

Republic of Lebanon
Office of the Minister of State for Administrative Reform
Center for Public Sector Projects and Studies
(C.P.S.S.)

**INDUSTRIAL
REPORT**

Statistics & Findings

Ministry of Industry
In cooperation with GTZ (German Technical Cooperation)

The Ministry of Industry is pleased to present you with the final results of the first part of the 1998/99 industrial questionnaire, encompassing quantitative and qualitative surveys as well as a diagnosis of the Lebanese industrial sector.

The Ministry of Industry undertook this project with the technical and financial assistance of the Federal Republic of Germany through the German Agency for Technical Cooperation (GTZ). I would like to thank them for their assistance and continuous cooperation in mod take this opportunity to express my appreciation to the industrialists, the employees of the Ministry and to all participants for their contribution and hard work, which resulted in a successful implementation of the project.

We trust this publication will prove to be a valuable tool for defining and design industrial policy and economic policy generally. It should lead the way to more detailed and technically oriented studies and bring a high value added to the industrial sector analysis. It will highlight the importance of the industrial sector in Lebanon and will show that this sector continues to be a source of employment, investment and an essential contributor to the gross national product of the country.

In addition, new industrial indicators have been estimated and calculated to evaluate major indexes relating to the industrial sector and to estimate its production.

Moreover and importantly, this publication should prove to be a valuable asset to both, the public and the private sector. Industrial statistics and information are crucial elements for decision making, investment decisions and for benchmarking purposes for local and foreign industrialists. While the public sector will use it for assessing its industrial policy program, the first part of the survey paves the way for strategy planning, which will tackle various issues pertaining to the obstacles facing the industrial sector. The use of the results of the survey will also support the ground for a macroeconomic accounting system and provide data for a policy geared at promoting Lebanese industry.

This survey will also be available through a CD Rom, the Ministry of Industry Website, and our newly installed computer software, aimed at supplying industrialists with a search engine for their inquiries. This is being achieved in parallel to other projects currently underway to strengthen the industrial information base, available statistics and to provide necessary tools to assist policy and decisions makers in their analyses through index of production and sales and other relevant indicators.

Once again, the Ministry of Industry would like to thank the Federal Republic of Germany and the GTZ for their assistance as well as all the contributors from the Ministry of Industry and the private sector.

Dr. Nasser Saidi
Minister of Industry
Minister of Economy and Trade

TABLE OF CONTENT

LIST OF TABLES.....	7
TERMINOLOGY	9
INTRODUCTION	11
EXECUTIVE SUMMARY.....	14

FINDINGS & ANALYSIS

1.METHODOLOGY AND PROCEDURES	28
1.1 Preliminary phase	28
1.2 The survey.....	30
1.3 Estimation and extrapolation rate.....	31
2. GENERAL FEATURES OF THE INDUSTRIAL SECTOR	33
2.1 Main industries.....	33
2.2 Size of enterprises.....	35
2.3 Regional distribution	37
2.4 Legal status	39
2.5 Year of establishment	41
3. QUANTITATIVE FINDINGS	43
3.1 Output and production	43
3.1.1 Industrial output	43
3.1.2 Non industrial income	44
3.2 Inputs and expenditures	45
3.3 Value-added	47
3.3.1 Breakdown of the value-added by sector	47
3.3.2 Value-added by company size.....	49
3.3.3 Distribution of the gross value-added.....	49
3.4 Gross Fixed Capital Formation	53
3.5 Assets	57

3.6 Workforce and remuneration	59
3.6.1 Workforce distribution by type and gender.....	59
3.6.2 Company size and sectorial distribution of the workforce.....	60
3.6.3 Wages and social contributions	63
3.7 Financing.....	66
3.8 Main sectorial results.....	68
3.8.1 Food and beverage.....	68
3.8.2 Building materials	70
3.8.3 Clothing and textiles.....	71
3.8.4 Furniture and other manufactured products (ISIC 36)	73
4. QUALITATIVE FINDINGS.....	75
4.1 Appraisal method and difficulties in doing business in Lebanon	75
4.2 Public sector policy and the investment environment	76
4.3 Legal framework and administrative procedures.....	76
4.4 Customs and taxes.....	76
4.5 The Social Security system	77
4.6 Environmental issues	77
4.6.1 Zoning	77
4.6.2 Environment friendly production	78
4.7 Operating	78
4.7.1 Availability of infrastructure and essential services.....	78
4.7.2 Operating costs	78
4.7.3 Price of land.....	79
4.7.4 Productivity	79
4.8 Financing.....	79
4.8.1 Interest rates	80
4.8.2 Access to loans	80
4.8.3 Collateral	80
4.8.4 Leasing	80
4.9 Human resources.....	80
4.9.1 Availability of qualified labor and training	80
4.9.2 Cost of labor	81
4.9.3 Required skills by profession	81
4.10 Competition and competitiveness	81
4.11 Business environment : prospects for the following year	82

LIST OF TABLES

APPENDIX I: GENERAL FEATURES

Table I-1.a	Distribution of the Industrial Establishments by Activity and Workforce
Table I-1.b	Regional distribution of the Industrial Establishments by Activity and Workforce
Table I-2	Distribution of the Industrial Establishments by Activity and Legal Status
Table I-3	Distribution of the Industrial Establishments by Activity & Year of Establishment
Table I-4.a	Distribution of Industrial Establishments by Activity, Workforce, Area and Location in an Industrial Zone
Table I-4.b	Regional Distribution of Industrial Establishments by Workforce, Area and Location in an Industrial Zone
Table I-5	Distribution of the Establishments according to Industrial Waste disposal
Table I-6	Distribution of the Industrial Establishments by Workforce and Adherence to the Association of Lebanese Industrialists
Table I-7	Distribution of the Industrial Establishments by Workforce and Adherence to the Chamber of Commerce and Industry

APPENDIX II: QUANTITATIVE DATA

Table II-1.a	Main Economic Indicators in the Lebanese Industry by Economic Activity
Table II-1.b	Main Economic Indicators in the Lebanese Industry by Economic Activity & Establishment Size
Table II-1.c	Main Economic Indicators in the Lebanese Industry by Region
Table II-2.a	Distribution of the Workforce by Gender, Category and Economic Activity
Table II-2.b	Distribution of the Workforce by Gender, Category, Economic Activity & Establishment Size
Table II-3.a	Wages and Charges by Workers' Category and Economic Activity
Table II-3.b	Wages and Charges by Workers' Category and Establishment Size
Table II-4.a	Stocks & Stock Changes by Economic Activity
Table II-5.a	Industrial and Non Industrial Output by Economic Activity
Table II-5.b	Industrial and Non Industrial Output by Economic Activity and Establishment Size
Table II-5.c	Industrial and Non Industrial Output by Establishment Size
Table II-6.a	Main Expenditures on Inputs by Economic Activity
Table II-6.b	Main Expenditures on Inputs by Economic Activity and per Establishment
Table II-6.c	Main Expenditures on Inputs by Economic Activity and Establishment Size
Table II-7.a	Gross Fixed Capital Formation & Depreciation by Economic Activity
Table II-7.b	Gross Fixed Capital Formation & Depreciation by Establishment Size
Table II-8.a	Total Assets at the end of 1998 by Economic Activity
Table II-8.b	Total Assets at the end of 1998 by Establishment Size
Table II-9.a	Short Term Loans by Economic Activity

Table II-9.b	Short Term Loans by Establishment Size
Table II-10.a	Long Term Loans by Economic Activity
Table II-10.b	Long Term Loans by Establishment Size
Table II-11.a	Short & Long Term Loans by Economic Activity
Table II-11.b	Short & Long Term Loans by Establishment Size

APPENDIX III: BUSINESS ENVIRONMENT

Table III-1	Degree of Difficulty in Doing Business Ranking – Total Sample
Table III-1.a	Degree of Difficulty in Doing Business According to ISIC 15 (Food and Beverage Products)
Table III-1.b	Degree of Difficulty in Doing Business According to ISIC 17 (Textiles)
Table III-1.c	Degree of Difficulty in Doing Business According to ISIC 18 (Wearing Apparel and Furs)
Table III-1.d	Degree of Difficulty in Doing Business According to ISIC 19 (Leather and Leather Products)
Table III-1.e	Degree of Difficulty in Doing Business According to ISIC 20 (Wood and Products of Wood)
Table III-1.f	Degree of Difficulty in Doing Business According to ISIC 26 (Non-Metallic Mineral Products)
Table III-1.g	Degree of Difficulty in Doing Business According to ISIC 28 (Fabricated Metal Products Except Machinery and Equipment)
Table III-1.h	Degree of Difficulty in Doing Business According to ISIC 36 (Furniture and Manufactured Goods)
Table III-2.a	Degree of Difficulty in Doing Business - by Size of Enterprise (Ranking - Total Sample)
Table III-2.b	Degree of Difficulty in Doing Business - by Size of Enterprise (Ranking - Large Enterprises)
Table III-2.c	Degree of Difficulty in Doing Business - by Size of Enterprise (Ranking - Medium-Sized Enterprises)
Table III-2.d	Degree of Difficulty in Doing Business - by Size of Enterprise (Ranking - Small Enterprises)
Table III-3	Required Skills by Profession
Table III-4	Business Environment

• • •

TERMINOLOGY

- **Establishment :**

It is an institution that produces principally a group of one type of goods (and possibly have secondary productions of other types of goods). Its main production activity represents the bulk of its added value.

One questionnaire form is filled by institution, including all its branches in the different regions, if those branches do not have independent accounting.

- **Workforce :**

Entirety of permanent workers, owners included.

- **Employees :**

Paid workers, including the owners or partners that are on the payroll.

- **Home workers :**

They are the workers working for the establishment, but accomplishing their work at home.

- **Seasonal workers :**

They are not permanent workers, but are hired by the establishment during high season or depending on the load of work.

- **Wages and salaries (basic) :**

Wages and salaries of permanent employees. They include bonuses and compensations, but exclude social contributions.

- **Total salaries :**

Wages and salaries plus social contributions (public and private).

- **Output :**

Value of the goods and services produced during a period of time, as a result of a main or secondary industrial activity, including the fixed assets that are produced for the establishment's own use (self-constructed assets), but excluding resale operations.

Output = value of production from main activity + value of production from secondary activities + value of production that has been added to the establishment's assets.

- **Resale :**

It is the value of goods that have not undergone any transformation.

- **Input (intermediate consumption) :**

It is the value of goods and services used in the production process.

Input = value of goods and materials acquired + variation of stocks of inputs + other operating expenditures

- **Value-added :**

It is the difference between the outputs and the inputs.

- **Non industrial income :**

Income from non industrial activities, such as resale, namely leasing, interests, ...

- **Gross Fixed Capital Formation :**

The gross fixed capital formation for an establishment or sector in 1998 is the value of investments in new or used fixed assets, minus the value of retired fixed assets for the year.

- **Fixed assets :**

The book value of the tangible and intangible assets used in production.

- **Asset depreciation :**

Book value of asset depreciation for 1998.

ABBREVIATIONS

- **ABL :** Association of Banks in Lebanon
- **ALI :** Association of Lebanese Industrialists

- **BDL :** Banque du Liban
- **BSE :** Beirut Stock Exchange
- **CCIB :** Chamber of Commerce and Industry of Beirut
- **EU :** European Union
- **GFCF :** Gross Fixed Capital Formation
- **IDAL:** Investment Development Authority of Lebanon
- **IRI :** Industrial Research Institute
- **ISIC :** International Standard Industrial Classification
- **MOI :** Ministry of Industry
- **NEC :** Not elsewhere counted
- **NGO :** Non-Governmental Organization
- **NSSF :** National Social Security Fund
- **SME :** small and medium-sized enterprises
- **TIC :** Trade Information Center
- **VA :** Value-added

• • •

INTRODUCTION

Background

After many years of crises and total lack of information especially regarding industrial enterprises, the Ministry of the Industry launched an industrial census in 1994 and 1995 with the assistance of the German Technical Cooperation (GTZ).

The first phase was descriptive and consisted in establishing the location and description of all the industrial units operating in Lebanon. The elements analyzed pertained to the number of establishments, the main production lines, the geographic location, the legal form, the date of establishment, and the average size of the workforce.

The second phase consisted in determining the operating conditions, as well as the value-added of the Lebanese industrial sector based on 1994 financial statements.

The results provided a quantitative understanding of the sector and estimates of its main components. Unfortunately, the data was neither completed nor updated, at a time where the industry was undergoing several changes and the economic situation rapidly deteriorating.

In early 1998, the Ministry of Industry submitted a request for German support to follow-up the industrial census of 1994/95. In summer 1998, the Ministry of Industry and GTZ agreed to jointly carry out a project the scope of which goes beyond a mere update of the old industrial census: the objective of the joint efforts was defined as to develop, based on the results of an industrial survey – and, thus, on comprehensive knowledge of the magnitude and significance of the various existing obstacles - an industrial

strategy as a starting point for policy-making decisions.

The major part of the German contribution to the project was subcontracted by GTZ to Etudes et Consultations Economiques (ECE), which was supported by two German experts.

Developing an industrial strategy

Production and marketing crises, inadequate reforms and future economic uncertainties are some of the major challenges the industry is facing today.

The industry plays an important role in the country's economic recovery as it is one of the main sources of wealth and employment.

Although the Lebanese industry has succeeded in safeguarding an important share of its assets and survived many crisis years, it still faces today, numerous difficulties resulting from internal dysfunctions as well as from the maladjustment of domestic industries to the various changes that are taking place in the business environment.

The policy adopted for the recovery of the Lebanese industry should rely on a thorough analysis of the sector, as well as on the participation of the various parties involved in the sector.

Productivity improvements in the industry result not only from measures implemented by the government, but also from the sustained efforts made by the enterprises and professional associations.

The recovery strategy consists in the development of a global set of programs and the

setting up of institutions aiming to fully develop the existing industry's potential. However, it is important that the action plan and measures be clear and simple. Some measures can only be implemented over the long run, but others can quickly relieve the industries.

The industrial development program involves the following stages:

- A quantitative, qualitative, and descriptive survey aimed at assessing and evaluating the volume of business, and determining the main obstacles and difficulties that must be overcome.
- The consolidation and validation of the results with the industrialists and market professionals, through interviews, workshops and seminars. This stage of the program is supported by specialists from international organizations, and relies on close cooperation with the leaders of professional and regional industrial associations.

The Survey

In 1999, a comprehensive survey was launched in order to obtain an updated evaluation of the sector. The survey's main objective was to obtain statistical information as well as to have essential indicators, such as value-added, to evaluate the industrial activity and to provide an evaluation of the business environment and main obstacles encountered by industrialists. A questionnaire form covering several areas was distributed to 3,000 industrialists.

The survey helped to analyze three major facets of the sector :

- Descriptive results pertaining to the location, legal form, year of establishment, operating surface area, as well as participation in

professional associations, training policy of the companies, waste management, and their adherence to new operating standards.

- Quantitative results that provided estimates of industrial value-added, volume of outputs, main operating expenses, number of employees, social security charges, investments, and total assets.
- Qualitative results were used to analyze the industrial business environment, and determine the main obstacles and problems in the sector, as well as the short-term plans of industrialists.

The findings helped to assess the current situation. However, the figures available are those that have been disclosed by the industrialists. They include some typical errors usually encountered in surveys, as well as errors due to the biased declarations of industrialists who are, for multiple reasons, often reluctant to disclose their real figures.

Other errors may be due to the lack of data availability to industrialists, especially in the smaller enterprises, or to confusion between dates, especially that the field survey was conducted between October 1999 and February 2000, and referred to 1998 results.

Finally, it is important to note that, given the scope and density of the data collected, some results should only be interpreted as indications of a trend. The data must be further filtered by means of more precise and targeted surveys.

Consultations with professionals and specialists

The field survey was meticulously organized with the support of German specialists from GTZ, and the collaboration of the Association of

Lebanese Industrialists, as well as several other professional and regional associations. Meetings were organized with industrialists in the various Lebanese regions. The questionnaire form was reviewed and amended according to remarks that were made by the industrialists and their representatives.

Validation of the findings

The survey's results were validated by an additional series of interviews with over 50 industrialists from major industrial branches and regions.

Workshops with industrialists on one hand, and seminars with specialists and economists on the

other, will allow the completion of the industrial strategic plan.

This process should be regularly updated over the next coming years, in collaboration with international organizations and especially with the cooperation of professional associations.

The industrial sector should be continuously monitored in order to collect and compile more accurate results and data, mainly through the adoption of specific indices and through more targeted and precise investigations. Special attention should be given to trend indicators and to projections related to industrial activities.

• • •

EXECUTIVE SUMMARY

The industrial survey covered 3,000 Lebanese industrial units and yielded figures pertaining to the quantitative and qualitative aspects of the Lebanese industry in 1998.

1998 survey results

The main findings resulting from the survey are summarized as follows:

Establishments by size and sector

- Lebanon has around 22,000 industrial establishments, almost 2% more than in 1994. This total excludes water, power, and construction activities.
- The Lebanese industrial sector is not very diversified. The bulk (i.e. 88.6%) of the industrial establishments belong to 8 major industrial branches:
 1. food and beverage (20.3%)
 2. metal products (16.1%)
 3. non-metallic products (11.5%)
 4. furniture and assimilated products (10.7%)
 5. clothing and fur (10.3%)
 6. wood products - excluding furniture (10.2%)
 7. leather and tanning (5.9%)
 8. textiles (3.7%)
- The bulk of industrial establishments are small units: the average number of workers (including owners) per company is 5.2 people in 1998.

Over 95% of the industrial enterprises employ less than 10 workers (owners included). Less than 1% of industrial firms have more than 100 workers.

The predominance of small firms is partly explained by the legal status of the industrial firms and their establishment date. In 1998, around 85% of industrial companies were individual companies. Around half of these companies were established after 1990.

Geographic distribution

- Industrial firms are geographically concentrated around the main urban areas, typically in the suburbs, where most of the large enterprises have located. 61% of the enterprises and 66% of the workers are concentrated in Beirut and Mount Lebanon. The establishments located in these zones constitute 74% of the total output and 61% of the investments made in 1998.

Workforce

- The permanent workforce in the industry in 1998 (owners and employees) represents around 114,000 people. Employees only represent 69% of this workforce. Seasonal workers (not included in the total workforce) represent 35% of the number of employees.

Economic slowdown has enticed many industrialists to lay off permanent workers, and rely on seasonal workers whenever the business required doing so. The costs related to seasonal workers are well below those related to permanent employees since seasonal workers do not benefit from any social contribution from their employers, nor do they have compensations, bonuses, or other privileges.

- Male workers represent 88% of total workforce whereas female workers represent only 12%. However, the survey's findings show that there is no gender discrimination

(based on the number of unpaid women) in the industrial sector.

Wages and salaries

- Total salaries reached USD637 million, out of which 77.3% are basic salaries to permanent employees, 10.7% are social contributions to the National Social Security Fund, 2.4% are private insurance charges, and 9.6% are seasonal wages.
- The average annual basic salary per employee is estimated at USD6,262. The average total annual salary per employee is estimated at USD7,325.
- On the average, wages are higher in the larger companies. Total salary per employee is the highest (USD11,072) in the companies with over 250 workers, and is the lowest in companies having between 5 and 9 workers (USD5,064). This can be partly explained by the fact that the larger companies usually hire more qualified people than the smaller ones.

Output

- Industrial output stood at USD3.95 billion. Besides, the industries benefited from additional non-industrial revenues (resale, services, storage of goods, leasing, financial income) that amounted to around 7% of industrial output.
- Average productivity per employee (measured by output / total workforce) is estimated at USD34,642. However, productivity improvements only offset part of the increase in salaries, thus limiting improvements in competitiveness.

Inputs

- Input expenditures stood at USD2.25 billion. The bulk of inputs are imported and are

levied with relatively high customs duties. Only a limited share of raw materials benefit from the minimum tariff set on inputs.

- More than 80% of the inputs consist of raw materials. Expenditures on energy (fuel, oil, and electric power) come second with around 8% of input expenditures. This is true although Lebanon does not have any heavy industries. Packaging expenses represent another 5% of input expenditures, mainly because the packaging industry itself imports the bulk of its raw materials. Besides, high quality and modern packaging materials are sometimes directly imported by industrialists.

Value-added

- Value-added totaled about USD1.7 billion in 1998. The ratio of value-added to output stood at 43.2% in 1998, limited by the importance of input expenditures. The Lebanese industry is a light processing industry with the bulk of inputs being imported and therefore subject to customs duties.
- Average value-added per worker stood at USD14,958.
- The breakdown of value-added in 1998 was estimated as follows:
 - Up to 37.4% of the value-added was used to remunerate workers (permanent, seasonal, and home workers), compared with 26.6% in 1994.
 - The depreciation of assets, estimated at around USD422 million in 1998, represents around 25% of the total value-added. Depreciation represents around 113% of industrial investment in 1998, due to the importance of this

type of investment during the 1995-1997 period.

- Interest charges related to industrial credits from banks are estimated at USD200 million in 1998. Interest charges are estimated to amount to 11.7% of total value-added.
- Interest charges on informal credits are estimated at USD30 million, thus 1.7% of value-added.
- The implicit cost of leasing is estimated at USD90 million, based on 4.5 million square meters of built industrial space. Costs relative to leasing industrial space therefore represents 5.3% of value-added.

Investment and Assets

- Investment reached USD373.4 million in 1998. Distribution of total industrial investment by type of asset for 1998 shows that almost 51% of investments are made in machinery, and around 25% in land and buildings. The unavailability of land or built areas for leasing or of cheap industrial space within organized industrial zones, forces industrialists to purchase or build their own production space.
- In 1988, total assets stood at USD3.88 billion. Industrial investment made in 1998 represented 9.6% of these total assets.

Earnings

- Earnings before taxes are estimated to stand at USD324 million in 1998. This would represent a gross return on capital of 8.3%. An estimated USD60 million in non-industrial income should be added to these profits.

The main results of the opinion poll are summarized as follows:

In response to questions about the difficulties of the business environment, Lebanese industrialists pointed problems out that hinder industrial development. Most of these problems relate to:

- public sector decisions : complicated legal procedures, restricting regulations, high level of taxes and social security charges
- inexistence of structured industrial zones, infrastructure problems, etc.
- operating expenses: high rents, cost of energy, penalizing customs tariffs, etc.
- marketing problems : foreign competition on domestic and international markets, lack of information, etc.
- financial issues : a high level of interest rates, limited access to funding from banks, scarcity of long term financing and of leasing, lack of collateral, etc.

Concerning future prospects, the industrialists seemed to be little optimistic, and the majority declared they would refrain from investing or recruiting over the coming months. Their expectations as to increase in sales or exports are rather negative in the short run.

Based on the total sample of companies, survey results show the following ranking of the 10 most important difficulties encountered by the industries :

1. level of interest rates
2. regional competition on the local market
3. access to long term loans
4. cost of electricity
5. high level of social contributions
6. international competition on the local market

7. access to short term loans
8. lack of collateral or guarantees
9. access to leasing
10. high level of customs duties.

Comparison with 1994 results

- The number of industrial establishments rose by 2% between 1994 and 1998.
- The average size employment of the firm decreased from 6.4 workers in 1994 to 5.2 in 1998.
- There was an 18% decrease in the permanent workforce employed in the industry between 1994 and 1998. The share of employees in the workforce stands at 69% in 1998, compared to 75% in 1994. Seasonal workers represent 35% of the number of employees in 1998, compared to 29% in 1994.

Economic slowdown, layoffs, and a shift towards seasonal workers who are less costly to the industry are the main reasons behind the shrinking of the permanent workforce.

- The average annual basic salary per employee is estimated at USD6,262 in 1998 compared with USD3,601 in 1994, which represents an increase of 74%. The average total annual salary per employee is estimated at USD7,325 in 1998, compared to USD4,202 in 1994. Salary adjustments during the period, and a smaller number of employees per company explain the rise in workers' remunerations.
- Industrial output rose 11.5% between 1994 and 1998, reaching USD3.95 billion in 1998.
- Industrial output evolved differently according to the industrial branch. The metal and non-metallic products industries, as well

as the food and beverage industry showed the most important increases in output as compared to 1994 survey results. Actually, those are the sectors that have developed particularly over the past years, under the impetus of the national reconstruction effort, and because of the promising potential of exporting and diversification.

- Average productivity per employee (measured by output / total workforce) reflected a 36% increase, from USD25,483 in 1994 to USD34,642 in 1998.
- Input expenditures increased at a higher rate than output. Industrial expenses increased from USD1.84 billion in 1994 to USD2.25 billion in 1998, i.e. a 22% increase. This rise is mainly explained by the high customs duties on the different industrial inputs (raw materials, packaging material, spare parts, etc.), the bulk of which is imported.
- Despite an 11.5% increase in output, value-added did not change significantly compared to 1994 survey results (around USD1.7 billion).

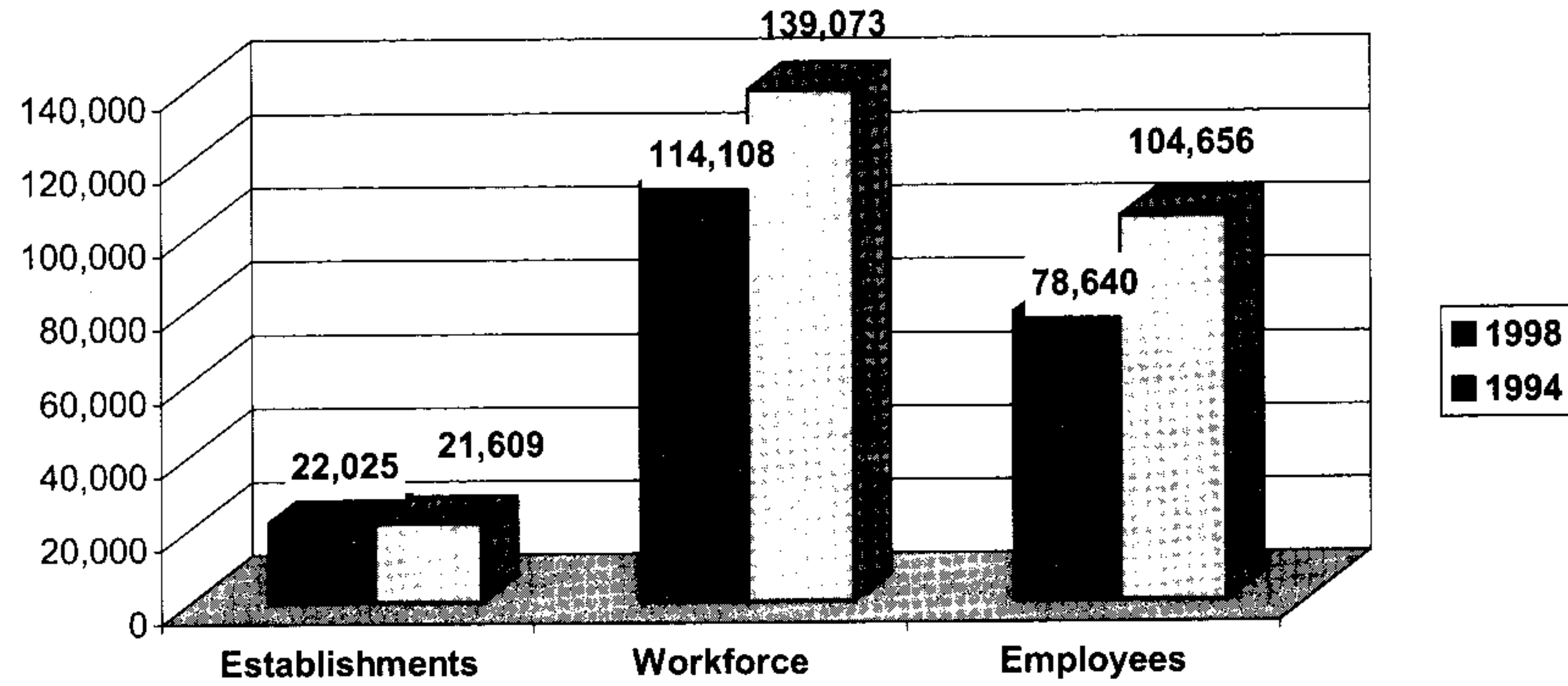
The ratio of value-added to output fell from 48.1% in 1994 to 43.2% in 1998. This regression is mainly the result of the increase in input expenditures.

- Value-added by worker improved by 22% between 1994 and 1998 : average value-added by worker rose from USD12,249 to USD14,958.
- Investment reached USD373.4 million in 1998, compared with USD192.2 million in 1994. Industrial investment in between these two dates is believed to have been significantly higher. Indeed, the increase in

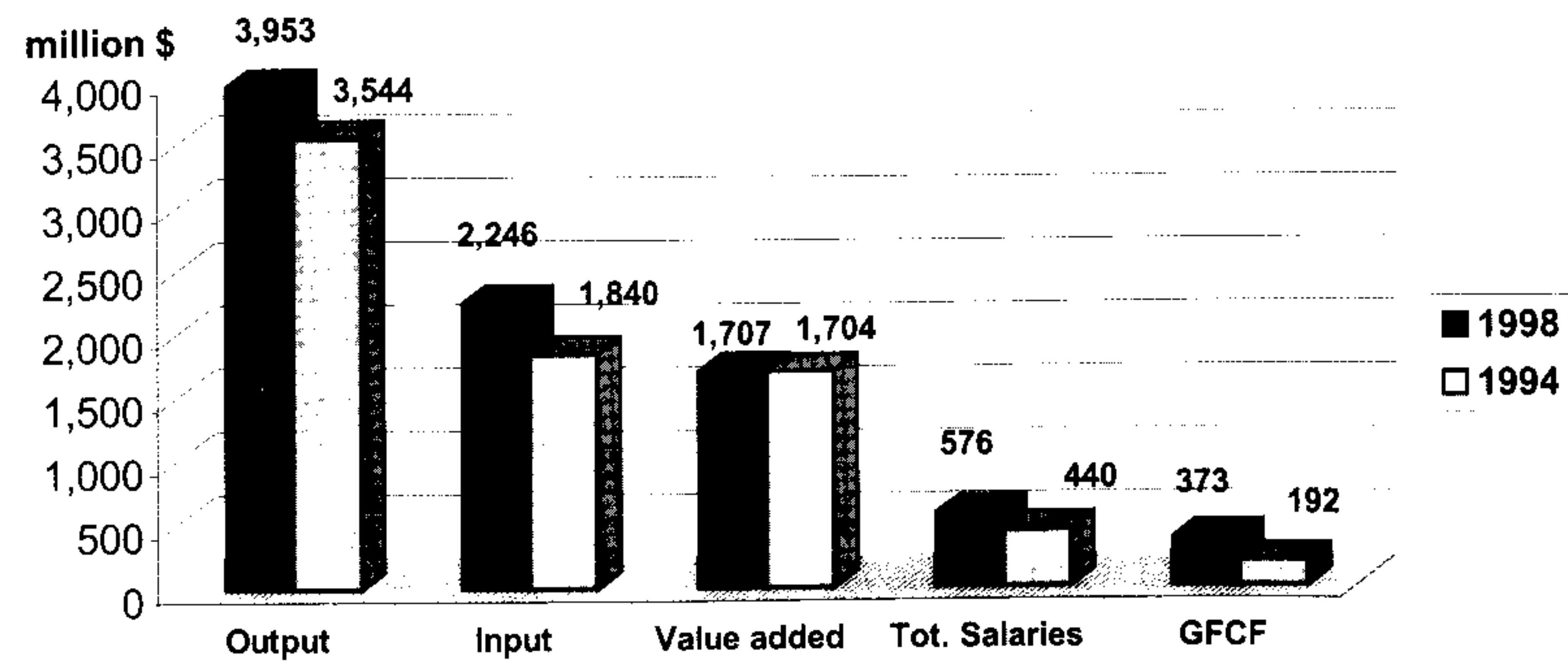
industrial investments started in 1993, but slightly slowed down in 1998.

- Investment per worker increased from USD1,382 in 1994 to USD3,272 in 1998.

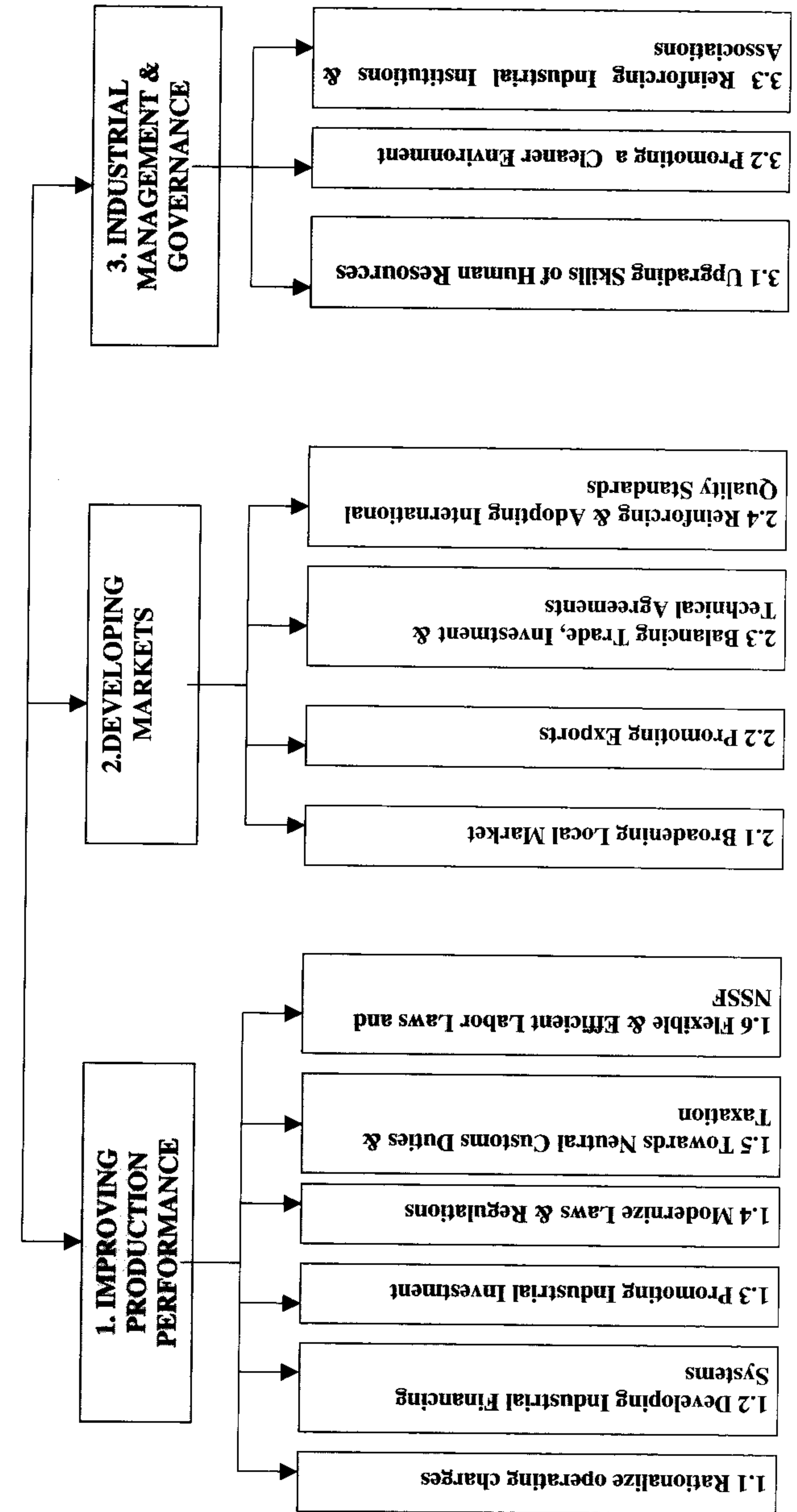
Evolution of Establishments, workforce & employees between 1994 & 1998



Evolution of output, input, value added, salaries & GFCF between 1994 & 1998



INDUSTRIAL DEVELOPMENT PROGRAM



Main Indicators of the Industrial Sector by Branch of Activity

Branch	Number of establishments		Total workforce		Number of employees		Total salaries ('000 US\$)		Output ('000 US\$)		Value-added ('000 US\$)		Investment (GFCF) ('000 US\$)	
	1998	% of total	1998	% of total	1998	% of total	1998	% of total	1998	% of total	1998	% of total	1998	% of total
Food & Beverage	4,480	20.3%	26,390	23.1%	18,344	23.3%	136,286	23.7%	1,011,313	25.6%	432,796	25.4%	147,988	39.6%
Metal products	3,553	16.1%	14,492	12.7%	9,342	11.9%	65,996	11.5%	454,976	11.5%	185,168	10.8%	26,190	7.0%
Non-metallic products (glass, ceramic etc.)	2,530	11.5%	13,367	11.7%	10,045	12.8%	72,065	12.5%	552,374	14.0%	262,397	15.4%	79,906	21.4%
Furniture & other products	2,352	10.7%	11,068	9.7%	7,512	9.6%	50,895	8.8%	327,890	8.3%	159,026	9.3%	13,101	3.5%
Clothing	2,262	10.3%	10,562	9.3%	6,654	8.5%	38,939	6.8%	212,026	5.4%	91,497	5.4%	4,391	1.2%
Wood products (except furniture)	2,246	10.2%	6,933	6.1%	3,490	4.4%	20,087	3.5%	112,926	2.9%	52,860	3.1%	925	0.2%
Leather & Tanning	1,291	5.9%	6,482	5.7%	4,212	5.4%	34,672	6.0%	111,012	2.8%	45,113	2.6%	5,296	1.4%
Manufacture of textiles	804	3.7%	3,671	3.2%	2,207	2.8%	14,526	2.5%	100,874	2.6%	41,078	2.4%	3,339	0.9%
Other branches	2,507	11.4%	21,143	18.5%	16,834	21.4%	142,558	24.7%	1,069,519	27.1%	436,874	25.6%	92,270	24.7%
Total	22,025	100.0%	114,108	100.0%	78,640	100.0%	576,034	100.0%	3,952,910	100.0%	1,706,809	100.0%	373,406	100.0%

Main Indicators of the Industrial Sector by Branch of Activity

Branch	Total assets ('000 US\$)		Depreciation ('000 US\$)		Total salaries in % of value-added		Value-added in % of production		Employees in % of workforce		Average workforce per establish.		Output per workforce in US\$		Value-added per workforce in US\$		Salary per employee in US\$	
	1998	% of total	1998	% of total	1998	% of total	1998	% of total	1998	% of total	1998	% of total	1998	% of total	1998	% of total	1998	% of total
Food & Beverage	1,022,202	26.3%	90,971	21.5%	31.5	42.8	69.5	5.9	38,322	5.9	16,400	7,429	16,400	7,429				
Metal products	565,899	14.6%	37,315	8.8%	35.6	40.7	64.5	4.1	31,395	4.1	12,777	7,064	12,777	7,064				
Non-metallic products (glass, ceramic etc.)	752,257	19.4%	86,839	20.6%	27.5	47.5	75.1	5.3	41,324	5.3	19,630	7,174	19,630	7,174				
Furniture & other products	272,002	7.0%	26,006	6.2%	32.0	48.5	67.9	4.7	29,625	4.7	14,368	6,775	14,368	6,775				
Clothing	136,223	3.5%	10,623	2.5%	42.6	43.2	63.0	4.7	20,074	4.7	8,663	5,852	8,663	5,852				
Wood products (except furniture)	123,057	3.2%	12,004	2.8%	38.0	46.8	50.3	3.1	16,288	3.1	7,624	5,756	7,624	5,756				
Leather & Tanning	80,901	2.1%	9,098	2.2%	76.9	40.6	65.0	5.0	17,126	5.0	6,960	8,232	6,960	8,232				
Manufacture of textiles	85,853	2.2%	9,590	2.3%	35.4	40.7	60.1	4.6	27,479	4.6	11,190	6,582	11,190	6,582				
Other branches	841,763	21.7%	140,120	33.2%	32.6	40.8	79.6	8.4	50,585	8.4	20,663	8,468	20,663	8,468				
Total	3,886,157	100.0%	472,566	100.0%	33.7	43.2	68.9	5.2	34,642	5.2	14,958	7,325	14,958	7,325				

Main Industrial Indicators by Establishment' Size

Class	Nb of establishments	Workforce	Nb of employees	Total salaries 000\$	Output 000\$	Input 000\$	Value Added 000\$	G.F.C.F.* 000\$	Total assets 000\$	Depreciation 000\$	VA / Output	G.F.C.F. / Worker
Total 1998	22,025	114,108	78,640	576,024	3,952,910	2,246,101	1,706,809	373,406	3,880,157	422,565	43.2%	3,272
class1 1998	16,223	43,744	20,779	163,539	806,334	459,077	347,257	88,192	1,096,294	65,780	43.1%	2,016
in% 1998	73.7%	38.3%	26.4%	28.4%	20.4%	20.4%	20.3%	23.6%	28.3%	15.6%		
class2 1998	4,738	30,824	21,154	107,124	753,193	449,121	304,072	29,756	588,865	60,945	40.4%	965
in% 1998	21.5%	27.0%	26.9%	18.6%	19.1%	20.0%	17.8%	8.0%	15.2%	14.4%		
class3 1998	619	8,122	6,396	35,020	332,065	197,131	134,934	12,866	342,557	35,856	40.6%	1,584
in% 1998	2.8%	7.1%	8.1%	6.1%	8.4%	8.8%	7.9%	3.4%	8.8%	8.5%		
class4 1998	220	5,563	4,979	31,464	326,068	176,407	149,661	13,109	318,118	38,754	45.9%	2,356
in% 1998	1.0%	4.9%	6.3%	5.5%	8.2%	7.9%	8.8%	3.5%	8.2%	9.2%		
class5 1998	81	3,310	3,111	20,366	200,808	104,627	96,181	44,584	165,164	21,011	47.9%	13,469
in% 1998	0.4%	2.9%	4.0%	3.5%	5.1%	4.7%	5.6%	11.9%	4.3%	5.0%		
class6 1998	77	5,389	5,234	42,937	474,414	276,858	197,556	24,944	315,665	48,381	41.6%	4,629
in% 1998	0.3%	4.7%	6.7%	7.5%	12.0%	12.3%	11.6%	6.7%	8.1%	11.4%		
class7 1998	47	6,418	6,335	57,638	358,890	209,986	148,904	44,755	310,467	56,429	41.5%	6,973
in% 1998	0.2%	5.6%	8.1%	10.0%	9.1%	9.3%	8.7%	12.0%	8.0%	13.4%		
class8 1998	20	10,738	10,652	117,935	701,137	372,895	328,242	115,200	743,027	95,410	46.8%	10,728
in% 1998	0.1%	9.4%	13.5%	20.5%	17.7%	16.6%	19.2%	30.9%	19.1%	22.6%		

* G.F.C.F. = Gross Fixed Capital Formation

Main Economic Indicators in the Lebanese Industry by Region
(value in 000\$)

Region	Nb of Establishments	Workforce	Nb of Employees	Wages & Salaries	Output	Value added	G.F.C.F.
Beirut %	2,547 11.6%	11,218 9.8%	7,059 9.0%	38,254 7.8%	435,453 11.0%	160,572 9.4%	67,186 18.0%
Mount Lebanon %	11,011 50.0%	64,087 56.2%	46,270 58.8%	281,168 57.1%	2,476,759 62.7%	1,052,041 61.6%	159,358 42.7%
North Lebanon %	3,865 17.5%	17,062 15.0%	12,334 15.7%	123,552 25.1%	541,977 13.7%	281,484 16.5%	20,137 5.4%
Bekaa %	2,250 10.2%	12,195 10.7%	7,460 9.5%	28,000 5.7%	321,153 8.1%	144,117 8.4%	100,854 27.0%
South Lebanon %	1,641 7.5%	6,768 5.9%	3,911 5.0%	15,329 3.1%	142,949 3.6%	53,266 3.1%	24,994 6.7%
Nabatiyeh %	712 3.2%	2,778 2.4%	1,606 2.0%	6,117 1.2%	34,619 0.9%	15,329 0.9%	877 0.2%
Total	22,025	114,108	78,640	492,420	3,952,910	1,706,809	373,406

Main Industrial Ratios by Sector

Ratios	Food & Beverage	Metal products	Non-metallic products (glass, ceramic etc.)	Furniture & other products	Clothing	Wood products (except furniture)	Leather & Tanning	Manufacture of textiles	Other branches	Total
Output / Worker (in USD)	38,322	31,395	41,324	29,625	20,074	16,288	17,126	27,479	50,585	34,642
Output / Assets	98.9%	80.4%	73.4%	120.5%	155.6%	91.8%	137.2%	117.5%	127.1%	101.9%
Value-added / Worker (in USD)	16,400	12,777	19,630	14,368	8,663	7,624	6,960	11,190	20,663	14,958
Value-added / Assets	42.3%	32.7%	34.9%	58.5%	67.2%	43.0%	55.8%	47.8%	51.9%	44.0%
Value-added / Output	42.8%	40.7%	47.5%	48.5%	43.2%	46.8%	40.6%	40.7%	40.8%	43.2%
Assets / Worker (in USD)	38,734	39,049	56,277	24,576	12,897	17,749	12,481	23,387	39,813	34,004
GFCF / Worker (in USD)	5,608	1,807	5,978	1,184	416	133	817	910	4,364	3,272
GFCF / Assets	14.5%	4.6%	10.6%	4.8%	3.2%	0.8%	6.5%	3.9%	11.0%	9.6%
Depreciation / Assets	8.9%	6.6%	11.5%	9.6%	7.8%	9.8%	11.2%	11.2%	16.6%	10.9%
Depreciation / Value-added	21.0%	20.2%	33.1%	16.4%	11.6%	22.7%	20.2%	23.3%	32.1%	24.8%
Input / Worker (in USD)	21,922	18,618	21,693	15,257	11,412	8,664	10,166	16,289	29,922	19,684
Raw materials / Total inputs	80.4%	90.7%	53.3%	86.2%	84.3%	81.1%	85.8%	79.8%	87.3%	80.9%
Energy expenditures / Total inputs	3.5%	5.4%	24.6%	4.2%	4.4%	7.6%	4.8%	5.6%	6.6%	7.6%
Total salaries / Value-added	31.5%	35.6%	27.5%	32.0%	42.6%	38.0%	76.9%	35.4%	32.6%	33.7%
Total salaries / Assets	13.3%	11.7%	9.6%	18.7%	28.6%	16.3%	42.9%	16.9%	16.9%	14.8%
Total salaries / Output	13.5%	14.5%	13.0%	15.5%	18.4%	17.8%	31.2%	14.4%	13.3%	14.6%
Employees / Workforce	69.5%	64.5%	75.1%	67.9%	63.0%	50.3%	65.0%	60.1%	79.6%	68.9%
Average workforce per establishment	5.9	4.1	5.3	4.7	4.7	3.1	5.0	4.6	8.4	5.2
Average salary per employee in US\$	7,429	7,064	7,174	6,775	5,852	5,756	8,232	6,582	8,468	7,325

GFCF: Gross Fixed Capital Formation

Main Industrial Ratios by Size of Establishment

Ratios	No. of workers								Total
	class 1 1 to 4	class 2 5 to 9	class 3 10 to 19	class 4 20 to 34	class 5 35 to 49	class 6 50 to 99	class 7 100 to 250	class 8 over 250	
Output / Worker (in USD)	18,433	24,435	40,885	58,614	60,667	88,034	55,919	65,295	34,642
Output / Assets	73.6%	127.9%	96.9%	102.5%	121.6%	150.3%	115.6%	94.4%	101.9%
Value-added / Worker (in USD)	7,938	9,865	16,613	26,903	29,058	36,659	23,201	30,568	14,958
Value-added / Assets	31.7%	51.6%	39.4%	47.0%	58.2%	62.6%	48.0%	44.2%	44.0%
Value-added / Output	43.1%	40.4%	40.6%	45.9%	47.9%	41.6%	41.5%	46.8%	43.2%
Assets / Worker (in USD)	25,062	19,104	42,176	57,185	49,898	58,576	48,374	69,196	34,004
GFCF / Worker (in USD)	2,016	965	1,584	2,356	13,469	4,629	6,973	10,728	3,272
GFCF / Assets	8.0%	5.1%	3.8%	4.1%	27.0%	7.9%	14.4%	15.5%	9.6%
Depreciation / Assets	6.0%	10.3%	10.5%	12.2%	12.7%	15.3%	18.2%	12.8%	10.9%
Depreciation / Value-added	18.9%	20.0%	26.6%	25.9%	21.8%	24.5%	37.9%	29.1%	24.8%
Input / Worker (in USD)	10,495	14,570	24,271	31,711	31,609	51,375	32,718	34,727	19,684
Total salaries / Value-added	47.1%	35.2%	26.0%	21.0%	21.2%	21.7%	38.7%	35.9%	33.7%
Total salaries / Assets	14.9%	18.2%	10.2%	9.9%	12.3%	13.6%	18.6%	15.9%	14.8%
Total salaries / Output	20.3%	14.2%	10.5%	9.6%	10.1%	9.1%	16.1%	16.8%	14.6%
Employees / Workforce	47.5%	68.6%	78.7%	89.5%	94.0%	97.1%	98.7%	99.2%	68.9%
Average salary per employee in US\$	7,870	5,064	5,475	6,319	6,546	8,203	9,098	11,072	7,325

census has proved that the companies in the sector encounter a great range of difficulties on a daily basis.

Impediments are numerous, but the census shows that a large share of hindrances encountered by the private industrial companies are related to inefficiency of public sector policy and to the system's complexity.

Besides having to put up with the system, industrial companies also have to deal with problems that are more directly related to the sector's performance :

- operating problems (operating costs, weak productivity, unavailability of adequate infrastructure, maintenance,...)
- financial problems (availability and cost of financing, lack of collateral,...)
- problems related to human resources (scarcity of qualified labor, poor training system, ...)
- problems related to competition on the domestic and foreign markets (threat of liberalization, weakness of standardization, necessity of joining the WTO and other partnerships, weak interest on behalf of foreign investors, ...).

The industrial census has enabled a precise identification of the specific problems and impediments encountered by the country's industrialists. Analysis of the results according to the size of the companies and their activity should provide the bases for setting up specific and targeted policies or actions that would help relieve the sector from several bottlenecks and allow improvement and growth.

4.2 Public sector policy and the investment environment

Industrial performance and the sector's growth are highly reliant on the efficiency of the business environment and the suitability of public policy. Although some governmental actions of the post-war period (mainly infrastructure rehabilitation) did have a favorable impact on the business environment, some of the difficulties encountered by the industrialists seem to arise from new measures taken by the government, or from the inertia of the authorities with regard to certain issues.

4.3 Legal framework and administrative procedures

Enterprises encounter legal and procedural difficulties at the time of setting up the company as well as during operation. Administrative delays, numerous complicated official procedures related to the company status, start-up costs, etc. are all elements that slow down the process of a company's setting up and complicate everyday business for industrialists.

On the average, degrees of difficulty related to these issues vary between 2.41 and 2.59 : legal and administrative intricacy related to the setting up of the companies and their operations do not seem to be among the major difficulties described by industrialists, whatever the size of the company and the field it operates in.

4.4 Customs and taxes

- Customs duties in Lebanon remain relatively high (sometimes even on industrial inputs) despite the partial alleviation that took place in 1999. The

high level of customs duties has an average degree of difficulty of 3.47 across the industrial sector, thus representing a relatively important problem for the companies.

- Besides implying important expenditure for stocking the goods until clearance, customs procedures involve a great deal of scrutiny in control, and hence delays and additional costs. Complicated customs operations and customs procedures and regulations have, respectively in the total sample, a 3.07 and 3.04 degree of difficulty.
- The high level of taxes has an average degree of difficulty of 3.41 (significant problem) when all the sample is taken into consideration.

4.5 The Social Security system

The Social Security system is a highly problematic issue for the industry. Overall, contributions, mainly the share borne by the employers, are found to be excessively high whereas the quantity and quality of services that the beneficiaries are entitled to are far from satisfactory.

Average degrees of difficulty in this field are practically all above 3, indicating significant negative impact on the sector.

- For the total sample, a weight of 3.87 was attributed to the level of social security contributions that is perceived as being too high. The insufficiency of the coverage obtained an average weight of 3.09.

- The most important problem related to the Social Security system concerns the insurance related to retirement : the end of service indemnity system. Employers regularly have to pay huge additional retirement compensations in cash to the retirees. The average degree of difficulty attributed to this financial burden reaches 3.14.
- Recuperating social benefits is costly (3.06 in the total sample). Employers also appear to be finding difficulties in obtaining information related the social security - for instance, they have to go through tedious procedures in order to obtain quietuses : degree of difficulty 2.84.

4.6 Environmental issues

4.6.1 Zoning

Although the Lebanese government has shown interest in environmental protection, and a few laws were passed with regard to this issue, public projects relating to the setup of classified industrial zones with adequate infrastructure and cheap land plots have encountered implementation problems and very little was done on this level by the authorities.

- In the total sample of industries, the non existence of organized and equipped industrial zones came in 15th position with a 3.39 degree of difficulty.
- The high cost of land is weighted by a degree of difficulty of 3.43.

4.6.2 Environment friendly production

The role of the public sector with regard to quality control in general, and environmental protection in particular, is still very weak : very few laws and regulations exist in the field, and their enforcement is ineffective.

- Environmental issues do not seem to be of major concern to industrialists. Pollution control and environmental regulations appear at the lower end of the classification of the problems encountered by the industries, with 1.78 and 1.94 degrees of difficulty respectively.
- When questioned about 'clean' or environment friendly production, only 64% (1425 companies) of those questioned declared knowing about it, and 1157 companies said they were planning to invest in environment friendly production facilities.

4.7 Operating

Satisfactory operation of industrial companies is related to the company itself as well as to the environment it operates in. The opinion survey indicates that the availability of certain infrastructures and services is less problematic to industrialists than the costs of operation. High operating costs and overheads clearly weigh heavily on the efficiency of the companies and their productivity standards.

4.7.1 Availability of infrastructure and essential services

Although no ideal pre-equipped industrial zones have been set up to facilitate the setting up and operating of local industries', the survey shows

that existing companies do not encounter major difficulties concerning the availability of basic infrastructure and services.

- The availability of water and sewer networks and electricity supply seem to constitute the two main infrastructure problems for the sample as a whole. Their respective degrees of difficulty in the total sample are of 3.05 and 2.86, indicating relatively high difficulty for such basic facilities.
- For the medium-sized and large companies, the cost of electrical power constitutes the most important problem they face (respectively 4.22 and 4.43), while it comes in seventh position for the small companies (3.75).
- Other public and private services have been cited by industrialists as having a slightly lower than average impact on their operations (degrees of difficulty varying between 1.9 and 2.4). Such elements include the availability of transport and transit services, communication services, production space, post and courier services, and maintenance services.

4.7.2 Operating costs

More importantly than the availability and the access to infrastructure and services required by operations, is the cost of this access that appears to be the main problem for the industries.

- On top of the list, we find the cost of electrical power. In the total sample of companies, the degree of difficulty attributed to this element is of 3.93, a relatively high indicator of difficulty that puts the cost of power 4th on the list of the

most problematic issues for industrialists overall. When observed individually, the most important types of industries in Lebanon have all classified electricity costs as one of the top ten difficulties that they encounter.

- Other types of costs affecting operations and having a relatively high degree of difficulty in the total sample of companies are : the cost of energy products besides power (3.46), the high price of land (3.43), the cost of equipment (3.25), the cost of maintenance (2.99), and the cost of production space (2.90).

4.7.3 Price of land

Besides the importance of energy costs, the high price of land (degree of difficulty 3.43 in the total sample) seems to be a crucial issue when it comes to measuring operating problems across all the industrial activities.

- The non availability of cheap land within organized industrial zones forces industrialists to locate their industries in areas where land is relatively expensive. Leasing is practically non available and industrialists are generally obliged to acquire property before starting operations.
- In order to benefit from more or less advanced infrastructure and quality services, industries try to locate as near as possible to urban areas, mainly Beirut. This proximity highly impacts their costs.

4.7.4 Productivity

Lebanon's industrial sector suffers from overall poor competitiveness and low productivity levels.

However, the opinion poll shows that industrialists on the average only attribute a 2.57 degree of difficulty to problems related to productivity, placing them in 39th position in the ranking based on the total sample.

This attitude can be justified by the fact that the respondents reckon that they do not face major difficulties that are directly related to the productivity in the firm. However, answers on the high importance of problems related to costs and the availability of certain products and services essential to operations confirm the obvious negative impact of these difficulties on overall industrial productivity.

4.8 Financing

The opinion poll clearly shows that problems related to financing are by far the most important hindrances to industrial development. All five types of financing problems inquired about in the opinion poll belong to the top ten problems encountered by the industry as a whole.

The findings of the poll point out that, although problems related to financing rank among the most important problems in small, medium-sized and large enterprises, the degree of difficulty is inversely related to the size of the company. Thus, small companies are impacted to a larger extent by the access to and the cost of financing than larger enterprises.

In all cases, we notice that, even for the larger companies, providing collateral and access to loans is relatively problematic, given that all the degrees of difficulty associated to financing are above the 2.9 level (higher than average difficulty).

4.8.1 Interest rates

The high level of interest rates, and hence the cost of financing, is the most important problem encountered by Lebanese industries. The degree of difficulty attributed to the problem of interest rates, on the average, across activities and whatever the company size, is of 4.16.

When company size is considered, the degree of difficulty relevant to the level of interest rates ranges from 4.04 to 4.17, respectively for large companies and small ones.

4.8.2 Access to loans

The survey shows that long term loans are less easily accessible than short term loans, although access to both types of loans is quite problematic on the average.

- Access to long term loans is the third most important problem encountered by industrial companies overall. It has a 4.05 degree of difficulty in the total sample, but difficulty reaches 4.13 (important problems) for the companies having less than 10 employees. The sample of large companies has led to an average of difficulty of 3.39 (relatively difficult).
- Short term loans are easier to access, and they represent the seventh most important problem when all the companies are considered. On the average, the degree of difficulty to access short term loans is 3.84 (relatively difficult), with the small enterprises encountering more difficulty than the larger ones (respectively 4.01 and 2.99).

4.8.3 Collateral

Access to loans, mainly bank loans, generally requires collateral. Small enterprises encounter more difficulty than the larger ones in providing this collateral. On the average, the supply of collateral or guarantees is weighted by a 3.73 degree of difficulty. This difficulty represents 3.90 for the small enterprises and 2.95 for the large ones.

4.8.4 Leasing

The number of respondents to the question related to the access to leasing was smaller than that of the other questions. Some companies are probably not aware of leasing procedures, or have never envisaged resorting to leasing as a way to finance their investments.

In the overall sample, the average degree of difficulty for accessing leasing is 3.60.

4.9 Human resources

Problems related to human resources involve the availability, the quality and the cost of labor.

4.9.1 Availability of qualified labor and training

The availability of qualified labor does not seem to be a major problem for industrial companies operating in Lebanon. On the average, the degree of difficulty attributed to finding qualified labor is 2.40.

- The results show that the degree of difficulty in finding qualified labor for large companies is higher than that for small companies (respectively 3.02 and 2.15). This is probably because smaller

companies usually have less need for qualified labor.

- Training is also moderately problematic when all the sample is taken into consideration; the degree of difficulty stands at 2.39. Again, training presents a higher degree of difficulty in large companies than in the smaller ones, probably because the larger companies give greater importance to training their staff.
- 1033 respondents declared that the availability of qualified labor or training was a serious or major problem for them. 49.7% of these respondents were small companies, 40.7% were medium-sized companies, and 9.5% were large companies.

4.9.2 Cost of labor

- In the total sample, the cost of qualified labor has a degree of difficulty of 3.14, and it reaches 3.60 for the larger companies.
- The cost of unqualified labor has a much lower degree of difficulty according to the industries, with a very moderate average degree of 2.18.
- Like the cost of qualified labor, the degree of difficulty represented by the cost of unqualified labor increases when the size of the company is bigger.

4.9.3 Required skills by profession (see Table III-3)

The companies that have found serious or major difficulties relating to the availability of qualified labor or the training of their staff were asked to specify their needs for qualified labor.

- 27.6% of the respondents declared needing qualified labor in the field of industrial mechanics. Industrial automation came next with 15.9% of the answers. The need for skills in technical information, woodwork, and machinery and metal industries came next with respectively 13.4% of the answers, 12.7%, and 11.9%.
- The skills that are most required by the large companies are : industrial mechanics (43.4% of the large companies that answered), electronics (31.3%), industrial automation (21.2%), technical information (19.2%), machinery and metal (15.2%).
- The skills that are most required by the medium-sized companies are : industrial mechanics (34.0% of the medium-sized companies that answered), industrial automation (16.9%), technical information (15.2%), machinery and metal (11.4%), electronics (10.5%),
- The skills that are most required by the small companies are : industrial mechanics (19.3% of the small companies that answered), woodwork (17.7%), industrial automation (14.0%), machinery and metal (11.7%), technical information (10.7%),

4.10 Competition and competitiveness

- Competition from regional and international companies on the domestic market are ranked second and sixth most important difficulties encountered in general by the industrial companies operating in Lebanon. The relevant degrees of difficulty are respectively 4.09 and 3.85 for the entire sample of companies.

- Competition on the domestic market, whether regional or international, seems to be more problematic for the smaller enterprises for which the degrees of difficulty are respectively 4.15 and 3.85, whereas they reach lower standards for the large companies, with 3.73 and 3.71 respectively.
- The evaluation of Lebanese products' competitiveness on foreign markets can be represented by :
 - the importance of the costs of exports : on the average, the degree of difficulty is of 3.42, therefore relatively high, but not critical. This difficulty is higher for the larger enterprises, reaching 3.85 for large companies.
 - tariff and institutional barriers on regional markets : their degrees of difficulty are respectively 3.28 and 3.24 on the average. Tariffs and institutional barriers also represent higher difficulties for the larger companies, probably because they export bigger quantities, more often, and to more markets than the smaller companies.
 - access to information on regional markets : on the average, access to such information represents a 3.27 degree of difficulty, hence a relatively important problem for firms.
 - access to market and technical information : although they are weighted by fair degrees of difficulty (respectively 2.82 and 2.61 in the total sample), access to market and technical information represent significant problems especially to large companies for which the

respective degrees of difficulty are 3.37 and 3.14.

4.11 Business environment : prospects for the following year

(see Table III-4)

New investment

The largest share of companies (49% of the total sample) declared they were not planning to invest in new equipment over the following year. 29% said they would. 14% were uncertain about what they would do.

Considering the size of the companies, the large companies gave the highest share of 'yes' (53% of the large companies) while the small companies gave the highest share of 'no' (52% of the small companies).

Changes in the production lines

52% of the companies in the total sample answered that they were not planning to change or discontinue, partially or totally, production lines. 18% of the companies said they were planning to implement such changes. 20% were uncertain.

Medium-sized companies have the biggest share of 'yes' (22%) answers while the largest companies have the biggest share of 'no' answers (73%).

Employment

Hiring new employees

63% of all respondents declared they were not planning to hire. 12% said they were planning to, and 17% said they were uncertain.

Within categories, the highest share of companies planning to hire was that of large companies (30%), whereas 64% of small and medium companies are planning not to hire.

Layoffs

In the entire sample, 20% said they were planning to lay off employees, 43% said they weren't, while 23% said they didn't know yet.

Medium-sized enterprises have the highest share of companies planning to lay off employees (28%) and large companies have the highest share of companies not planning to do so (46%).

Turnover

Expected increase in turnover

49% of total respondents said 'no', 15% said 'yes', and 24% were uncertain.

The biggest share of companies expecting an increase in turnover is within the category of large enterprises, with 35% of 'yes' answers. Medium-sized enterprises are those that are the least expecting increases in turnover with 52% of 'no' answers.

Expected decrease in turnover

41% of all respondents expect a decrease in their turnover while only 19% do not, and 26% are still uncertain about the evolution of their turnover.

Among categories, medium-sized companies have the biggest share of companies expecting a decrease (44%) while the large companies are those the least expecting a decrease (38% of 'no' answers).

Exports

Expected exports to new markets

Only 8% of the companies questioned declared expecting to export to new markets. 34% said they were not expecting this. 15% were uncertain and 43% did not answer the question.

39% of large companies are expecting to export to new markets over the coming year, while this proportion among small companies only represents 3%. Medium-sized companies are those the least expecting to export to new markets, with 42% of 'no' answers.

Expected decrease of exports

48% of the companies questioned did not answer this question. 19% said 'yes', 17% said 'no', and 16% declared being uncertain.

Large companies have the highest share of respondents (42%) who are not expecting a decrease of their exports. Medium-sized companies have the highest share of respondents (24%) who are expecting a decrease of their exports. 57% of small companies who were questioned did not answer.

Environment friendly production

The companies were asked if they knew about environment friendly production methods, and if they were planning to invest in such methods. 64% of the respondents declared knowing about clean production, 14% said they did not, 14% did not answer the question and 8% said they were uncertain if they knew what clean production was.

The category of large companies had the highest share of respondents who knew what clean

production was (78%). This share only amounted to 60% among small companies. 14% of small and medium-sized companies declared not knowing about clean production.

Among those companies that knew what environment friendly production was, 60% said they were planning to invest in it, 12% said they

were not, and 11% were uncertain. Within categories, the large companies have the biggest share of companies planning to invest in clean production (70%) while the biggest share of companies not willing to invest in clean production belongs to the medium-sized category (15%)

• • •

APPENDIX I

GENERAL FEATURES

كلمة الوزير

يسر وزارة الصناعة في الجمهورية اللبنانية ان تقدم النتائج النهائية للجزء الاول من المسح الصناعي ١٩٩٨-١٩٩٩ الذي يحتوي على دراسات كمية ونوعية وكذلك على عرض لواقع القطاع الصناعي في لبنان .

وقد اطلقت وزارة الصناعة هذا المشروع بمساعدة تقنية ومالية من جمهورية المانيا الاتحادية ممثلة بالمؤسسة الالمانية للتعاون التقني (GTZ) . وأود هنا ان أشكرهم لهذه المساعدة ولتعاونهم المتواصل في تحديث القطاع الصناعي في لبنان .

كذلك أعتنم هذه الفرصة لاعبر عن كامل تقديري للصناعيين وللموظفي وزارة الصناعة ولجميع المشاركين لمساهماتهم البناءة وعملهم الدؤوب الذي أوصل المشروع الى حيز التنفيذ .
اننا واثقون بأن هذه النشرة ستثبت عن كونها اداة قيمة لتصميم ووضع سياسة صناعية واقتصادية عامة، كما يجب عليها فتح الطريق للمزيد من الدراسات التقنية المفصلة لتأمين قيمة مضافة عالية عند تحليل القطاع الصناعي .

ان هذه النشرة ستسلط الضوء على أهمية القطاع الصناعي في لبنان وستبين ان هذا القطاع سيظل مجالاً لتوفير فرص العمل والاستثمارات ومساهما اساسيا في الناتج القومي لهذا البلد . اضافة الى ذلك، فقد تم احتساب وادخال مؤشرات صناعية جديدة لتقييم عوامل اساسية مرتبطة بالقطاع الصناعي ولتقدير انتاجه .
كما أن لهذه النشرة بعدا مهما كأداة فعالة لكلي القطاعين العام والخاص على حد سواء لكون الاحصاءات والمعلومات الصناعية تشكل عناصر حاسمة لاتخاذ القرار خاصة في مجال الاستثمار ولحظ قمم النجاح من جانب الصناعيين المحليين والاجانب . وحيث ان القطاع العام سوف يستخدم هذه النتائج لتقييم سياسته الصناعية ، فان الجزء الاول من الدراسة سوف يفسح في المجال امام تخطيط استراتيجيته والتي ستتصدى لمختلف المهام في مجابهة العراقيل الموضوعية في وجه تقدم القطاع الصناعي .
كما ان نتاج المسح سوف تدعم الاساس لوضع نظام محاسبي عام وتوفر المعطيات لتشجيع الصناعة اللبنانية استنادا الى سياسة صناعية واقعية .

كما سيكون هذا المسح بمتناول الجميع من خلال الاقراص الالكترونية (CD ROM) وخانة وزارة الصناعة على شبكة الانترنت وكذلك بواسطة شبك المعلوماتية الهادف الى تزويد الصناعيين بكافة المعلومات المطلوبة من جهتهم . وهذا ما سيتم انجازه بموازاة مشاريع قيد الدرس والتحضير لتقوية قاعدة المعلومات في وزارة الصناعة ولتقوية الاحصاءات المتوفرة ولتزويد اصحاب القرار بالوسائل الضرورية في تحليلاتهم وذلك من خلال ابراز عوامل الانتاج والمبيعات ومؤشرات ضرورية أخرى .

ان وزارة الصناعة في الجمهورية اللبنانية تود مرة أخرى الاعراب عن شكرها الجزيل لجمهورية المانيا الاتحادية وكذلك للمؤسسة الالمانية للتعاون التقني (GTZ) لدعمهما وكذلك توجه شكرها الى المشاركين من وزارة الصناعة والقطاع الخاص .

د. ناصر السعيد

وزير الصناعة

وزير الاقتصاد والتجارة

ملخص تنفيذي للدراسة الاستقصائية

هناك أكثر من ٩٥% من المؤسسات الصناعية ممن يستخدمون أقل من عشرة عمال (بما فيهم المالكين أنفسهم)، في حين أن أقل من واحد في المئة من الشركات الصناعية يضم أكثر من مئة عامل.

إن هيمنة الشركات الصغيرة يمكن تفسيرها جزئياً من خلال الوضع القانوني للشركات الصناعية وتاريخ تأسيس كل منها. ففي العام ١٩٩٨، كان حوالي ٨٥% من الشركات الصناعية عبارة عن شوكات فردية، مع الإشارة إلى أن نصف تلك الشركات تم تأسيسها بعد العام ١٩٩٠.

التوزيع الجغرافي

• تتركز معظم الشركات الصناعية في محيط المدن الرئيسية، وبشكل عام في ضواحيها، حيث تقع معظم المؤسسات الكبرى. ويتركز ٦١% من المؤسسات و ٦٦% من العاملين في بيروت وجبل لبنان، علماً أن المؤسسات المنشأة في المناطق المذكورة تشكل نسبة ٧٤% من مجموع الانتاج و ٦١% من معدل الاستثمارات في العام ١٩٩٨.

القوى العاملة

• شكلت القوى العاملة الدائمة في القطاع الصناعي (من مالكيين ومستخدمين) في العام ٩٨ حوالي ١١٤٠٠٠ شخص. وبلغت نسبة المستخدمين منهم ٧٠%، في حين بلغت نسبة العمال الموسميين (الذين لم يشملهم احصاء القوى العاملة الاجمالية) ٣٥% من عدد المستخدمين.

تجدر الإشارة إلى أن الركود الاقتصادي قد دفع الصناعيين إلى اللجوء إلى العمال الموسميين، كلما قضت ظروف العمل بذلك. والواقع أن كلفة استخدام عمال موسميين هي أقل من تلك الناتجة عن استخدام عمال دائمين، وذلك أن العمال الموسمييين لا يستفيدون من أي تقديرات اجتماعية

شمل الاحصاء الصناعي ثلاثة آلاف وحدة صناعية لبنانية، وعرض رسوماً بيانية تتعلق بالناحيتين الكمية والنوعية للصناعة اللبنانية في العام ١٩٩٨.

نتائج احصاء العام ١٩٩٨

إن النتائج الرئيسية للاحصاء يمكن تلخيصها على الشكل التالي:

تصنيف المؤسسات بحسب حجمها والقطاع الذي تنتمي اليه

- بلغ عدد المؤسسات الصناعية في لبنان ٢٢٠٠٠ مؤسسة، أي بزيادة حوالى ٢% عن العام ١٩٩٤ علماً أن هذا المجموع يستثني جميع ورش البناء، الطاقة، والمياه.
- إن القطاع الصناعي في لبنان ليس شديد التنوع. فمعظم المؤسسات الصناعية (٨٨,٦%) تنتمي إلى ثمانية فروع رئيسية، هي التالية:
 - ١- المأكولات والمشروبات (٢٠,٣%)
 - ٢- المنتجات المعدنية (١٦,١%)
 - ٣- المنتجات غير المعدنية (١١,٥%)
 - ٤- المفروشات والمنتجات المماثلة (١٠,٧%)
 - ٥- الألبسة والفرو (١٠,٣%)
 - ٦- المنتجات الخشبية باستثناء المفروشات (١٠,٢%)
 - ٧- الصناعات الجلدية وديب الجلود (٥,٩%)
 - ٨- صناعة النسيج (٣,٧%)
- إن معظم المؤسسات الصناعية هي عبارة عن وحدات صغيرة، بحيث أن المعدل العام لمجموع العاملين في الشركة الواحدة (بما فيهم مالكي الشركة) قد بلغ في العام ١٩٩٨ ما نسبته ٥,٢ شخصاً.

من مستخدميهم، كما أنهم لا يحصلون على تعويضات، أو علاوات، أو أي امتيازات أخرى.

- يشكل العمال الذكور نسبة ٨٨% من مجموع القوى العاملة، في حين تبلغ نسبة الإناث ١٢% فقط. ومع ذلك، فقد أظهرت نتائج الإحصاء عدم وجود تمييز بين الجنسين في القطاع الصناعي (استناداً إلى عدد النساء اللواتي لا يتقاضين رواتباً).

الرواتب والأجور

- بلغت نسبة الرواتب الاجمالية ٦٣٧ مليون دولار أميركي يعود ٧٧,٣% منها إلى رواتب المستخدمين الدائمين و ١٠,٧% للتقديرات الاجتماعية الخاصة بصندوق الضمان الوطني الاجتماعي، و ٢,٤% للمصاريف الخاصة بالتأمين الشخصي، و ٩,٦% للرواتب الموسمية.
- قدر معدل أساس الراتب السنوي للمستخدم الواحد ب ٦٢٦٢ دولار أميركي. في حين قدر مجموع الراتب السنوي للمستخدم الواحد ب ٧٣٢٥ دولار أميركي.
- لوحظ أيضاً أن أجور العمال في المؤسسات الأكبر حجماً هي أعلى بشكل عام. إذ أن أعلى معدل راتب إجمالي للمستخدم الواحد قد سجلت في المؤسسات التي تضم ما يزيد عن ٢٥٠ عاملاً (بلغ معدل الراتب المذكور ١١٤٥٩ دولار أميركي). في المقابل، فإن أدنى نسبة رواتب قد سجلت في المؤسسات التي يتراوح عدد عمالها بين خمسة وتسعة عمال (٥٥٠٧ دولار أميركي للمستخدم الواحد). ويمكن تفسير هذا الأمر إلى حد ما بلجوء الشركات الكبرى إلى استخدام موظفين يملكون مؤهلات عالية.

الإنتاج

- بلغ مردود الإنتاج الصناعي في لبنان ٣,٩٥ مليار دولار أميركي في العام ١٩٩٨. بالإضافة إلى ذلك، فقد استفادت الصناعات من عائدات إضافية من

مصادر غير صناعية (إعادة بيع، خدمات، تخزين بضائع، تأجير، دخل مالي) والتي بلغت نسبتها حوالي ٧% من المردود الصناعي.

- ان معدل الانتاجية للمستخدم الواحد (الذي يقاس بمعدل الانتاج / مجموع القوة العاملة) قدر ب ٣٤٦٤٢ دولار أميركي. علماً أن تحسن الانتاجية يعوض عن جزء فقط من زيادة الأجور.

المدخلات

- بلغت نفقات المدخلات ٢,٢٥ مليار دولار أميركي في العام ١٩٩٨. وتجدر الإشارة إلى أن معظم المواد المستوردة تفرض عليها رسوم جمركية عالية نسبياً. ولا يستفيد من الحد الأدنى للتعرفة المخصصة للمدخلات سوى عدد محدود من المواد الخام.
- وتشكل المواد الخام والنصف مصنعة أكثر من ٨٠% من المدخلات. يليها في المرتبة الثانية نفقات الطاقة (الوقود، الزيت والطاقة الكهربائية) التي تبلغ نسبتها حوالي ٨% من مجمل النفقات التشغيلية، بالرغم من أن لبنان لا يملك أية صناعات ثقيلة. كذلك، فإن نفقات التوضيب تمثل نسبة ٥% أخرى من النفقات الاجمالية، ويعود السبب الرئيسي في ذلك إلى أن صناعة التعليب تستورد معظم موادها الخام من الخارج. إضافة إلى ذلك، فإن مواد التوضيب ذات النوعية الرفيعة بدأت تحل مكان مواد التوضيب المصنعة محلياً مما سرع وتيرة الاستيراد.

القيمة المضافة

- بلغ مجموع القيمة المضافة حوالي ١,٧ مليار دولار أميركي في العام ١٩٩٨. كما بلغ معدل القيمة المضافة بالنسبة إلى الانتاج ٤٣,٢% في العام نفسه. ويعود سبب ضعفها إلى أهمية نفقات المدخلات في عملية الانتاج حيث تصنف معظم الصناعات اللبنانية صناعات خفيفة تستورد معظم موادها الأولية.

- بلغ معدل القيمة المضافة للعامل الواحد ١٤٩٥٨ دولار أميركي.
- ان توزيع القيمة المضافة في العام ٩٨ قدر كما يلي:
- بلغت نسبة الأجور وأرباحها (الدائمين، الموسمين، والذين يعملون في منازلهم) ٣٧,٤% بالمقارنة مع ٢٦,٦% للعام ١٩٩٤.
- تقدر استهلاكات الأصول بحوالي ٤٢٢ مليون دولار أميركي في العام ١٩٩٨، وتشكل حوالي ٢٥% من مجمل القيمة المضافة.
- يمكننا تقدير نسبة أعباء الفوائد العائدة إلى التسليفات الصناعية المصرفية والغير مصرفية بمئتي وثلاثون مليون دولار أميركي في العام ٩٨. وبلغت هذه النسبة بذلك حوالي ١٣,٤% من مجمل القيمة المضافة.
- قدرت القيمة التأجيرية المطلقة ب ٩٠ مليون دولار أميركي استناداً إلى وجود ٤,٥ مليون متر مربع من المساحات الصناعية المبنية. لذلك، فإن القيمة التأجيرية للمساحة الصناعية تشكل ٥,٣% من القيمة المضافة.

الاستثمار والموجودات

- بلغت قيمة الاصول الثابتة ٣,٨٨ مليار دولار أميركي في العام ١٩٩٨. ويظهر التصنيف لمجمل الاستثمارات الصناعية بحسب نوع الموجودات، أن حوالي ٥٠% من الاستثمارات يتم توظيفها في الآلات، وحوالي ٤٣% في الأراضي والأبنية. كذلك، فإن عدم توفر الأراضي أو المساحات المبنية الصالحة للإيجار أو المساحات الصناعية المعقولة الثمن ضمن مناطق صناعية منظمة، يدفع الصناعيين إلى شراء أو بناء مساحات للإنتاج خاصة بهم.
- بلغت قيمة مجمل الاستثمارات السنوية ٣٧٣ مليون دولار أميركي في العام ١٩٩٨. وقد شكل مجموع الاستثمارات الصناعية في العام المذكور ٩,٦% من مجمل الاصول الثابتة.

الأرباح

- قدرت الأرباح قبل احتساب الضرائب ب ٣٢٤ مليون دولار في العام ٩٨. الأمر الذي يشكل عائداً متواضعاً للأسماح البالغ نسبته ٨,٣%. علماً أنه يجب أن يضاف إلى هذه الأرباح ما يقدر بحوالي ستين مليون دولار أميركي كمدخول من خارج النشاط قطاع الصناعي للمؤسسات.

النتائج الرئيسية لعملية استطلاع الرأي :

في اجابتهم على الأسئلة المطروحة حول الصعوبات التي يعاني منها قطاع الأعمال، أشار معظم الصناعيين اللبنانيين إلى وجود مشاكل عدة تعوق عملية التطور الصناعي. وقد ردوا معظم المشاكل المذكورة إلى الأسباب التالية :

- قرارات القطاع العام : الاجراءات القانونية المعقدة، القوانين المقيدة، المعدل المرتفع للضرائب، اعباء الضمان الاجتماعي، عدم وجود مناطق صناعية منظمة، مشاكل البنى التحتية، الخ
- المصاريف المختلفة : الاجارات المرتفعة، كلفة الطاقة، رسوم التعرفة الجمركية، الخ.
- مشاكل التسويق : المنافسة الأجنبية على الأسواق المحلية والعالمية، نقص المعلومات، الخ.
- القضايا المالية : الارتفاع في معدل الفوائد، شروط صعبة للحصول على اعتمادات مصرفية، ندرة عمليات التمويل الطويلة الأمد والتأجير، الافتقار إلى الضمانات الإضافية، الخ.
- بالنسبة إلى التوقعات المستقبلية، فإن الصناعيين اللبنانيين لم يبدوا تفاؤلاً كبيراً، وقد أعلن غالبيتهم أنهم سوف يحجمون عن الاستثمار خلال الأشهر القادمة. كذلك، كانت توقعاتهم سلبية في ما يخص زيادة نسبة المبيعات أو الصادرات في المدى القريب.
- استناداً إلى العينات الاجمالية للشركات التي شملها الإحصاء، حددت النتائج الصعوبات العشر الأكثر أهمية التي يواجهها قطاع الصناعة وفقاً للترتيب التالي :

١. معدل الفوائد
٢. المنافسة الإقليمية على الأسواق المحلية
٣. الصعوبة في الحصول على قروض طويلة الأمد
٤. تكاليف الكهرباء
٥. المعدل المرتفع للتقديرات الاجتماعية
٦. المنافسة الدولية على الأسواق المحلية
٧. صعوبة الحصول على قروض قصيرة الأمد
٨. الافتقار إلى ضمانات إضافية أو كفالات
٩. صعوبة الإيجار
١٠. ارتفاع معدل الرسوم الجمركية.

مقارنة مع نتائج إحصاء العام ١٩٩٤:

- ارتفاع عدد الوحدات الإنتاجية بنسبة ٢%.
- تراجع معدل العمالة للمؤسسة الواحدة من ٦,٤ إلى ٥,٢ عامل.
- تراجع عدد العمال بنسبة ١٨% حيث يشكل الأجراء ٦٩% من مجموع العمال عام ١٩٩٨ مقابل ٧٥% عام ١٩٩٤.
- وصل معدل الأجر الأساسي للعامل الواحد إلى ٦٢٦٢ دولار سنويا عام ١٩٩٨ مقابل ٣٦٠١ دولار عام ١٩٩٤ أي بارتفاع ٧٤%. أما فيما يتعلق بمجموع الأعباء الأجرية فقد كان معدل الأجر عام ١٩٩٨ للعامل الواحد ٧٣٢٥ دولار سنويا مقابل ٤٢٠٢ دولار عام ١٩٩٤.

- قدر الإنتاج الصناعي عام ١٩٩٨ بحوالي ٣,٩٥ مليار دولار بزيادة ١١,٥% مقارنة بعام ١٩٩٤.
- وصل معدل الانتاجية (انتاج / عدد عمال) إلى ٣٤٦٤٢ دولار للعامل الواحد عام ١٩٩٨ مقارنة بـ ٢٥٤٨٣ دولار عام ١٩٩٤ أي تحسن بنسبة ٣٦%.
- ارتفعت كلفة المدخلات بنسبة ٢٢% بين ١٩٩٤ و ١٩٩٨ ووصلت إلى ٢,٢٥ مليار دولار عام ١٩٩٨ مقابل ١,٨٤ مليار للفترة السابقة. وكان لارتفاع النسب الجمركية الأثر الكبير على تثقل كلفة المدخلات التي لا تزال بمعظمها مستوردة.
- ويعتبر ارتفاع كلفة المدخلات العامل الأساسي لتراجع نسبة القيمة المضافة من ٤٨,١% عام ١٩٩٤ إلى ٤٣,٢% عام ١٩٩٨. هذا مع العلم أن القيمة المضافة للعامل الواحد ارتفعت من ١٢٢٤٩ دولار عام ١٩٩٤ إلى ١٤٩٥٨ دولار عام ١٩٩٨ أي بنسبة ٢٢%.
- لقد ارتفعت قيمة الاستثمارات الجديدة من ١٩٢,٢ مليون دولار عام ١٩٩٤ إلى ٣٧٣,٤ مليون دولار عام ١٩٩٨ مما يعطي معدل استثمار للعامل الواحد بحوالي ٣٢٧٢ دولار عام ١٩٩٨ مقابل ١٣٨٢ دولار قبل أربعة أعوام.

