00			7.50
4) Output / No. of Workers		16,875.00			53,636.00

3.1.1.9. FPI/ 09

This is a private, family owned limited liability company established in 1985 with French and Swedish technology, which specializes in the production and export of frozen vegetables. The company stated that it dominates the local market with an 80% market share of all frozen vegetables sold in Egypt in 1997. It is a large, modern and clean plant, well organized and efficiently operated. However, it did leave the impression of working way under capacity. Vegetables processed are : peas. okra, beans, favabeans, molokheya, cauliflower, carrot, artichoke, strawberries, sweet corn and others.

In 1997, total production was 12,000 tons with 35% (4200 tons) for the domestic market and 65% (7800 tons) going to the export market. This is one of the more unique companies in its industry in that its focus is much more export oriented despite the fact that they are very strong in the domestic market as well.

This company purchased 70% of its raw materials from farmers and wholesalers and raised 30% of its needs in its own farms. It plans to increase production of vegetables and berries in its own farms to meet up to 50% of its needs. This backward linkage enables the company to maintain strict quality control from the time the selected varieties are planted to the point it enters the consumer freezer or cooking pot. This approach also provides protection against changes in supply and prices in the open market, which may affect the company's export commitments at pre-determined prices. Capital investment in 1985 was LE 15 million which increased to LE 20 million in 1997. Total labor last year was 350 workers with an estimated annual payroll of LE 900,000. Total sales were LE 41.2 million with LE 14.28 million in domestic sales and LE26.5 million in export sales. They change technology as it comes on the market. The last time they bought new equipment and know-how was two years ago.

Major export markets are France, USA, Canada and Arab countries, accounting for 70% of exports. France is a major importer, especially of Artichokes. The rest of Europe is the destination for the remainder 30% of exports.

Export problems were listed as follows:

1. The imposition of 75% duty on spare parts for currently installed machinery is excessive.
2. Treatment accorded to the companies established in the new cities is not fair to the already existing companies which can not easily move. Ten year tax exemption is a significant and unfair advantage.
3. The price of electricity at about US$0.04 per kilowatt- hour is excessively expensive. The company is paying LE3 million per year on energy.

Capital:	*LE 40 million*
Sales:	*LE 41.2 million*
Capital/output:	*1 .00*
Labor cost:	*LE 3.2 million*
labor/output:	*0.08*
Output/labor:	*LE 114,290*
Ave. wage:	*LE 400*

It is important to note the difference between total labor cost which is estimated at LE 3.2 million and the LE 900,000 which is the basis for calculating average wages of production workers per year. The difference between LE 3.2 million and LE 900,000 or LE 2.2 million we believe are management salaries and bonuses.

Firm Level Productivity Calculation Sheet

Company: *FPI/09* **Ownership:** *Private* **Sector:** *Frozen Veg.*					
ITEM		**Start in** 1985	1990	1996	1997
Capital :					
	Fixed Assets	15,000,000.00			20,000,000.00
	Working Capital	44,000,000.00			20,000,000.00
	Total	55,000,000.00			40,000,000.00
Production:					
	(Q) Ton				12,000
	(V) LE				40,000,000.00
No. Of Workers :					
	Permanent				250
	Seasonal				100
	Total				350
Raw Materials :					6,000,000.00
Cost of Labor: (Annually)					900,000.00
Annual Capital Cost:					
Capital Per Worker :					
Production Per Worker:					
	Q/ Wk.				34
	V/ Wk.				28,571.00
Wages :					
	Min				200
	Max				3,000.00
	Average				400
Sales:					
	Local	1,750,000			14,280,000.00
	Export	3,250,000.00			26,500,000.00
	Total	5,000,000			41,200,000.00
1) Capital/ Output					1.00
2) Labor / Output					0.08
3) Capital / Labor					11.11
4) Output / No. of Workers					114,290.00

3.1.1.10. FPI/ 10

This is a state owned company that was established by French investors and nationalized in 1961. Prior to nationalization 37 years ago the company successfully exported large quantities of frozen shrimp to different export markets. At present it produces all types of canned foods including vegetables, beef, fish and juices.

The capital of the firm in 1956 was reported to be LE43 million. It is not known whether the French investors were compensated upon nationalization. The capital in 1997 was reported to be LE74 million.

Total sales in 1997 were LE60 million with 80% or LE48 million derived from local markets and 20% or LE 12 million from exports. The estimated breakdown of costs for 1997 were as follows:

Raw materials:	*LE 47 million*
Labor:	*LE 13 million*
Total processing:	*LE 19 million of which LE 5 million paid in duties*
Other unspecified costs:	*LE 7.5 million*
Direct processing costs:	*LE 3.5 million*

The number of workers decreased from 3240 in 95/96 to 2,701 in 1996/97. Average Labor cost was LE 4,813 per worker per annum. It seems that the company still has too many workers and higher annual average salaries compared to other firms in the industry. A sister SOE in the same industry and in the same vicinity was recently privatized. The privatization of this company seems to be in limbo since feelers from potential buyers last year were spurned. In 1997,

Net sales:	*LE 60 million*
Local market:	*“ 48 million*
Export:	*“ 12 million*
Labor:	*“ 13 million*
Raw materials:	*“ 47 million*
Processing and other costs:	*“ 16 million*
60% of exports:	*LE 7.2 million to Europe, USA and Canada*
25% of exports:	*LE 3 million to Arab countries*
15% of exports:	*to other countries*

The company also owns and operates a tin can manufacturing facility fulfilling its own can needs and selling the rest in the domestic market. The value of the total production of cans in 1997 was LE10.5 million and it employed 20 workers.

The company lost LE11.5 million in 1995/96 and LE6.3 million in 1996/97. The major reasons for this loss were:

1. Excessively high labor cost which was close to 20% of total cost.
2. Recent investments in cold storage
3. An incentive system based on production and not on sales, left over from the previous era.
4. The old age of the equipment leads to excessive waste

5. Production is undertaken for production sake and not according to market requirements.
6. The absence of a marketing department for domestic as well as export markets.
7. Excessive labor redundancy. Reportedly close to 50% of the work force has no work to do and workers may or may not show up on a daily basis.

This company had incurred a debt of LE70 million that reportedly was paid up by the holding company. Such activities as cleaning the balance sheet and reducing the number of workers are indicative of an impending privatization. Subsequent to the interview we were given a series of figures which are given below and clarify the company's financial situation.

FPI/10, Company-Provided Financial Data
For 1995 – 1998

Value: L.E. Million

Item	*1995*	*1996*	*1997*	*1998*
Fixed Assets	54.0	52.5	52.5	52.5
Working Capital	43.5	30.0	30.0	28.0
Total Capital	97.5	82.5	82.5**	80.5
Production	78.0	83.0	64.0	NA
Labour Cost	16.0	15.0	13.0	11.0
Inputs	63.0	57.0	47.0	NA
Losses	5.0	11.5	6.3	3.0*

**** Estimated***
*****As compared to LE 74 million reported in the interview, Table FPI/10. No explanation was given for the difference of LE 8.5 million.***
Source: Provided by FPI/10

Firm Level Productivity Calculation Sheet

Company: *FPI/10* **Ownership:** *Public* **Sector:** *Frozen Veg., Juices, Canned Fish…etc.*					
ITEM		**Start in** 1961	1990	1996	1997
Capital :					
	Fixed Assets				44,590,000.00
	Working Capital				30,000,000.00
	Total				74,000,000.00
Production:					
	(Q) Ton				
	(V) LE				64,000,000.00
No. Of Workers :					
	Permanent				
	Seasonal				
	Total			3,240	2,701
Raw Materials :					47,000,000.00
Cost of Labor: (Annually)					13,000,000.00
Annual Capital Cost:					
Capital Per Worker :					27,397.00
Production Per Worker:					
	Q/ Wk.				
	V/ Wk.				25,600.00
Wages :					
	Min				150
	Max				3,000.00
	Average				250
Sales:					
	Local				48,000,000.00
	Export				12,000,000.00
	Total				60,000,000.00
1) Capital/ Output					1.29
2) Labor / Output					0.20
3) Capital / Labor					6.35
4) Output / No. of Workers					25,600.00

3.2. The Leather Shoe Industry

3.2.1. Introduction

The shoe industry in Egypt has a long tradition as a handicraft and cottage industry before becoming a fully mechanized manufacturing sector. Given the different types of shoes produced and exported from Egypt, it was decided that a close look at the leather shoe industry would be an appropriate use of limited resources. Information was gathered from the Chamber of Leather Industries, the National Organization for Industrialization. In addition, interviews were held with 6 companies. In each case we have applied a number of productivity measures.

3.2.2. Production Aspects

According to the Chamber for Leather Industry, based on interviews with the Chairman and the acting executive director, in 1998 the industry consists of 30 large, fully mechanized and capital intensive companies. And approximately 300 semi-mechanized medium sized companies. In addition the Chamber data indicates the existence of 19,000 workshops spread all over Egypt, 6000 of which are said to be organized and 13,000 defined as very small workshops. The latter may be considered micro enterprises of one to four workers, most probably including some family members. The Chamber indicated that the total number of workers in the leather industry is 250,000, 130,000 of whom are engaged in the manufacture of leather shoes. The size definition in the industry at present is :

Large:	(100) to (300) employees – 30 companies
Medium:	(50) to (99) employees – 300 companies
Small:	(10) to (49) employees – 1000 workshops
Very small:	(5) to (9) employees – 5000 workshops
Micro:	Less than 5 employees – 13,000 workshops

There is thus a fairly large universe of economic entities in the industry. In the absence of an industrial census or well-designed representative survey, the exact size of the industry can not be verified easily.

The Chamber of Leather Shoes was established in 1958 and at present has 3000 members. The number of dues paying active members is 500. These 500 include the largest 30 and the next largest 300 enterprises and about 200 of the larger workshops. There is substantial fluctuation in production and the level of exports between the large and medium sized companies. For example one of the large manufacturers exported 80% of its production on 1996 but only 10% in 1997. As will be seen later in the macro analysis, the trend of exports has been downward during the last few years. The chamber indicated that most of the large and medium sized companies are currently working at about 50% of capacity. Our observations in the entities visited indicated an even lower utilization of capacity, perhaps on the order of 20 to 30% in May 1998. The chamber data indicated that in 1997, 70 million pairs of shoes were manufactured in Egypt. These are for men, women, and children. Of these 20% are said to be made from non-leather materials which amount to 14 million pairs. 80% of the total (56 million) pairs are said to have been made of leather uppers and non-leather soles and heels. This amounts to less than one pair of leather (upper) shoes per capita per year which seems somewhat low, especially if this 56 million is assumed to be the production of 19,330

operating units. However, if this were just the production of the 330 larger firms, or even the 500 active members of the chamber, then the total number of shoes manufactured in Egypt would be several times of the 56 million pairs reported. This discrepancy in production figures led us to dig further and check other sources. The results are given in a later section of this chapter.

The Chamber estimates the capacity of the leather shoe industry to be 120 million pairs of shoes per year, most probably referring to the top 330 companies. Our own estimates are slightly different. Assuming that each large company had a maximum capacity of 300,000 pairs a year, with one eight hour shift, 300 days a year, the total capacity of the 30 large companies is estimated at 9 million pairs/year. If the 300 medium companies have an average capacity of 100,000 pairs per year, again with one eight -hour shift for 300 days, the total capacity of this group would be 30,000,000 pairs/year. If the 6000 workshops have an average capacity of 5000 pairs/year each, this would result in 30,000,000 pairs. The 13,000 very small shops are theoretically assumed to be able to produce a maximum of 1000 pairs a year or a total of 13 million pairs.

The total capacity according to this analysis would therefore be 82 million pairs per year based on a single shift for 300 days per year, or double this amount (164 million pairs) in two shifts. 164 million pairs is a maximum capacity, or design capacity, which in reality is seldom reached on an annual basis. Some companies may work at full capacity for short periods of time to take advantage of a rush order. It is possible to theoretically say that on a three shift basis, capacity is 2 26 million pairs/year. However, this is not considered to be a practical, implementable concept.

The industry, as will be seen from the global statistics and the data observed during the interviews, is facing a large number of difficult problems. This was emphasized by the Chamber and corroborated with other sources. In addition to the Chamber, the Federation of Egyptian Industries and the General Organization for Industrialization, we consulted a UNIDO report written by BALLY consultants and conversations with a German shoe technician financed by GTZ. All emphasize that the industry faces critical problems in the years to come. These are summarized in the next section.

3.2.3. Problems Facing the Leather Industry

We will first list the problems as perceived by the Chamber and then follow up with our comments based on observations and interviews. Subsequently we will describe the results of our interviews that will contain statements on problems as perceived by the companies themselves. The problems from the chamber's point of views are as follows:

1. Marketing is a serious problem. Firms in this industry, from the smallest to the largest, do not have a clear concept of what marketing is, how it should be done and who should do it. The study team, concurs and would add that the owners and managers have little idea of what kind of training and experience a shoe marketing professional can or should bring to his job. This applies to both domestic and international marketing.

2. Taxes on raw materials are high and cumbersome. Manufacturers who wish to export high quality shoes to European markets combine leather uppers made from local hide with imported soles and/or heels. Although there are duty drawback facilities, they are

cumbersome and take a long time and the drawback is at times incomplete. We concur and go as far as observing that some firms have given up their drawback privileges due to excessive frustration and other disadvantages.

3. There is a lack of skilled labor. The Chamber states there is an endemic shortage of qualified labor. This is difficult in an industry which the Chamber says has 130,000 workers, if not more, and is working way under capacity. What may be seriously lacking is upgrading skills in a more formalized and organized manner. Companies are dealing with this problem by training skilled workers in other operations in addition to their primary one. A particularly interesting phenomenon which was observed in a number of large companies was that when business is extremely slow, they switch from mechanized production to manual production and leaves much of the equipment idle.

   A new shoe training institute funded by the German Aid Organization GTZ started operations a year ago. It has 26 individuals in a two year training course and has provided short courses to upgrade the skills of over 100 workers. Companies share the cost of short-term courses while long-term training of two years is financed by the Egyptian Government. The private sector should take a much more active role in the operation of this institute and expand its training capacity with its own private sector resources. The leather shoe manufacturing companies have reservations regarding increasing the pool of highly trained workers. The main reason for this concern is that once an employee has gained additional skills, he may leave for another firm which offers him a higher salary and or better working conditions. Decreasing training opportunities in order to decrease labor mobility is a short sighted management objective which will hopefully change in the near future .

4. The smaller workshops use large numbers of unskilled or semi skilled labor. In the absence of a formal apprenticeship program, as in other countries, the workshops act as a funnel taking in large numbers of individuals who may choose to drop out after a while. The good ones may stay, move to a larger producer for higher pay or open their own workshop. In the absence of simple but sound management and marketing skills, technically superior shoe making skill may not be sufficient to enable a business to survive, let alone enable it to succeed in exports.

5. The Chamber emphasized that the structure of the industry makes it difficult for individual manufacturers to choose the appropriate mix of design and prices. The structure of the industry has been changing in the last twenty years and especially in the last decade with the disappearance of the Former Soviet Union and Eastern European markets. These two markets were price conscious and relatively insensitive to quality. The Egyptian industry got hooked on manufacturing large quantities of low quality, low priced shoes on which they made decent profits and got paid rapidly by their government which traded shoes for other goods in barter trades. The industry is trying to shake these old habits of high production over short periods of time to satisfy their former clients. Many companies are having difficulty in adjusting to rapidly changing conditions in the domestic as well as export markets.

6. The Chamber bemoans the fact that not only do most of the companies not have marketing departments, but they are not aware of the necessity of having marketing departments. We concur based on our observations which indicated that most owners and/or managers we

have spoken to, especially in private firms, know how to make shoes well but not how to sell them. In former times they did not have to. They received an order from Russia for 100,000 pairs of shoes to be delivered in three months and they worked in two or three shifts to churn out 30,000 pairs a month and shipped them to the satisfaction of all concerned, the manufacturer, the importer and the two governments involved. The changing rules of the game have caused consternation, especially in the large firms.

7. Many companies still have unrealistic expectations of sudden large orders like they used to receive in the past.

8. The Chamber would like sources of soft financing at below market interest rates. This should be discouraged. The private sector, under a truly private trade regime and dealing with truly private banks which compete for business, might be able to get favorable terms from such private banks. They would also be able to promote Egyptian shoes in major markets as generically of high quality, and a competitively priced product without basing it on a brand name.

In response to our questions on cost/price relationships and industry level productivity the Chamber provided the following information which was corroborated through interviews:

The average cost of a pair of shoes ex factory was LE30 in 1998. This pair of shoes sold by the manufacturer to the retailer for an average of LE 42.50, providing a gross margin of LE 12.50/pair. Workshops and even larger producers will often insist they do not make more than 6% or LE1.80 per pair of shoes. During socialist times the GOE established prices and margins at all levels from manufacturers to consumers. The manufacturer's margin was 6% for many years, although it may in fact have fluctuated above or below depending on market conditions. Nowadays, when a manufacturer insists that he is making 6% or less, it may be an expression of distrust and reluctance to reveal the truth. If he is saying the truth, perhaps it reflects difficult current conditions in which the leather shoe industry finds itself in today's market in Egypt.

Based on the Chamber data about 60 million leather shoes were produced in Egypt in 1998. At a total cost at LE 30/pair this equals a total cost of LE1.8 billion. With an ex-works price of LE42.50 the value of 60 million pairs is LE2.5 billion.. If 60 million shoes are being produced by 130,000 workers in a year, this means that on the average each worker is manufacturing 462 pairs of leather shoes per year. This is quite low for an industry that wishes a rapid take off into increased exports. These 462 pairs per worker per year translate to 1-½ pairs per worker per day. This is indicative of a very large skew between large producers with 300 to 400 thousand pair of capacity per year, about three pairs per workers per day, and small workshops, which produce a few hundred pairs a year. In addition, as indicated earlier, the fact that a large number of small workshops operate only four months a year contributes to the low level of production per worker.

The Chamber data indicates that in large companies production on the average is 3 to 4 pairs per worker per day. In medium size firms it is about 5 to 6 pairs/worker/day and in the small workshops 8 to 10 pairs/worker/day. This means that, if Chamber data is correct labor productivity is inversely related with firm size. We doubt that this probable, but, if it were true, it would mean that capital resources, equipment, and raw materials were not being utilized

properly by the large firms, most probably due to mismanagement in large and medium size companies.

In conclusion to this introductory section dealing with the information received from the Chamber, a few comments are in order before going on to the next section, which provides additional macroeconomic analysis based on the data received from the Federation of Egyptian Industries and the Organization for Industrialization.

1. Companies visited were uniformly working at less than 50% capacity.

2. At low levels of demand activity large firms switched technologies to using skilled labor more intensively.

3. The local market for leather shoes in Egypt seems to be going through a recession. As input prices increase and are reflected in retail prices, consumers may be scaling down purchases, showing some resistance to price increases by buying less shoes per capita per year. This observation is impressionistic and based on a limited number of interviews, so may not represent the whole industry.

4. The private companies are searching for innovative ways to remain in business by providing more flexible terms to retailers, and by opening retail shops themselves in Egypt and other countries.

5. State owned enterprises in this industry in general are in worse shape than private firms. One SOE visited had equipment over 70 years old. Another SOE, with 320 retail shops, had LE 36 million of unmarketable inventory of three year old shoes. This company would be a prime candidate for privatization were it not for the pride of some of the business and political leaders involved. A recent offer by an investor group was turned down.

6. Although the quality of tanning in Egypt has measurably improved over the last years, and there are a number of tanning facilities producing good quality finished products, increased output should not be at the expense of quality. Relatively limited quantities of leather currently tanned in Egypt are of the very highest quality demanded by discriminating buyers in European countries. A small quantity of raw hides are imported from Africa. There are approximately ten companies which make leather and artificial material soles in Egypt. Locally made soles may be satisfactory for the local market but not for export markets. 80% of the soles utilized in Egypt are of local manufacture and 20% are imported from Italy.

7. The chamber stated that of 3 million pairs of leather shoes exported in 1997, 70% were with Egyptian made soles. This does not correspond to the information received during the interviews. Perhaps this is true of the majority of exports going to Libya, other Arab countries, Africa and Eastern Europe. This may also be indicative of the very small share of Egyptian shoe exports that go to Europe, Canada and the United States.

8. Although Egypt manufactures wooden and plastic lasts, they are not considered of good quality. Large manufacturers prefer to use Italian lasts almost exclusively.

9. The Egyptian shoe manufacturers as a group are not as properly set up to penetrate the North American shoe markets as the Brazilians; Central American and Far Eastern manufacturers. The U.S. market has a broader size requirement including width and length, which translates into different types of lasts. One manufacturer's comment was: "Give us an order and we will get the lasts".

10. The Egyptian shoe industry demonstrates a potential for increased leather shoe exports. Its realization however, will require a substantial amount of additional effort, primarily by the private sector. Reducing tariffs, eliminating invisible payments, reducing cumbersome import and export procedures and contributing to the promotion of Egyptian shoes in major markets through advertising and public relation campaigns are the functions which can be undertaken by the government.

3.2.4. Macro Economic Analysis

Table (9) provides productivity measure derived from the secondary data sources and compares it with the data from the five leather manufacturers interviewed. The data indicates:

Capital/Output

In the macro analysis of large, medium and small companies; the capital/output ratio ranged from 0.41 in small companies to 0.6 in medium and 1.71 in large companies. Small companies used less capital per unit of output than the other two groups. Among the companies interviewed only three firms provided sufficient data to calculate this ratio. LSI/05 used capital most productively with a ratio of 0.7 while LSI/01 appears very inefficient with 6.7 units of capital per unit of output.

Cost of Labor/Output

In the macro analysis the medium-sized companies with a ratio of 0.048 came ahead of the large and small companies. For each LE of output medium companies expended 4.8 piasters while small companies spent 9 piasters and large companies 14 piasters. Among the companies interviewed only four provided sufficient information to calculate this ratio. LSI/01 was the firm which spent the least in labor per unit of output with 4 piasters. LSI/02 followed with 20 piasters, LSI/06 with 23 piasters, and LSI/03 and LDI/05 with 40 piasters.

Production/Worker

In the macro analysis the highest production/worker was observed in medium size firms with LE 64,860 followed by LE 24,920 in small firms and LE 9,990 in large firms. In the companies interviewed production per worker was calculated in terms of pairs. The highest production/worker was 1,333 pairs/worker in LSI/02, a state owned company. This was followed by LSI/06 with 1,071 pairs/worker, 466 pairs at LSI/03 and 285 pairs at LSI/01. This production was not converted to a monetary value due to the large difference in the cost and quality of the shoes produced in the companies interviewed. The company with the largest production/worker is a low cost and low quality producer while the others have substantially higher cost/price structures.

Capital/Cost of Labor

In the macro analysis this ratio analyses the amount of capital used for each pound cost of labor expended. The smallest amount of capital used per unit cost of labor was 4.54 by small firms, followed by 12.42 by medium firms and 12.43 by large firms. Among the companies interviewed only two companies provided data to calculate this ratio. LSI/05 was the best with 1.7 in capital utilized for each pound of labor while LSI/ 01 with 16.7 was higher than the companies analyzed in the global data.

Table 9. Comparative MACRO and MICRO Economic Productivity measures for 1997 in the Leather Shoes Industry

ITEM	***Capital / Output***	***Cost Labor / output***	***Production / No of Worker***	***Capital / Cost of Labor***
MACRO :				
Leather Shoes				
Large	1.71	0.14	9,990.00	12.43
Medium	0.6	0.048	64,860.00	12.42
Small	0.41	0.09	24,920.00	4.54
MICRO:				
LSI 01	6.7	0.04	285(PAIRS)	16.7
LSI 02	NA	0.2	1,333.00	NA
LSI 03	3.8	0.4	466.00	13.20
LSI 04	NA	NA	NA	NA
LSI 05	0.7	0.4	529	1.7
LSI 06	NA	0.23	1,071.00	NA

3.2.5. Analysis of the Industry, UNIDO

The *UNIDO* project, providing technical assistance to two shoe companies in Egypt, consisted of a three person team: a footwear technologist, a tanning expert and a team leader who worked closely with *Bally* staff in Switzerland and Egypt.

Their first recommendation was for the shoe industry in Egypt in general, and the two Egyptian companies they were working closely with in particular, to familiarize themselves with certain general quality standards which do not cater specifically to the shoe industry. These were: BS5750 published by the British Standard Institute, ISO9000 and the European Standard EN29000 are equivalent to the BS5750.

The *UNIDO* team selected five key terms and definitions from ISO8402 to be incorporated into the operations of a manufacturer. These were:

1. Quality policy: established by top management
2. Quality management: management function which implements quality policy
3. Quality system: organizational structure which implements quality management
4. Quality control: operational techniques used for quality requirements
5. Quality assurance: action plan which provides assurance that the product satisfies specific requirements.

UNIDO experts indicated that continuous adherence to these standards and certification for using a recognized quality system will:

1. Make it easier for a manufacturer to gain entry to the European Union markets and other markets as well
2. Provide assurance to a customer that it is dealing with a supplier seriously interested in a long time relationship
3. Provide assurance to a customer on the quality of materials and production technologies used
4. Validates the organization as a manufacturer of quality products

The *UNIDO* team emphasized that they held the factory manager and his supervisory staff responsible both for productivity and quality. They stressed that spot-checking is insufficient and that continuous inspection of total production was essential. It is important to note that seven years after this project, started during our visit to one of the firms which worked with the *UNIDO* team, we observed this attention to quality and were told “We do not make second quality shoes, they are perfect when finished or they go back to be remade.” The *UNIDO* team suggested 6 points at which quality control was critical. They were

1. Upper leather sorting
2. Inspection after clicking
3. Inspection after closing
4. Lasting room inspection
5. Inspecting before finishing
6. Final quality control

In addition to all the above a full time roving inspector checks each shoe according to previously established written standards. The UNIDO team restated a basic rule in its application to the shoe industry “Manufacturing and selling a higher priced product logically

means realizing higher profits." This is not necessarily so if high expenses are incurred due to faulty purchasing, problems in selection, sorting, waste, accidents, lack of supervision bad workmanship and other reasons. At the end of their assignment the UNIDO team expressed its satisfaction in having contributed to substantial improvements in the operations of two Egyptian shoe manufacturers: Abbouda Shoe and Hafez and Ouda. Nevertheless they listed the areas in which further improvements were needed:

1. Upper and lining leather
2. Shoe components
3. Management technique
4. Marketing
5. Training of staff and labor.

We are not in a position to evaluate whether improvements were implemented in the first two areas mentioned above. However, our observations based on a limited number of plant visits and interviews indicated that the last three items deserve the immediate attention of the large and medium size shoe manufacturers.

Top management in most companies has been in place for a long period. In companies visited there was no middle management. There does not seem to be training and grooming process for a new generation of technically knowledgeable managers to take over in 10 to 20 years. Marketing as a concept and as an activity is something that manufacturers are struggling with. Training of staff and labor is not a well organized ongoing process to improve the skills of every worker in a plant. Although these three areas are the three weakest links in the chain of shoe manufacturing, the multitude of strong links must be mentioned. Selection and sorting have improved. The total manufacturing process has been compartmentalized and improved with strong quality control measures.

Prior to the UNIDO project taking place a proposed program outline for technical assistance was prepared in 1990 by Mr. Kamal Ramadan, the Chairman of the Egyptian Chamber of Leather Industry at the time

It would be useful to summarize some of the basic elements of this program.

The total number of shoe manufacturers in 1990 were estimated by Mr. Ramadan as follows:

i.	*Small workshops:*	*6320*
ii.	*Semi-mechanized shops:*	*200*
iii.	*Fully mechanized shops:*	*20*

Production in 1990 was estimated at 70 million pairs at a cost of LE2.5 billion. It is noteworthy to mention that in 1990 Mr. Ramadan observed the incidence of low demand in the local market and decreased exports. It is also important to mention that he indicated in his presentation that the majority of production came from the smaller workshops. In 1990 the footwear market was described as follows:

i.	*Footwear for men:*	*50% of total production 35 million pairs*
ii.	*Footwear for women:*	*30% of total production 21 million pairs*
iii.	*Footwear for boys:*	*13% of total production 9.1 million pairs*
iv.	*Footwear for girls:*	*7% of total production 4.9 million pairs*

The major problems of the industry were listed by Mr. Ramadan in 1990 as follows:

1. Shortage of skilled labor due to migration of qualified and skilled Egyptian workers to Gulf countries
2. Inefficiency of existing training centers, referring to an old training Center in old Cairo.
3. Inability to use advanced machinery due to lack of in-plant on the job training.
4. Lack of information about the needs of potential export markets in Europe and the U.S.
5. Lack of industries which feed the shoe industry with their output. This keeps the Egyptian shoe manufacturers dependent totally on foreign suppliers.

Mr. Ramadan expressed the expectation of having a production surplus for exports-after fulfilling domestic demand-of US$500 million worth of shoe exports in the year 2000. A second goal he expressed was the manufacture of a product suitable for the average income earner in Egypt. His third goal was the production of high quality shoes to meet the demand of export markets in Europe and the U. S. A.

He recommended the following measures in order to achieve the three goals mentioned above:

1. Upgrade the quality of finished leather in the local tanneries
2. Introduce substitute inputs such as synthetic materials for uppers and lining
3. Grant total tax exemption on new machinery
4. Provide credit to small units for modernization
5. Develop information sources on conditions in local and foreign markets
6. Improve skills through training at all levels
7. Direct public sector companies and cooperatives to produce popular footwear at reasonable prices
8. Grant short term loans to small workshops for mechanization of production lines.

It would be useful to complete the framework of the industry to mention a few words about the tanning industry. In 1990 there were 339 tanneries in Egypt processing the following number of hides:

i.	*Cattle:*	*923,476*
ii.	*Buffalo:*	*764,240*
iii.	*Calf:*	*706,960*
iv.	*Sheep/goat :*	*5,305,740*
v.	*Camel:*	*123, 945*

The number of hides indicated above are gathered from a network of 352 slaughterhouses across the country. However, according to an estimate by Mr. Mamdouh Thabet Meky, the Vice Chairman of the Egyptian Chamber of Tanning Industry, 40 to 60% of the slaughtering in the country is still done privately outside the network of 352 slaughterhouses which affect the quality of the hides reaching the tanneries. For 1998 the number of tanneries has gone down to 300 and an educated guess of the total hide supply for the whole country may be:

i.	*Cattle:*	*1½ million*
ii.	*Buffalo:*	*1 million*
iii.	*Calf:*	*1 million*
iv.	*Sheep/goat :*	*6 million*
v.	*Camel:*	*100 thousand*

Substantial amount of slaughtering is still done outside slaughtering houses.
The Camel hide supply has decreased in recent years due to interrupted imports of live camels from the Sudan.

3.2.6. The leather Shoe Industry Company Descriptions

LSI/01

This is a privately owned shoe manufacturer established in 1963 with a registered capital of LE 5000. It is owned and operated by two brothers who have been in this business for 50 years. The older brother started making shoes when he was five years old and has not stopped since. They both put in 14 to 16 hour days including a short day of 12 hours on Fridays, taking time off for prayers and lunch.

In the beginning the two owners worked side by side with 20 workers, most of whom owned and brought in their own tools to work. Production was about 250 pairs per week and in a 40-week year they produced and sold 10,000 pairs per year. In 1963 the cost of a foot of leather was 7 piasters. The cost of labor was 65 piasters per pair. Raw materials were LE1. And other costs totaled 20 piasters. The shoes were sold for 2 pounds providing 10 piasters of gross profit or 6% of cost, in accordance with the GOE regulations of the time. In 1967 they started exports shipping 5000 pairs to Russia. Eventually exports to Russia reached 100,000 pairs a year before the bottom of that market fell out. Between 1967 and 1973 shoes were sold ex-works at LE3./pair. Raw materials cost LE1.20, wages 65 piasters, other costs 60 piasters for a total of LE2.45 providing a profit of 55 piasters per pair. Shoe manufacturers were earning good profits until 1973 when input prices started to increase. The Russians resisted the price increases.

In response to shoe manufacturers' complaints the Ministry of Industry increased prices 50% to LE4.50. Production at this firm continued at 100,000 pairs per year, most of which was exported. In the late 70s costs went up to LE1,5/pair for labor, LE2.5 for raw materials, other expenses including management cost was 25 piasters leaving 25 piasters for profit.

In 1985 the firm had a total capital of LE 130,000 with LE100,000 in fixed capital and LE30,000 in working capital. In 1987 a fire burned down the whole factory and caused an estimated damage of US$2 million. In the absence of any insurance the firm had to start all over again importing new machinery from Italy for about US$1.2 million. They paid for the equipment with a US$2 million loan from a local bank at 12.5% interest for 5 years. They were not able to pay back the loan in 5 years and requested an extension. They received an extension of two years and paid off the loan in a total of seven years in 1994. Total payments in principal and interest over the seven year period was over US$6 million including fees. The owners complained that
they did not make any profits during these 7 years working exclusively to make bank payments. In 1990 total capital had gone up to LE15 million, with LE10 million in fixed assets and LE5 million in working capital . The labor force this year went up to 175 workers. Production has increased to 20,000 pairs per month or 200,000 pairs per year. 30% of production or 60,000 pairs were exported to Russia , Hungary, and Eastern Germany, 29% or 40,000 pairs were exported to Czechoslovakia. Local market absorbed only 20% of production or 40,000 pairs in 1990.

The ex-works average price of an average pair of shoes was LE50 in 1990. The retail price to the consumer was LE65. The export price was US$16.50 or about LE50. In 1990 the raw materials cost was estimated at LE25/pair. Labor cost was LE15/pair, other expenses including debt service was LE7.50/pair. Total cost was estimated at LE47.50/pair. Assuming both shoes for export and the local market were being sold for the same average price of LE50, the firm earned a gross profit of LE2.50/pair or 5% of the cost as well as the sale price.

For 1997 no capital figures are available for the firm. However, considering investments which were made 10 years ago and the good condition of the equipment an educated guess would be 15 million in fixed assets and 8 million in working capital. Maximum capacity in 1997- continuing to the present in May 1998- was 800 pairs in a single shift. Considering 300 working days the design capacity of the firm is estimated at 240,000 pairs/year. In case of two shifts design capacity reaches almost half a million shoes per year which is a theoretical ceiling not easily reachable under normal circumstances. Actual production in 1997 was 50,000 pairs or 21% of capacity. Total value of production was LE 2,250,000 which gave an average price of LE51.30/pair. Cost per pair was estimated at LE45 leaving a profit of LE6.30/pair equivalent to a 14% margin. In 1997 local sales were 20% of total production or 10,000 pairs. Exports were 80% of production or 40,000 pairs. An undetermined amount of these exports are retailed in the three stores the company owns in Europe, two in Moscow and one in Amsterdam. The cost breakdown in 1997 was as follows:

Raw materials:	*50% of 45 = LE22.50*
Labor cost:	*40% of 45 =LE 18.00*
Management etc.:	*10% of 45 =LE 4.50*
Total cost:	*LE 45.00*

The company stated that it was paying LE 720,000/year in principal and interest on a new loan which again impacted profits. Nevertheless, the firm has opened two new stores in the Cairo metropolitan area in addition to three stores in foreign countries mentioned above. The shoes, bags and accessories manufactured by this firm are geared to a higher than average income consumer. Increased competition in local and foreign markets has led the company to integrate vertically by owning and operating retail stores, adding these retail margins to their manufacturing profits.

Vertical integration allows them to work at low levels of production, substantially below capacity, and still make a comfortable margin.

The company listed its export problems as follows:

1. They request an export subsidy from the GOE equivalent to 30% of the production value similar to a policy utilized in the past by the Government of Turkey. They have established trade relations with Turkish businesses during the last year and have visited the country.
2. They request a permanent elimination of the 10% export tax.
3. They expect GOE assistance and intervention in opening the U. S. Market to Egyptian producers.
4. The cost of energy is too high. Their electricity bill is about LE 7,000/month.

Firm Level Productivity Calculation

Company: LSI/01 **Ownership: Private** **Sector: Leather Shoes**					
Item		**Start in** 1963	1990	1996	1997
CAPITAL :					
	Fixed Assets	2,000.00	10,000,000.00		10,000,000.00
	Working Capital	3,000.00	5,000,000.00		5,000,000.00
	Total	5,000.00	15,000,000.00		15,000,000.00
Production:					
	(Q) Pairs	10000	200000		50000
	(V) LE	18,500.00	9,500,000.00		2,250,000.00
No. Of Workers :					
	Permanent				
	Seasonal				
	Total	22	175		175
Raw Materials :		10,000.00	5,000,000.00		1,125,000.00
Cost of Labor: (Annually)		6,500.00	3,000,000.00		900,000.00
Annual Capital Cost:		2,000.00	1,500,000.00		225,000.00
Capital Per Worker :		227.00	85,714.00		
Production per Worker:					
	Q/ Wk.	455	1143		286
	V/ Wk.	840	54285		12857
Wages :					
	Min				
	Max				
	Average				
Sales:		20000	10000000		2565000
	Local		2000000		513000
	Export		8000000		2052000
1) Capital/ output		0.27	1.60		6.70
2) Labor / Output		0.35	0.30		0.40
3) Capital / Labor		0.76	5.00		16.70
4) No Of Pairs / No. Workers		455	1142		285

LSI/02

This privately owned shoe manufacturer is also owned by two brothers who have worked at this craft all their lives. They established the company in 1977 with a capital of LE1000. They purchased tools and equipment worth LE75 and other expenditures of LE400. During the first year of operations production was 150 pairs per week with 3 workers in addition to the two brothers. Total production was estimated at about 7500 pairs of shoes for 1977.

Raw materials:	*LE 1.80*
Labor :	*LE .00*
Other costs:	*LE .40*
Total cost:	*LE 3.20*

The production cost was estimated at LE3.20 and it was sold at 3.40/pair, providing a 6.2% profit. Retail prices were fixed at LE5.25 with a 35% retail margin.

The company increased its authorized capital to LE25,000 in 1990. Fixed assets in 1990 were estimated at LE 150,000 and working capital at LE25,000. Assuming they turned over their working capital ten times during the year, their working capital is estimated at LE 250,000. Total labor force was 27 workers and production was 900 pairs per week. Working 40 weeks per year, total production was estimated at 36,000 pairs per year. These shoes were sold at a price range of LE45-55/pair. Total revenue was estimated at LE 1,800,000. The company earned about LE 120,000 in 1990.

In 1997 production was 36,000 pairs/year, at the same rate of 900 pairs/week over a 40 week / year. The total cost of production reportedly had stayed the same at LE50/pair.

Cost of Materials:	@ LE 32./pair X 36,000 pairs	= 1,152,000
Cost of labor:	@ 11/pair	= 396,000
Management & other cost:	@ 4.80/pair	= 172,800
Total cost:		LE 1,720,800
Profit:		LE 70,200
Total revenue:		LE 1,800,000

Profit seems to have decreased substantially from 120,000 pounds in 1990 to 70,200 pounds in 1n 1997.

The profit calculated as LE 2.20/pair seems too low. On the other hand they said that their shoes were being sold in retail stores for an average of LE 80/pair. It is possible that they retail a large number of shoes from their workshop, which increases their low production margin with the addition of a substantial retail margin. In 1997 the owners stated that they had exported 800 pairs for LE36,000. At present the company is using soles imported from Spain, Italy and France. The total labor force is 27 workers, 20% of which is permanent and the others are paid according to their production. Average production per worker is 11-12 pairs/day/worker, 70 pairs/wk or 2800 pairs per year/worker. The labor classification was as follows: 1 designer, 1 packaging worker, 3 distributors, 3 cutters, 5 mechanics, 10 shoe manufacturers, 1 classifier, 1 dresser and 2 supervisors. Given an increase in demand the owners indicated that they can go up to 1000 pairs/week. The top design capacity of the workshop is estimated at 1200 pairs/week

The export problems were listed as follows:

1. Lack of financial resources that would enable owner/managers to attend international shoe fairs and exhibitions.

2. They do not receive any orders from abroad any more.

3. The age of receivables is too long. Buyers take 3 months or longer to pay their bills. They experience liquidity shortages which is exacerbated by clients who return unsold shoes.

Firm Level Productivity Calculation

Company: LIS/02 Ownership: Private Sector: Leather Shoes					
Item		**Start in** 1977	1990	1996	1997
CAPITAL :					
	Fixed Assets	1,000.00			
	Working Capital	400.00			
	Total	1,400.00			
Production:					
	(Q) Pairs	7500			36000
	(V) LE	24,000.00			1,678,800.00
No. Of Workers :					
	Permanent				6
	Seasonal				21
	Total	3			27
Raw Materials :		13,500.00			1,152,000.00
Cost of Labor: (Annually)		7,500.00			396,000.00
Annual Capital Cost:		300.00			172,800.00
Capital Per Worker :		466.00			
Production per Worker:					
	Q/ Wk.	2500			1333
	V/ Wk.	8000			61066
Wages :					
	Min				
	Max				
	Average				
Sales:		39375			1800000
	Local				
	Export				
1) Capital/ output		0.06			
2) Labor / Output		0.30			0.20
3) Capital / Labor		0.20			
4) No Of Pairs / No. Workers		2500			1333

LSI/03

This privately owned company was established in 1982 with a capital of LE 390,000. The firm specializes in leather shoes for men with leather, synthetic, and rubber heels. Inputs are procured from local sources as well as imports. Technology is updated when significant innovation is available. The origins of this company go back over 100 years starting with a very small workshop established in Abbasia in 1895. The price of shoes at the time was 150 piasters and cobblers made a 30% profit. They are a third generation shoe-making family business. This is one of the companies owned by this prominent family. Other firms in the same group manufacture clothing, aluminum, paper, cardboard, office furniture, tractor assembly, and have an international trade company. They started shoe exports over thirty years ago.

The company, similar to the others interviewed, indicate a decrease in market demand for shoes both in the domestic and export markets. Interestingly the management freely admitted that their installed capacity was too large for the local market. This means that in a long term downturn in the local demand for shoes, as Egypt seems to be experiencing over the last 5 to 8 years, where all producers are affected, those that planned on producing for the export market and were unable to export the anticipated quantities are suffering more than the others. This firm, which has modern equipment and a large plant, seemed to be working at a fraction of its capacity despite the high quality shoes they seemed to produce.

This company was a major exporter of Egyptian shoes to Russia up to ten years ago. When the bottom fell out of the Russian and Eastern European market, they tried Western Europe, the U. S. And other Arab countries without much success.

At the heyday of large and continuous exports to Russia, profits were reportedly higher than on the local market and at times reached LE10./pair. It seems that the company re-invested substantial profits in restructuring operations in preparation for exports to new markets. It changed all the designs and patterns, bought a large stock of lasts from Italy, and fully computerized manufacturing operations. In spite of all their efforts they have suffered intensely from very strong international competition in world markets. In addition to manufacturing shoes, the company also produces soles which they use themselves and sell to other shoe producers. The sole manufacturing equipment which was purchased 20 years ago was modified and upgraded five years ago. All upgrade and adjustments were made according to Italian requirements. Despite the high quality soles which the company produces, they import soles at a lower price than the cost of equal or better quality local ones, in order to lower the production cost of a number of lines of shoes. Up to five or six years ago the company focused on leather soles. At present it utilizes a large number of soles made from synthetic materials. Nevertheless, in certain types of shoes, 90% of the production line uses imported soles. They have also improved the types of adhesives used to prevent rapid deterioration of the sole when it is exposed to water for long periods of time.

The general manager emphasized that competition from the Far East was severe, with quality standards lower than Egyptian shoes, but with prices much lower than could be matched in Egypt.

He insisted that consumer tastes in America have changed, becoming more price sensitive and less quality conscious. The company is searching for a medium quality segment of the international market. Its export price for this type of shoe are US$22/pair ex-works. He

claimed that the competition was selling similar shoes for US$19/pair. In England, where the general manager recently visited, shoes similar to the ones he is trying to sell for $22/pair were retailing at 9.00 pounds Sterling which is less than his production cost.

In 1996, 40% of the production was exported and 60% sold to the local market. In 1995 70% of production was exported and 30% sold in the local market. So far in 1998 they have not had any exports at all. The general Manager indicated that despite the capacity of 1000 pairs/day, actual production is 350-400 pairs/day with sporadic production runs.

The company owns and operates 16 retail stores, all of them located in the Cairo metropolitan area. The stores sell shoes imported from Italy, Germany, and England along with their own production. They do not sell shoes made by other manufacturers in Egypt. The stores sell 25% of the company's annual production. We were told that the domestic market in shoes and textiles is much more profitable than the export market. However, there is a concern that as liberalization of the economy goes forward this situation may change at some point in the future. This is forcing some manufacturers to plan ahead and get ready for those days.
The export performance of this company can be summarized as follows:

Year	***% of Production exported***
1995	*40*
1996	*30*
1997	*10*
1998	*0*

The General Manager emphasized that they were at a transitional phase at the present time trying to increase quality in order to try again to get a foothold in foreign markets. The company has recruited a German shoe technician, financed by GTZ to improve production operations and quality. He arrived in April 1998, and is scheduled to stay for two years. Conversations with him indicated that he plans to undertake time and motion studies in order to determine true costs all along the production lines.

The company has no middle level management in production or marketing. The German technician is considered the production manager. The General Manager considers himself the marketing manager as well and travels widely in search of new markets. The firm has decided to hang on to its labor force of 211 workers despite bad times, just in case they get a large export order. Although not fully utilized they are kept in order to meet seasonal demand as well. The General Manager indicated that there are four high seasons in the shoe industry where sales increase and slow down thereafter. These are: Ramadan, Back to School, Christmas and Mother Day. The first has a floating date while the latter three are at fixed dates of the year. These four seasons, which comprise just about six months of the year, absorb 60% of the production of this firm.

The design capacity of the equipment is 1000 pairs per 8 hour shift. We were told that in theory the plant could work three shifts per day and produce 900,000 pairs per year. Parts would wear out faster and they would experience some problems if they attempted this high a rate of production. Normal utilization is considered 800 pairs/day. Production performance has been as follows:

Year	*Production pairs/day*	*% of capacity*
1995	*600*	*60*
1996	*500*	*50*
1997	*800*	*80*
1998	*400*	*40*

1998 figures apply to the first half of the calendar year.

It is interesting to note that despite working at 40% capacity with no exports, the company is not just covering costs and making a profit but also maintaining a labor force which is highly underutilized, with the hope that things will get better in the local market, in exports or both! At the time of our visit efforts to design new models and extend credit to their traditional retail store buyers were under way to improve performance. In 1997 local sales were LE 6.5 million and exports LE 500,000.

Export problems were listed as follows:

1. The company believes the GOE should subsidize shoe exports to the tune of 30%. They would like a rebate on their selling price in order to compete in foreign markets.
2. They never get their import taxes back, they should be eliminated.
3. The quality of the output of most tanneries leaves a lot to be desired. The company is in continuous search of reliable, good quality suppliers of raw materials in local and foreign markets.

The company at the end of the interview insisted there was nothing wrong that an order of 100,000 pairs could not fix. Despite the high technology and its historical tradition, the company needs a strong middle management team to survive the future. The team would consist of a production manager and a staff of supervisors to maintain the changes introduced by the German technician, working alongside him for the next two years. In addition a domestic sales and marketing manager is needed to expand local market share unless the company chooses to open another 100 retail stores and channel most of their production that way. The company is also in need of a strong international marketing manager, perhaps an industrial engineer, with experience in shoe manufacturing, with subsequent graduate education in international marketing and intimate knowledge of the international shoe market.

Firm Level Productivity Calculation

Company: LSI/03 **Ownership: Private** **Sector: Leather Shoes**					
	Item	**Start in** 1982	1990	1996	1997
CAPITAL :					
	Fixed Assets				8,000,000.00
	Working Capital				17,000,000.00
	Total	390,000.00			2,500,000.00
Production:					
	(Q) Pairs				105000
	(V) LE				6,613,000.00
No. Of Workers :					
	Permanent				
	Seasonal				
	Total			211	225
Raw Materials :					2,650,000.00
Cost of Labor: (Annually)					1,900,000.00
Annual Capital Cost:					
Capital Per Worker :					13.00
Production per Worker:					
	Q/ Wk.				
	V/ Wk.				
Wages :					
	Min				
	Max				
	Average				
Sales:					6500000
	Local				6000000
	Export				500000
1) Capital/ output					3.80
2) Labor / Output					0.40
3) Capital / Labor					13.20
4) No Of Pairs / No. Workers					466

LSI/04

This company established in 1938 and owned by Messrs. Koraky and Aly Hassan was expropriated in 1958 and has since been operating as a government owned enterprise. It has both tanning operations and shoe manufacturing although tanning is the main line of business. In 1967 the total production of shoes was destined for the military. In 1990 production went up to 1000 pairs/day of all kinds of leather shoes, i.e. shoes for men, women and children were produced for the local market. The labor force in 1970 was 150 workers and production that year reached 300,000 pairs working one eight- hour shift per day six days a week, ten months a year. Over the years the company has come to operate 3 tanneries, a leather shoe factory and an industrial gelatin plant. Shoe production at present is dominated by the manufacturing of military style boots for the Egyptian police force. Samples observed seemed to be exceptionally strong and well made for its purpose. The company has 150 employees and four stores in Alexandria and Cairo.

They used to export shoes to Russia during the socialist era. At present small quantities are exported to Libya and other countries in Africa. The quality of export shoes, we were told, was the same as those for local manufacture. They have a larger export trade in finished leather. They ship several containers of finished leather per month. One or two containers a month are shipped to Turkey. Plastic lasts were imported from Italy and wood lasts from Czechoslovakia. From January 1 to May 1, 1998, total production was 16,000 pairs of shoes, 90% of which (14,400 pairs) were produced for the police force and 1600 pairs marketed through their retail stores. Production costs of and revenues from shoe production for 1998 were as follows:

Item	**Military shoes/pair**	**Consumer shoes/pair**
Raw materials	LE 40.00	LE 19.5
Labor	10.00	10.00
Processing	2.00	2.00
Total cost	52.00	31.5
Margin	8.00	3.5
Sale price	60.00	35.00

Gross income from military shoes was LE 864,000 and from consumer shoes LE560.000 giving a total gross income of LE 1,424,000. Net income from military shoes was 115,200 and from consumer shoes 56,000 providing a total net income from shoes of LE171,200.

The company has a marketing manager who looks after both domestic and international marketing, especially of finished leather. Most of the equipment is 50 to 60 years old. The company has great difficulty in finding or manufacturing spare parts. Until recently the government allowed them to deduct depreciation costs but instructed them to stop since they will be privatized in the near future.

There was no firm-level productivity calculation sheet for this company.

LSI/05

This state owned shoe company was established in 1927 and nationalized in 1961. When the company was nationalized the original owners relinquished their property without compensation and allowed the company to keep the name with the condition that it will not export under its original trademark. In 1970 the company built three new buildings, tripling

the size of its previous premises, installed new equipment and expanded capacity. This company saw much better times in the 70s and perhaps in the 80s. However, it seems to have gotten into trouble in the 90s. During the last three years the company has been working at 10% of capacity. Ownership of 320 retail shops provides a cushion for the substantial losses incurred in production operations. In 1997 the 320 retail shops sold LE52 million of goods, 30 million of which was the companies own production and 22 million was merchandise from other manufacturers in Egypt. Shoes from other producers were sold at a LE3million profit.
Total production of shoes in 1997 was 1.83 million pairs compared with 2.6 million pairs in 1996. Production cost was 42,300,000/1,800,000 = LE23.5/pair
Sale price was 49,850,000/1,800,000 = LE 27.7/pair
Profit was LE4.2/pair or LE 7,560,000.

As can be seen from the financial information on this company for the last five years, given at the end of this section (Table LSI-5.1), the company has lost substantial sums, almost LE44 million in the last 4 years – almost US$13 million. In addition, excessively high inventories — reduced from LE 68 million in 1993 to 36 million in 1997 — indicates the difficulties the company has had in moving its products in the market place, despite having 320 stores to sell them. Although not known for certain, the company seems to have refused to discount old merchandise and convert it to cash and to cover losses.

The company has also suffered from excessive employment. As of January 1997 the company had 4300 employees on its payroll. This labor force was reduced gradually down to 3400 workers by January 1998. In this labor force of 3400, 1200 individuals work in the 320 retail stores, 600 in administration and finance and 1600 are production workers. In the past only a percentage showed up at work on a daily basis, but all showed up to get paid at the end of the month. Since March 21, 1998 they all show up for work by order of the management. It appears that perhaps one third of the labor force, if well paid, supervised and motivated, would be sufficient to operate the company.

The company was almost privatized recently. A Singapore based investment group bid for the company. Presumably their bid was turned down for two reasons. The first reason was the company's insistence that it receive the full price of LE36 million for its inventory of shoes, some of which were three years old. The foreign investors offered 10% or LE 3.6 million. The second reason was that the investor group did not want to acquire all 320 stores. They wanted to pick and choose the best locations. There may have been other reasons as well that we are not aware of. The final GOE decision was to keep the shoe manufacturing plant and rent out the stores to its employees or others at a fixed rent plus a percentage of sales.

Table LSI – 5.1 Firm Level Financial Data LSI/05

Value: LE 1,000,000

ITEM	92/93	93/94	94/95	95/96	96/97
Sales Revenues	70.5	63	72	72	50
Production Cost	49	53	66	69	42
Total Profit	22	10	6	2	7
Marketing & Purchasing Cost	12	11	10	11	9
Revenues	10	0.2	4	9	1.4
Raw Materials	23	22	19	21	21
Net Revenues	2	6	11	16	11
Income Tax	0.7	0.09	-	-	-
Profit to be Distributed	-	-	-	-	-
Total Loss	-	6	11	16	11
Total Salaries	-	-	-	19	17
Fixed Assets	23	26	26	25	25
Depreciation	17	18	19	20	20
Net Fixed Assets	6	7	6	5	4
Working Assets Inventory Financial Investment	 68 1	 65 0.8	 45 0.8	 41	 36
Receivables	27	23	5	2	4
Total Working Assets	73	68	52	44	47
Collateralized Debt	58	60	52	59	66
Working Capital	14	7	-	14	19
Authorized Capital	3	10	10	10	10
Reserves	17	11	12	12	13

Source: Financial Data Provided by LSI/05

Firm Level Productivity Calculation

Company: LSI/05 **Ownership: Public** **Sector: Leather Shoes**					
Item		**Start in** 1938	1990	1996	1997
CAPITAL :					
	Fixed Assets			10,000,000.00	10,000,000.00
	Working Capital			14,971,000.00	19,411,000.00
	Total			24,979,000.00	29,411,000.00
Production:					
	(Q) Pairs			2,600,000	1,800,000
	(V) LE			69,300,000	42,300,000
No. Of Workers :					
	Permanent				
	Seasonal				
	Total			4300	3400
Raw Materials :					20,500,000
Cost of Labor: (Annually)				18,800,000	17,000,000
Annual Capital Cost:					4,800,000
Capital Per Worker :					
Production per Worker:					
	Q/ Wk.				
	V/ Wk.				
Wages :					
	Min				
	Max				
	Average				
Sales:		63,000,000	72,000,000	71,000,000	49,850,000
	Local				
	Export				
1) Capital/ output				0.36	0.70
2) Labor / Output				0.27	0.40
3) Capital / Labor				1.33	1.70
4) No Of Pairs / No. Workers				604	529

LSI/06

This company was the last to be interviewed in the third week of May 1998. The interview with the owner and his wife and the acting director of the Chamber of Leather industry took over four hours. The owner of this company is also the current Chairman of the Chamber which added to the importance of our meeting. The first half of the meeting was devoted to the current problems and possible solutions of the industry. The second half of the meeting was devoted to his company operations

Our initial discussion centered around a major difference in production planning between Europe/USA and in Egypt. In the West production planning starts 12 to 18 months in advance of a season. Fashion houses and manufacturers plan seasons designs and merchandising plans at least a year in advance. In Egypt retailers often request large quantities to be delivered over a short period of time and return unsold merchandise for full credit. This phenomenon raises the need to adopt a system similar to the one in Europe and USA where producers and retailers work together for mutual benefit and profit to satisfy consumer demand. Distrust between producers and retailers, cutthroat competition and playing one entity against the other does not contribute to the profitable development of the industry. The first step in establishing this system proposed by the Chairman is to organize two exhibitions per year by Egyptian producers for the trade only in June and November of every year. The purpose would be to introduce future fashions and designs and take firm orders. The June exhibition that will be held in Cairo from 8-11 June cover back-to-school and Christmas and the November exhibition would cover the Ramadan and Mother's Day seasons.

These two occasions will give both producers and retailers an opportunity to meet and plan for year round production and marketing. This will provide the opportunity to undertake production scheduling, allowing plenty of time to order raw materials and if needed hire and train additional workers. One of the most serious problems with large orders with a short lead time is the pressure they create, which causes the percentage of waste to increase dramatically. Unfortunately, all types of waste eat into profits, slimming down the bottom line despite the size of the order. The adoption of an orderly system would enable both producers and retailers to plan and project their cash flow and fund requirements better. Another problem which would be resolved is high fluctuations in the prices of raw materials, especially of finished leather. As demand is concentrated at fixed dates several months before the high seasons, raw material prices rise inordinately in anticipation of increasing demand. At the end of each season, producers who can pay cash can get 30% discounts in their purchases of finished leather.

The Chairman indicated the need for a single export company to export all shoes from Egyptian producers. Perhaps the need is a private trade association totally financed by private producers which undertakes market research, public relations and advertising in all the major international markets throughout the year. The cost of such an undertaking is too high for one or more firms and the government is already doing all it can to help the industry with its limited resources.

The government charges excessive duties and taxes for samples received from other countries because the recipient has not opened a letter of credit. Often the charges are several hundred percent of the value of the pair of shoes received. The Egyptian shoe manufacturer will often let it go, reject the sample and refuse to pay the outrageous charges. A government which wishes to encourage exports would eliminate charges on such samples and eliminate duties on

imported raw materials and equipment. The Chairman provided his own version of total shoe production in Egypt:
30 large companies produce 4-5 million pairs
300 medium companies produce 18 million pairs
3000 small workshops produce 4-5 million pairs
He estimated the total at 26 to 28 million pairs.

1. CAPMAS, since 1990, has been providing the data that total production of shoes in Egypt is 70 million shoes per year with 20%, or 14 million pairs, in casual wear of all types. The cause of the discrepancy between this and the estimates provided by associations, above, is not known.

2. The Chairman indicated that the government should enable shoe exporters to borrow funds at less than market rates. Without such incentives producers/exporters are at a serious disadvantage vis-a-vis exporters from other countries.

3. The government should encourage the small producers to move to a single central location of their choice to enable the spread of specialization and integration of different specialties such as cutting , stitching, gluing etc. He also suggested that the government encourage large producers to export and small producers to manufacture for the local market and subcontract to large producers when needed.

4. When the doors are opened to imported shoes in Egypt local producers will need to specialize in high quality shoes to survive. If Egyptian manufacturers choose the alternative of mass production they will be able to specialize only in one or two lines. "We have to choose whether we will be in the production oriented sector or the marketing oriented sector."

5. Long term training to improve quality and lower costs is essential to succeed in exports.

At this point the discussion turned to the Chairman's own company.

He established the company in 1972 with 200 pounds. He had 6 workers and produced 80 pairs of shoes per day, 6 days a week. On the basis of 300 days a year his total production was 24,000 pairs in the first year of operations. The price of a pair of shoes in 1972 was LE1.5. His total income was LE36,000. The cost structure that year was as follows:

Raw materials:	90 piasters
Labor:	30 piasters
Other costs:	10 piasters
Total cost:	LE 1.30
Margin:	0.20
Sale price:	LE 1.50

Total income was LE 36,000 and net income was LE 4800.

It is interesting to note that the margin was 15% versus the 6% indicated by other producers. Production per worker per day was 13 pairs.

He did not wish to disclose the total capital of the business in 1997.
Production in 1997 was 200 pairs per day or 60,000 pairs for the whole year. The average price of a pair of shoes was: LE 40/pair.

Raw materials costs @ 60% of total cost:	LE 24.00
Labor cost at 20% of total cost:	LE 8
Cost of capital and other @6% of total cost:	LE 2.4
Margin @ 16.2 %:	LE 5.6
Total cost:	LE 40.

The number of workers in 1997 was 56 and total payroll was LE80,000. The company has two retail shops and sells to a large number of retailers. Other producers shoes are sold in the two shops. He considers his company productivity to be above industry average.

During the last five years 50 to 60% of the company's production has been exported. This was somewhat unusual compared to other firms interviewed since the majority of sales by other firms were to the domestic market.

Considering the total production of 60,000 pairs per annum and sales were at the same level throughout the last five years, the firm exported 30 to 36,000 pairs per year to the following markets:

Canada 40% of production 12-14,000 pairs
Libya 40% of production 12 -14,000 pairs
Denmark and Netherlands @15% 4-5,000 pairs
Other markets @5% of production 1.5-1800 pairs

The company keeps export prices about 15% lower than the competition at about LE 45(US$13.23)/pair. Productivity and profits in export shoes are higher since the export buyer allows sufficient time for purchasing raw materials and production, which reduces waste and increases profits. It allows the implementation of the system that he would like to establish industry-wide in Egypt.

Firm Level Productivity Calculation

Company: LSI/06 **Ownership: Private** **Sector: Leather Shoes**					
	Item	**Start in** 1972	1990	1996	1997
CAPITAL :					
	Fixed Assets	200.00			
	Working Capital	200.00			
	Total	400.00			
Production:					
	(Q) Pairs	15000			60000
	(V) LE	19,500.00			2,064,000.00
No. Of Workers :					
	Permanent				
	Seasonal				
	Total	6			56
Raw Materials :		13,500.00			1,440,000.00
Cost of Labor: (Annually)		4,500.00			480,000.00
Annual Capital Cost:		1,500.00			144,000.00
Capital Per Worker :					
Production per Worker:					
	Q/ Wk.	2500			
	V/ Wk.				
Wages :					
	Min				
	Max				
	Average				
Sales:		22500			2,400,000
	Local				1,400,000
	Export				1,000,000
1) Capital/ output		0.02			
2) Labor / Output		0.23			0.23
3) Capital / Labor		0.08			
4) No Of Pairs / No. Workers		2500			1071

3.3. Software

No firm-level interviews were obtained for this industry. See Statistical Appendix Table 27 for data on 29 software firms, as provided by IDSC.

3.4. Wood Furniture

3.4.1. Furniture Industry Profile

Background:
The making of furniture and wood working dates back to ancient times in Egypt. Furniture production as an industry developed in the 19th century.

The furniture and woodworking industries have always been highly dependent on imported woods for raw material. Indigenous timber, which includes tamarisk, acacia and carob, is insufficient to supply the trade, while wood from the ubiquitous date palm has tended to be rejected because of its tendency to split. Egypt spends over LE 1 billion annually on imports of wood and related products.

About 40 percent of the country's furniture is made in the Nile Delta town of Damietta. Of the remainder, factories and workshops in Cairo and Alexandria – the two largest cities – account for about 90 percent. While some 200 factories were registered by 1980, a large portion of the output until recently came from small and medium sized workshops, which use mass-production methods and employ from 300 to 900 workers. About 30 medium- to large-size factories specialize in the production of chairs, some for sale to the hotel and tourism sector, as well as for domestic sales and export.

The wealth of skills accumulated by Egyptians in furniture and woodworking is demonstrated by the performance of the sector during the period from 1975 to 1989, when, despite the prevalence of small-scale production, the gross output of furniture in current prices rose remarkably. The continued rapid growth of the population, combined with the opening of new accessible display areas and rising disposable incomes (especially in the case of Egyptians working abroad and sending back remittances) created substantial demand for furniture. By the year 1989/90 the value of furniture production stood at LE 814.4 million. Given their long history of furniture making and woodworking, Egyptians have acquired skills and traditions that, combined with their competitive wages, could also give the industry a comparative advantage in international markets despite the dependence on imported raw materials.

Mass production increased markedly in the 1980s after the government introduced a ban on the import of foreign-made furniture. Altogether, the industry in 1990 consisted of 8,427 factories and workshops plus 2,000 furniture showrooms and display areas. Total employment amounted to 75,000. The number of larger factories, in turn, had increased to 500, of which 150 were joint ventures, nine were owned by the public sector and 26 were cooperatives. The remainder were privately owned.

Exports in 1989/1990 amounted to LE 85.1 million, about 10.5 percent of total production. This represented nearly a threefold increase over the 1988/1989 figure in value terms, mainly because of substantial increase in exports to France, Kuwait, Libyan Arab Jamahiriya and the former USSR. In volume terms, exports rose by 160 percent to 10,386 tons. In 1989/1990,

the former Soviet Union formed the leading market, followed by Libya, Saudi Arabia, Kuwait, United States and France.

Private Sector Constraints and Prospects:

In the past few years, the furniture and woodworking industries in Egypt have suffered a decline due in part to the rising cost of imported wood.
Another constraint centers on falling domestic demand in some sections of the market. The spate of economic reforms introduced by the government – while expected to produce positive results in the medium to long term – has depressed both wholesale and retail demand, as consumers were forced to tighten their belts. It has also led to lower sales, industry sources report. The rising cost of imported raw materials has also led to substantial increases in retail prices for furniture. Since then, the imposition of sales taxes, together with continued rises in the cost of imported raw materials, workers' insurance and other producer overheads, has added to the upward trend in costs. Existing constraints on the training of furniture designers, as well as the lack of incentives for developing craft skills, also serve as a hindrance to the development of Egypt's potential export markets. The greater use of hand crafted skills (given Egypt's competitive edge in terms of wage), provided these are adequately applied to create more value added, could be applied to the production of up-market furniture such as Egypt's indigenous intricate Mashrabiyah styles or Pharaonic derivates, which are expected to be an increasing demand in the neighboring Gulf states as well as elsewhere in Europe, Asia and North America. Such skills also need to be encouraged if the industry is to reach its potential in the growing tourism sector.

Private Sector Development in Furniture and Woodworking:

In contrast to many other industrial branches, the concentration of ownership in the sub-sector is already heavily dominated by private investment. The growth prospects for furniture industry are promising given the rise in consumer demand, the upsurge in Egyptian remittances, the revival of export orders, as well as of tourism.

The privatization of many of Egypt's luxury hotels and tourist complexes in 1992 and 1993 may also enhance the investment opportunities in furniture, provided production is oriented toward the needs of these purchasers. The production of either mass-produced or handcraft chairs, for example, could be combined with the bulk purchase of wood at more competitive prices once import controls are lifted. However, private investment in other wood-based furniture projects oriented toward the domestic consumer or towards exports is expected to be warranted only if production is carried out in more modern factories with adequate supply and marketing arrangements.

In the short term, private investment in the furniture and woodworking sector is expected to increase dramatically as a result of the expected abolition of the total import ban on furniture. First introduced in the mid-1980s, the ban has effectively served as a government stimulus to local production. However, its lifting will reduce prices and stimulate total demand, enabling private-sector producers of high –quality goods to compete more effectively both domestically and internationally. The smaller workshops, on the other hand, such as those in Damietta, catering primarily to the popular end of the domestic market, could be adversely affected by competing imports of cheaper furniture from countries of territories such as China, Taiwan

Province of China, Hong Kong, the Philippines, Romania and other suppliers in eastern and central Europe.

A reduction in tariffs on imported wood and other raw materials such as synthetic foams, nails, glues, upholstery fabrics, fasteners, glass, trims and packaging materials should provide a significant stimulus to local private-sector producers able to withstand and competition of readymade furniture, doors, windows, flooring and other wooden products imported from abroad. However, given the lack of sufficient competition in the wholesale trade in both sawn and unsawn timber, plus the continuance of the government regulations affecting the pricing and import of softwoods, it is unlikely that any reduction in tariffs would necessarily be passed on to the producer or retailer. The sector is likely to be dominated increasingly by those manufacturers who operate with mass-production methods and/or have sufficient capital either to buy their wood in bulk or to finance sufficient inventory and storage facilities.

In the medium to long-term, the furniture sector will also need to expand the use of modern materials, as well as more modern methods of production which emphasize just-in-time delivery (to avoid costly inventories), flat-packed items and stacking furniture.

- Using cheaper wood-based products (plywood, chipboard, etc), that are suitable to mass production, leads to output expansion and raw material minimizing costs. This also would help to cover the substantial volume of unmet demand in Egypt by decreasing the final cost.
- On the other hand, consumers might resist the use of these materials, unless they are accompanied by attractive designs, immediate availability and sufficient promotion and marketing.
- This creates the need for centralized distribution facilities and large showroom space.
- The use of materials such as Plexiglas, fiberglass, and polymers would reduce the need to import costly wood in favor of materials that could be manufactured from Egypt's own hydrocarbon resources.
- Plexiglas shelving, benches, etc. could be directed to specialized users as shops, offices, and restaurants.
- Given the competitively lower cost of producing Plexiglas products in Egypt, export demand could also be expected to grow if sufficient supplied were produced and if sufficient feedstock at reasonable prices were made available to manufacturers.
- Quality control, such as in the final polishing as well as in manufacture and design is an important issue.

3.4.2. Recent Trends

Although the manufacture of furniture in Egypt is based on very old traditions, for the purposes of this study it would be useful to look at the evolution of the industry during the 20th century. In the early years of this century there was an influx of foreigners who chose to live and work in Egypt for business and professional reasons. French and Italian steel furniture manufacturing companies opened branches in Egypt in order to cater to this foreign communities' demand for European style furniture.

As production increased and a new government took its place in Egypt, furniture imports were ended in the early fifties and exports started in 1958-1960. Furniture exports increased to the

Former Soviet Union (FSU), mainly to Russia and to central and Eastern Europe (CEE), primarily to Poland and Czechoslovakia. Exports to these countries peaked at LE 3 million in 1970-73. In 1974 exports to the FSU and CEE started to decline as Egyptian steel furniture manufacturers searched new opportunities in Western Europe. Despite these efforts the quality of Egyptian furniture deteriorated in the 1980s and imports started in 1987. At this same year the Egyptian Company for Wood Production, a State Owned Enterprise, started manufacturing modern wood furniture in a plant in Helwan and increased production in subsequent years.

In 1992-93 the wood furniture handicraft sector continued to expand. According to EEPC the distribution of such shops were as follows:

Location	**Number of Workshops in 1993**
Damietta	37,000
Cairo	11,138
Alexandria	3,357
Gharbia	2,827
Dakahlia	2,592
Assiut	477
Total	**57,391**

The wooden manufacturing industry imports the majority of its raw materials, including most of its wood. Increasing prices of wood imports, combined with 23% custom duties and 10% sales tax seems to have affected the competitiveness of this industry and the decrease in exports during 1992-97.

No field interviews were conducted for this industry.

The Chamber for woodworking industry was established in 1958 with 25 members. In 1998 it had 520 active members out of a total of 933 manufacturers. Data search indicated there were 15 state owned enterprises, 350 registered private firms, and 80 joint ventures with foreign investment and 26 cooperatives called Gameyat Ettowania.

Total wood furniture exports decreased from LE 77 million in 1992 to a low of 41 million in 1995 and rose to 52 million in 1997. Its share of merchandise exports as well as total exports have also been declining over the years as can be observed from Appendix Table (17).

The data, which was received from the General Organization for Industrialization (GOFI) was broken down to wooden furniture made for the home and for the office. Capital, production and labor cost data with the productivity ratio calculations are given in Appendix Tables (17-24).

3.5. Textiles

3.5.1. Textiles Industry Profile

Background:
The textile and clothing (T&C) industry is one of the oldest industrial activities in Egypt. Two advantages have helped the industry flourish in the country. First, the use of the country's main agricultural crop, cotton, of which a wide range of varieties are produced, and whose top international ranking has remained unchallenged for almost two centuries. Second, the availability of abundant skilled and semi-skilled workers at relatively low cost. Despite the country's tradition of natural resource endowment in terms of raw materials, labor supply and advantageous location, the T & C industry remains in financial difficulty.

To efficiently exploit these advantages and to increase international competitiveness, the GOE has launched a number of reforms in recent years. The most important are: freeing the cotton trade and textile export regulations, raising the cotton price paid to the farmers by the state trading monopoly, and the privatization of some state-owned companies. The clothing industry has grown rapidly and many international brands are producing now in Egypt. The textile and clothing industry is the second largest manufacturing sector after food processing. It accounts for 12, 30 and 32 percent of manufacturing value added, employment and exports, respectively. By the year 1994/95 there were almost 1637 firms in the textile and clothing industry, with output valued at 2.5 billion LE. In terms of employment, this industry employs for around 300 thousand persons, of which 225 thousand were engaged in the public sector and 105 thousand were employed in the private sector.

The industry is largely dominated by the public sector. In addition, there are mixed companies operating under Investment Law 230 of 1989. Private sector participation in weaving, and ready-made garment production has grown significantly, reaching 55% of fabrics production and exceeding 85% of total production of garments during the 1990's. The private sector is composed of a large number of traditional small scale workshops and a smaller number of medium- to large-scale firms, many of which are joint ventures under law 230/1989.

The small-sized but modern factory (60 to 80 workers) has typically been the testing ground for private clothing manufacture. Only few have started with a large operation. The dozens who became successful have graduated to the 200 – 1000 employee size. Many of those have in turn moved to either produce international brand names under license or franchises from international companies such as Benetton, Naf Naf and Wrangler.

A key feature of the textile and clothing industry is the extensive degree of complementarity. Subcontracting, and specialized services are widely available, with only a few of the large public and private firms being highly integrated. Even public enterprises in the textile industry have always relied on the subcontracted output of hundreds of medium-sized private firms.

Exports have steadily increased since the mid-1980s. The EU countries constitute the major export market, accounting for almost 55% of total industry exports. The US and the Gulf States are important markets for Egypt ($2 billion).

Some major exporters have entered into arrangements with retail chains in Europe and the US, or opened their own retail outlets in Australia, Bahrain, France, UAE, and others. Other exporters are producing under designer labels.

Currently, the private sector has increasingly contributed to exporting high value-added textile products. It accounts for around 70% of total knits exports, 35% of terry cloth and 30% of garment export. Furthermore, its export performance has not been as severely hit by the world textile recession as that of the public sector. This indicates the private sector's ability to adapt to changing conditions and to penetrate external markets.

The recent formation of the Egyptian Ready-Made Garment Association, whose members comprise of the largest 24 exporters of clothing, is a sign of the industry's growing strength and of its members recognition of the value of lobbying for government support in promoting exports to key markets. The advantages of association have been joint promotion efforts that have established Egypt and Egyptian cotton products on the world market. Due to a shift in international demand from long to medium and short-staple varieties, greater attention is being paid to the introduction of new technology and production process, with a view to improving quality.

According to some empirical studies (Heba Handoussa), growth trends should continue and garment exports should realistically triple by the year 2000. The consensus is that Egypt should focus on the higher quality woven and knitted clothing range, maintaining the current product mix and target markets.

The export performance of Egyptian textiles seems to be constrained more by domestic factors than by limiting conditions in export markets, of which:

- The high rate of defective output per sample of major product items have increased between 1992/93 and 1993/94 (Hanaa Kheir El Din).
- Various input waste rates have been observed to exceed the standard rates.
- The wages cost per worker has increased faster than both real production and real value-added per worker, pointing to an increase in wage costs of cotton textiles due to declining labor productivity.
- The high rate of idle capacity. The main reasons for low rate of capacity utilization are either related to internal problems such as the unavailability of major inputs, poor maintenance of machinery and equipment, inadequate supervision, lack of incentives, negligence, or are external to the firm and relate to insufficient demand.

These observations corroborate a final one, namely high costs of production relative to domestic sales price and export price. Domestic sales prices and export prices hardly cover total costs of the majority of products considered. In fact they did not cover direct raw materials and labor costs in many recent years.

The industry already has a substantial export base and has developed valuable marketing networks in international markets. Building on the latter it has good potential to increase its exports over the next coming years.

To date, the best prospects exist in the European market due its proximity and high purchasing power.

The future market niche will not be in high volume, low-priced products but one step above into better quality, mid-range products. The following products are considered to have good potential: household textile and carpet sectors, including bed linens, table linens, floor coverings and hand made and machine carpets.

See Appendix Tables 28-35 for detailed production, employment and efficiency data for the textile industry.

3.5.2. Micro Analysis-15 Firms

Appendix Tables 36-50 provide data on four productivity indicators based on the financial statements of 15 textile companies for 1994/95 and 1995/96. For 1994/95 the capital/output ratios range from 1.01 in Delta Spinning and Weaving to 3.1 in Cairo Dying. In 1995/96 the capital/output ratio ranged from 1.26 in Delta Spinning and Weaving to 4.91 in Cairo Dying. Output per worker in 1994/95 ranged from a low of LE 943.85 in Misr Helwan to a high of LE 4356.01 in Alexandria Spinning. In 1995/96 output per worker ranged from a low of LE 6104.59 in Cairo Dying to a high of LE 46,056.82 in Unirab.

4.0. Summary of Findings, Firm-Level Analysis

Interviews with a sample of firms within each of three industries were undertaken to determine: (1) constraints to exports, (2) productivity, and (3) performance. The many and varied responses are distilled here to provide a summary of constraints to industry efficiency, as perceived by the firms themselves.

4.1. Constraints to Exports

4.1.1. Food Processing Firms

- Prices of raw materials have increased while international prices decline.
- Local markets are more profitable than export markets.
- High profits of trading companies.
- Domestic market too limited to absorb fluctuations in international demand.
- Lack of information about foreign markets.
- Excess employment increases costs (public firms)
- Severe domestic and international competition.
- Special requirements of foreign markets.
- Required permits from MALR for each shipment.
- “Invisible” fees required to be paid.
- Lack of experienced marketing staff.
- Lack of refrigerated cars.
- Severe working capital shortage.
- High duties on spare parts for machinery (45 - 75%).
- Tax holidays for new firms is a disadvantage for established firms.
- Electricity costs are too high.
- High labor costs. Fifty percent labor redundancy.

4.1.2. Leather Shoes

- Lack of skilled marketing staff and marketing strategy.

- Taxes on raw materials are high. Duty drawback is slow and cumbersome to employ.
- Lack of skilled labor.
- Low quality of shoes, developed historically from serving the Eastern European market.
- New open, demand-driven markets require skilled marketing staff.
- High costs due to operating at less than 50% of capacity.
- Weak domestic market
- Low quality raw materials purchased locally.
- High tariffs, “invisible” payments to export, and red-tape
- Shoe industry needs a 30 percent subsidy.
- Need to eliminate the 10% export tax
- Need GOE assistance in opening the U.S. market.
- Electricity costs are too high.
- Foreign buyers slow (3months) in paying their bills.
- Failure to reimburse under duty drawback.
- Lack of fairs and other contact with foreign buyers.

4.1.3. Software

(No firm-level interviews were obtained).

4.1.4. Wood Furniture

- Rising costs of imported wood plus 23% tariff and 10% tax.
- Lack of outward-looking marketing strategy.
- High import duties of over 70% make the domestic market much more attractive than exports (authors’ observation, not based on industry responses).

4.1.5. Textiles

- Deteriorating quality of raw materials.
- High “waste” rates.
- Wages are increasing faster than value added per worker.
- High rate of idle capacity.
- High costs of production relative to sales prices.

4.2. Efficiency Factors

4.2.1. Food Processing

- Fluctuating capacity utilization caused by variability of international market demand.
- Lack of sales and marketing department.
- Fluctuating raw material supply and cost.
- Redundant labor (public sector)
- Competition from domestic markets.
- Shortage of working capital.
- Low utilization of plant capacity.
- High cost of electricity.
- Outdated plant and equipment

- Lack of market analysis

4.2.2. Leather Shoes

- High taxes on raw materials, not fully offset by duty drawback facilities.
- Lack of skilled labor.
- Style considerations make it imperative that skilled marketing staff be employed.
- Management practices left-over from the socialist era inhibit growth in modern export markets.
- Operating at less than 50% of capacity partly because of the loss of the Eastern European market.
- Declining domestic demand.
- Low quality of domestic raw materials.
- High tariffs and cumbersome import and export procedures.
- Management of quality a key constraint to exporting to Europe. Critical points for quality control include: leather sorting, inspection after clicking, inspection after closing, lasting room inspection, inspecting before finishing, and final quality control.
- Inadequate training facilities for skilled labor. Migration of skilled labor to Gulf States.
- Severe competition from the Far Eastern producers.
- Declining demand in domestic and traditional markets and rapidly shifting demand in US and Europe has caused technical and managerial difficulties and declining profits.
- Lack of adequate lead time (12-18 months) in planning production according to expected changes in demand require development of fairs and exhibitions and improved information systems to adequately predict shifts in demand according to quality and style.
- Lack of a specialized trading company or companies for export trade.
- Excessive charges on samples received from abroad.

4.2.3. Software

(No individual firms were interviewed).

4.2.4. Wood Furniture

- Rising costs of imported wood and high tariffs.
- Competition from Far East if remove ban on furniture imports.
- Monopolistic control of wood and other raw materials imports.
- Lack of modern technology in finishing.
- Need to substitute other cheaper materials for wood.
- High duties on wood imports.

4.2.5. Textiles

- High rate of defective output
- High waste rates
- Labor productivity low value-added per workers.
- High rate of idle capacity caused by insufficient demand and raw materials bottlenecks.

- High capital/output ratios and low labor productivity.
- Costs of raw materials adversely affected by cotton pricing and raw material import policies.
- Weak financial condition of most publicly-owned enterprises.

5.0. Policy Implications

In broad terms, the five industries studied appear to be relatively efficient in terms of capital and labor used per unit of output. Also, various measures of comparative advantage showed these industries to have potential for growth in exports. Indeed, except for the wood furniture industry, which is the weakest of the five in terms of efficiency and the need for protection from foreign competition, exports since 1992 have shown a healthy growth rate, somewhat above the rate of growth of manufacturing overall.

However, interviews with individual firms revealed that certain actions by the GOE would stimulate greater growth in employment, output and trade. There are two categories of policy action that would seem to be required: (1) adjustment in tariffs and NTB constraints to imports and implicit constraints to exports and (2) government facilitation of technical transfer to improve management and market analysis to better prepare local firms for competing in the global market place.

5.1. Tariffs and NTBs

The effective rates of protection for shoes, furniture and textiles are extremely high by international standards, indicating that the responses by individual firms were true reactions to existing government policy. Most firms emphasized two related things: (1) imported raw materials had high costs and (2) sales on the domestic market are often more profitable than export sales. The first is self-evident. High duties on machinery and raw materials and a 14 percent sales tax added on top are bound to increase local manufacturing costs. The second phenomenon also increases the “tax” on exports. A 10 percent tariff on the final product, say on ready-made garments, tends to raise the domestic price by that amount. Thus, from the point of view of the prospective exporter, the export price tends to be 10 percent below the domestic price. If you add to this extra transport, finance and marketing costs, the export market does not look attractive to domestic industry. Thus, a reduction in tariffs would lower the domestic price, expanding domestic demand and raise the export price relative to the domestic price, tending to expand exports.

Expansion of both exports and domestic sales would help solve the excess capacity situation found in all five industries, would increase employment, and would lower the price of goods to domestic consumers.

Removal of excessive regulatory controls of imported products would have more or less the same effect as reducing tariffs. Indeed, a recent DEPRA study has estimated that the sum total of implicit export taxes caused by the current tariff and NTB regime may reach 40%, economy wide. If it were even one half that level, the tax on exports would surely discourage most would be exporters, because they would be facing a 20% reduction in the gross value of sales and a much higher reduction in profits on sales for export.

5.2. Government Facilitation of Industry Performance

Perhaps the next most important constraint to exports identified by the firms interviewed in this study was the lack of knowledge concerning export markets. Information needed includes prices, size of market, quality needs, style changes, and market niches. For the most part, industry managers will have to solve this problem themselves by investing in a marketing staff, in commercially available market information services, and in seeking out trade fairs and exhibitions. The GOE, however, can facilitate this to the extent that there are externalities at work. The existence of " externalities" means that an individual firm is not able to capture all the benefits from a given investment in acquiring information. For example, much market information is not industry specific but applies across the board to potential exporters of many commodities. Moreover, smaller firms which might grow and thrive in the export business probably don't have the resources, financial or in the form of trained personnel, needed to carry out a properly comprehensive survey of foreign markets. There is, therefore, a real role for government sponsored programs to assist industry and industry groups on a sector by sector basis, to develop the required information generating role.

The same is true of technical transfer. There may be real economies in a coordinated effort by a government agency to identify industrial needs and to coordinate efforts to import the required technology. It is also true that technology in transport, port services, and other infrastructure can benefit by government- sponsored technical and financial programs.

Lack of skilled labor was another often-cited constraint to productivity growth. Here, government-sponsored trade schools could play a vital role, as individual firms are rarely able to provide training for skilled labor. Development of a specialized system of grants to private firms to finance technical assistance, especially for smaller enterprises, might be another fruitful approach that could be carried out by the government.

التقرير النهائى

تنميـــــة صـــــــادرات مصـــــــر: ملحق
تحـليـل اقـتـصـادى لـخـمـس صـنـاعـات

اعدت

لوزارة التجارة والتموين

مقدمة الى

الوكالة الامريكية للتنمية الدولية

قطاع سياسات النمو الاقتصادى

مقدمة من

شركة ناثان اسوشيتس انكوربوريشن

عقد رقم

٢٦٣-C-٠٠-٩٦-٠٠٠٠٠١-٠٠

فبراير ١٩٩٩

استهـــــــلال

بني ملحق التقرير على دراسة قام بإعدادها مشـــروع تحليـل وإصـلاح السياسـات الاقتصادية والتنمية (دبرا)، من خلال عقد مع الوكالة الأمريكية للتنمية الدوليـــة بالقـاهرة - مصر (عقد رقم ٠٠-٠٠٠٠١-٩٦-٠٠-C -٢٦٣).

ويهدف مشروع دبرا إلى تشجيع ومساندة الإصلاح الاقتصادي الكلي في مصر، وذلـك من خلال تقديم المعونات الفنية إلى وزارة التجارة والتموين، مـع التركـيز علـى الجوانـب المرتبطة بتحرير التجارة والاستثمار الدوليين، وتحرير وتدعيم القطاع المالي.

وقام بإعداد هذه التقرير فريق من الخبراء من مؤسسة ناثان أسوشيتس إنكوربوريشـن للاستشارات الاقتصادية، برئاسة الدكتور/ جيمس كاسـينج، والأسـتاذ/ دينيـس جالاجـار، والدكتور/ أحمد محروس محرم (بمقتضى تعاقد مع شركة ألايـد كوربوريشـن - إيجبـت) بالإضافة إلى فريق من الاقتصاديين بجامعة القاهرة، منـهم الدكتـورة/ هنـاء خـير الديـن، الدكتورة/ سميحة فوزي، الدكتورة/ أمنية حلمي، و الدكتورة/ منى الجرف.

وهذا الملحق مبني على بيانات قام بإعدادها الدكتور/ رفعت باروكاس مـن مؤسسـة كيمونكس للاستشارات الاقتصادية، وقام بعملية تحريـر الدراسـة الدكتـور/ رولـو إيريـك المستشار بمشروع دبرا. وقد أسهم بجهد مشكور في إعداد هذا التقرير كل من السيدة/ فاطمـة عبد الحميد، والأستاذ/ أسامة مختار، والآنسة/ سالي الشهاوي، والأستاذ/ علاء هنـدي. كمـا كان للنقد البناء والمقترحات التي قدمها كل من الدكتور/ جمال صيام المستشار بمشروع دبـرا، والأستاذ/ علي فهمي مستشار غرفة الصناعات الغذائية، والأستاذ/ حجاج شقوير نائب المديـر العام لغرفة الصناعات الجلدية، والأستاذ/ علاء العجماوي من المؤسسة المصرية للبرمجيـات، والأستاذة/ غادة خليفة من مؤسسة البرمجيات، كان لها أكبر الأثر في صدور التقريـر بـهذه الصورة.

ويمتد الشكر أيضا إلى الدكتورة/ منى الجرف التي قامت بإجراء العديد من المقابلات الشخصية مع المسؤولين في صناعة البرمجيات، والدكتورة/ سميحة فوزي التي شاركت في كتابة المقدمة الخاصة بصناعة الأثاث وصناعة المنسوجات.

ويقدم فريق الدراسة عظيم الشكر للدكتور/ رولو إيريك منسق الدراسة من مشروع دبرا، بالإضافة إلى جميع أعضاء المشروع على المساندة التي قدموها. ويذهب الشكر أيضا، لكل من الدكتور/ عمر عبد الحميد سالمان مدير مركز بحوث ودراسات التجارة الخارجية، والأستاذ/ عربي مدبولي الباحث بالمركز، على ما قدماه من عون صادق، وكذلك الدكتورة/ هالة صقر من جامعة القاهرة.

ولقد استفاد فريق الدراسة من الملاحظات القيمة التي تلقاها عند عرض التقرير على كل من وزارة التجارة والتموين، وزارة الاقتصاد، الوكالة الأمريكية للتنمية الدولية بالقاهرة، وجمعية رجال الأعمال بالإسكندرية، وجمعية المصدرين المصريين. وشكر خاص للأستاذ الدكتور/ حمدى سالم، ومساعديه بمركز تنمية الصادرات المصرية، التابع لوزارة التجارة والتموين، على ما قدموه من مساعدات قيمة.

ويعتبر فريق الدراسة هو المسئول عن كافة الآراء الواردة في هذا التقرير، والنتائج والتوصيات التي اشتمل عليها لا تعكس بالضرورة آراء وسياسات حكومة جمهورية مصر العربية، أو الوكالة الأمريكية للتنمية الدولية.

ملخـــص الدراســـة

يقدم هذا الملحق الخاص بالدراسة التي عنوانها " تنميـــة صـــادرات مصـــر" (يونيـــة ١٩٩٨)، تحليلا على مستوى المنشأة مبني على مسح لعينة من الشركات ، تم اختيارهـــا مـــن خمس صناعات. كما تمت الاستعانة أيضاً، ببيانات تجميعية تم الحصول عليها مـــن الجـــهاز المركزي للتعبئة العامة والإحصاء، وغيره من المصادر الرسمية. وقد تمت معالجـــة أمـــور مثل كفاءة الصناعة، واتجاهات الصادرات، وخصائص الشركات، وتوصيات السياسة، وذلـــك من خلال تحليل متعمق. وقد تمثل ذلك في وجود (٤١) جدول إحصـــائي فـــي الملحـــق ـــ وتغطي هذه الجداول البيانات على مستوى الصناعة، بالإضافة إلى مقاييس لأداء الصناعة.

كفاءة الصناعة:

جملة القول، أن الصناعات الخمس المستهدفة، كانت تعمل بكفـــاءة، وتتمتـــع جميعـــها (باستثناء صناعة الأثاث) بالميزة النسبية باستخدام معاملات مقياس تكلفـــة المـــوارد المحليـــة. ومع ذلك، فقد لوحظ أن معدل الحماية الفعلي لكل صناعة من هذه الصناعات يزيد علـــى ٤٠% باستثناء الأغذية المصنعة. كما يتضح أن نمو صادرات هذه الصناعـــات كبـــير (فيمـــا عـــدا صناعة الأثاث) قياساً إلى باقي الصناعات.

اتجاهات الصادرات:

كان نمو الصادرات جيداً، لكن كان هناك تباين. فعلى سبيل المثـــال، كـــان إجمـــالي صادرات الأغذية المصنعة ينمو بمعدل يزيد على ٣% سنوياً، وتضاعفت صادرات الأغذيـــة المعلبة، على حين بلغ معدل نمو صادرات المنتجات الغذائية المجمـــدة ٣٠% ســـنوياً، لكـــن صادرات السلع الغذائية المجففة تناقصت. كما انخفضت صادرات الأحذية، وحققت صـــادرات الأثاث انخفاضا بنسبة ٣٢%، لكن معظم صادرات منتجات النسيج حققت زيادة كبيرة.

سمات الصناعة (من واقع بيانات المسح والمقابلة الشخصية):

إن أهم معوقات التصدير التي رصدتها الشركات الداخلة في العينة في كـــل صناعـــة، كانت على النحو التالي :

١) بالنسبة لصناعة الأغذية المصنعة: السوق المحلي أكثر ربحية.

٢) بالنسبة لصناعة الأحذية الجلدية: نقص الكفاءات التسويقية، وعدم وجود استراتيجية للتسويق.

٣) بالنسبة لصناعة الأثاث الخشبي: الأسواق المحلية أكثر ربحية.

٤) بالنسبة لصناعة المنسوجات: ارتفاع تكلفة الإنتاج بالنسبة لأسعار البيع.

وأما العوامل المتعلقة بالكفاءة، والتي قامت شركات العينة برصدها، فكانت على النحو التالي :

١) بالنسبة لصناعة الأغذية المصنعة: قابلية الطلب العالمي للتغير.

٢) بالنسبة لصناعة الأحذية الجلدية: إدارة عوامل الجودة بالنسبة للصادرات.

٣) بالنسبة لصناعة الأثاث الخشبي: تكلفة المواد الخام المرتفعة، والتعريفات الجمركية العالية.

٤) بالنسبة لصناعة المنسوجات: وجود معدل مرتفع للطاقة العاطلة.

توصيات السياسة :

أظهرت المقابلات الشخصية للشركات محل البحث أن ارتفاع التعريفات الجمركية والعوائق غير الجمركية على واردات المواد الخام، تعتبر من أهم القيود على الإنتاج من أجل التصدير، حيث ينصب أثرها على الزيادة الكبيرة في تكاليف الإنتاج. وفيما يتعلق بما أشارت إليه الشركات بشكل غير مباشر، ولكن يمكن استخلاصه ضمنياً من عبارة "الأسواق المحلية أكثر ربحية"، أن التعريفات الجمركية المرتفعة، والقيود غير الجمركية الشديدة، يمكن ترجمتها إلى ضريبة ضمنية على الصادرات، والتي تم تقديرها بنحو ٣٠ % في المتوسط عبر جميع الصناعات.

إن النقص الواضح في معرفة الطلب في الأسواق التصديرية يعتبر ثاني أهم معوقات التصدير. وفي هذا الصدد، يتضح أن المشاركة بين المشروعات الخاصة وأجهزة ترويج الصادرات التابعة للقطاع الخاص، والأجهزة الحكومية لتنمية الصادرات، يمكن أن تقدم الكثير لدعم الأداء التصديري.