

Arthur D Little

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

الجمهورية اللبنانية
مكتب وزير الدولة لشؤون التنمية الإدارية
مركز مشاريع ودراسات القطاع العام

**Promoting Industrial
Development in
Lebanon**

**Final Report to
Investment Development
Authority of Lebanon &
The Association of
Lebanese Industrialists**

Arthur D. Little International, Inc

October 1996

Reference: 58347

Agenda

1	Executive Summary
2	Industrial Mapping
3	Competitive Assessment
4	Strategic Objectives
5	Preferred Sectors
6	Strategic Thrusts
7	Implementation Program

Trends towards international free trade and peace in the Middle East will create both opportunities and threats for the Lebanese industrial sector

- **Opportunities** to expand market reach beyond Lebanon into export markets
- **Threats** to lose position in local and regional markets

As such Lebanon is seeking to formulate an industrial development strategy which concentrates future investments on areas where it has a real and sustainable competitive advantage

Agenda

1	Executive Summary
2	Industrial Mapping
3	Competitive Assessment
4	Strategic Objectives
5	Preferred Sectors
6	Strategic Thrusts
7	Implementation Program

Accordingly, the Investment Development Authority of Lebanon (IDAL) and the Association of Lebanese Industrialists (ALI) retained Arthur D. Little to recommend an industrial development strategy for Lebanon to

- Serve as a basis for promoting industrial investments
- Strengthen the existing industrial base

Arthur D. Little was asked to address two main issues

- Which manufacturing sectors are most likely to generate a clear and sustainable competitive advantage for Lebanon?
- What specific actions are needed in order to realize Lebanon's potential in these sectors?
 - ⇒ By the Government
 - ⇒ Trade and industry associations, and
 - ⇒ The private sector

To address these issues, we undertook the following work program

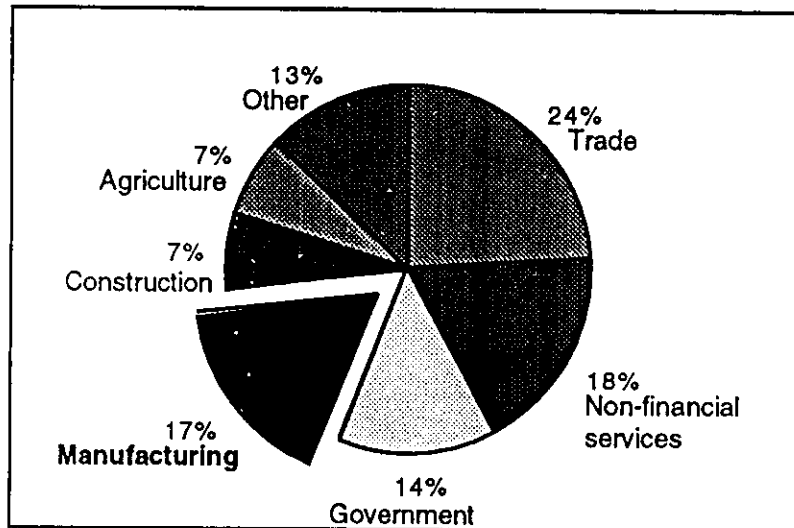
- Mapped the existing industrial environment
- Assessed Lebanon's competitive advantage
- Prepared a questionnaire for an industrial survey
- Proposed sectoral development priorities
- Identified facilitators and barriers
- Held several workshops to discuss findings and conclusions
- Specified an implementation program clarifying
 - ⇒ The role of the government
 - ⇒ The role of the private sector

Our main conclusions are as follows

- The industrial sector makes an important contribution to national income, employment, and exports
- The industrial sector is currently facing important challenges, and without concerted efforts, it is possible that this sector will shrink over time
- There is a critical need for the government and the private sector to work hand in hand to create the conditions needed for maintaining and expanding industrial production in Lebanon

The industrial sector makes an important contribution to national income, employment, and exports

Percentage Contribution to GDP

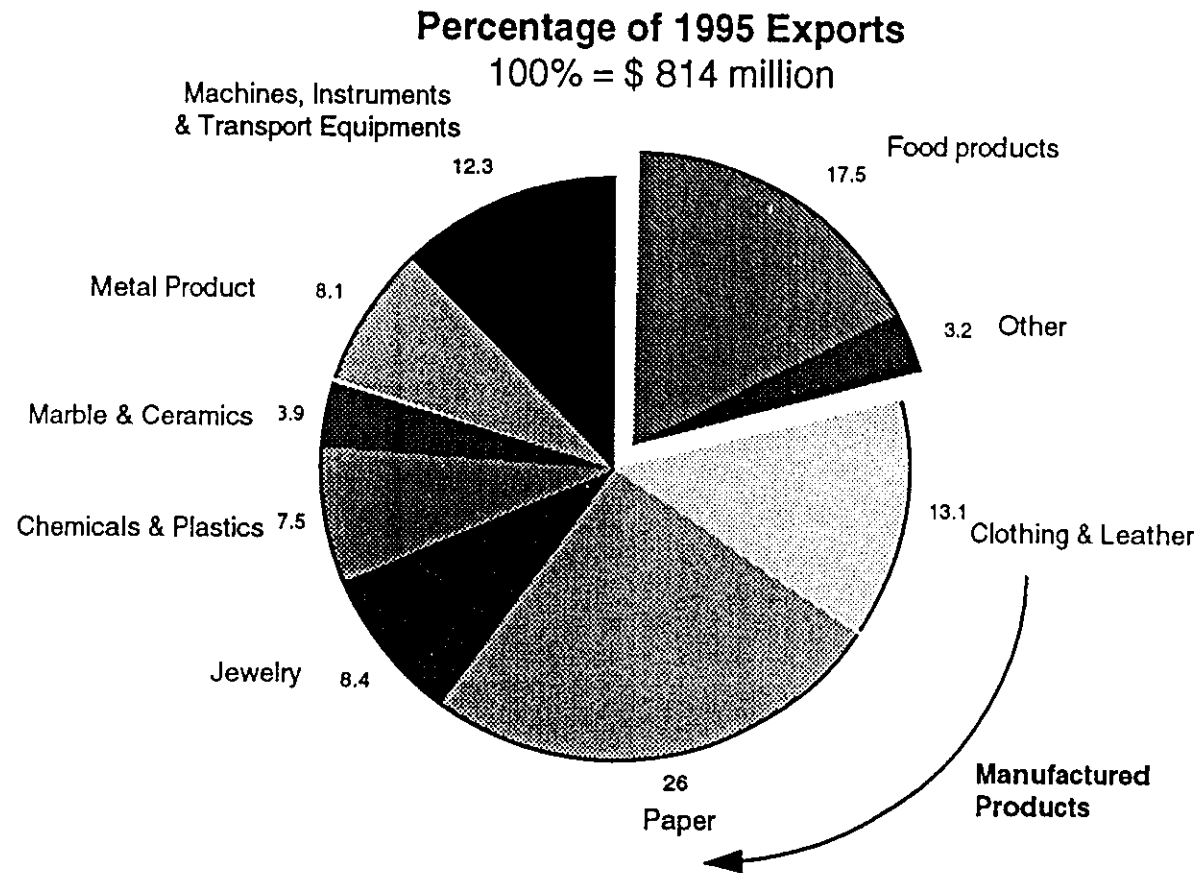


Industrial Sector - 1995

• Output:	\$ 3.9 billion
• Value added:	\$ 1.9 billion
• Employment:	150,000 (14% of labor force)
• Number of units:	22,100

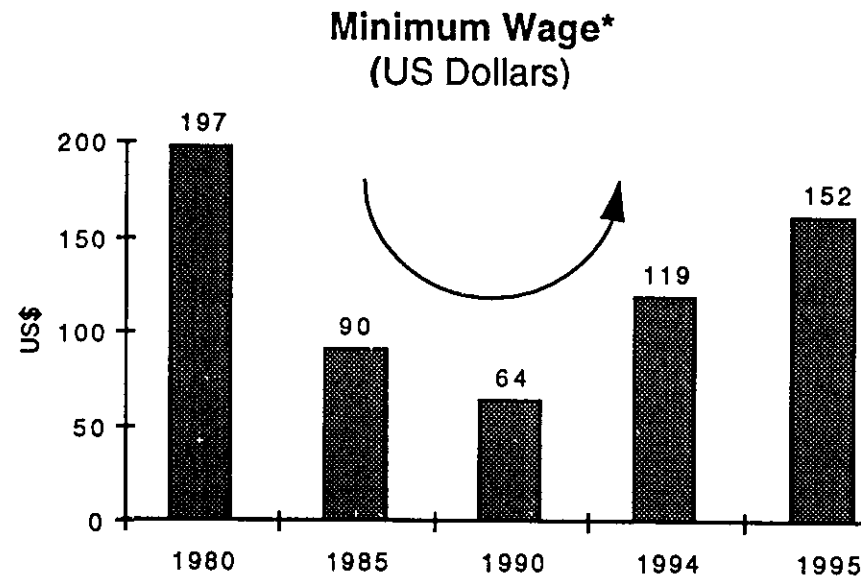
Source: World Bank; Industrial Census - 1994; ADL estimates

Industry generates around 80% (approximately \$ 650 million in 1995) of Lebanese exports



Source: Trade statistics

Industrial development was aided to some extent by an important decline in dollar wages in the early 1990s . . . this trend is being reversed today.



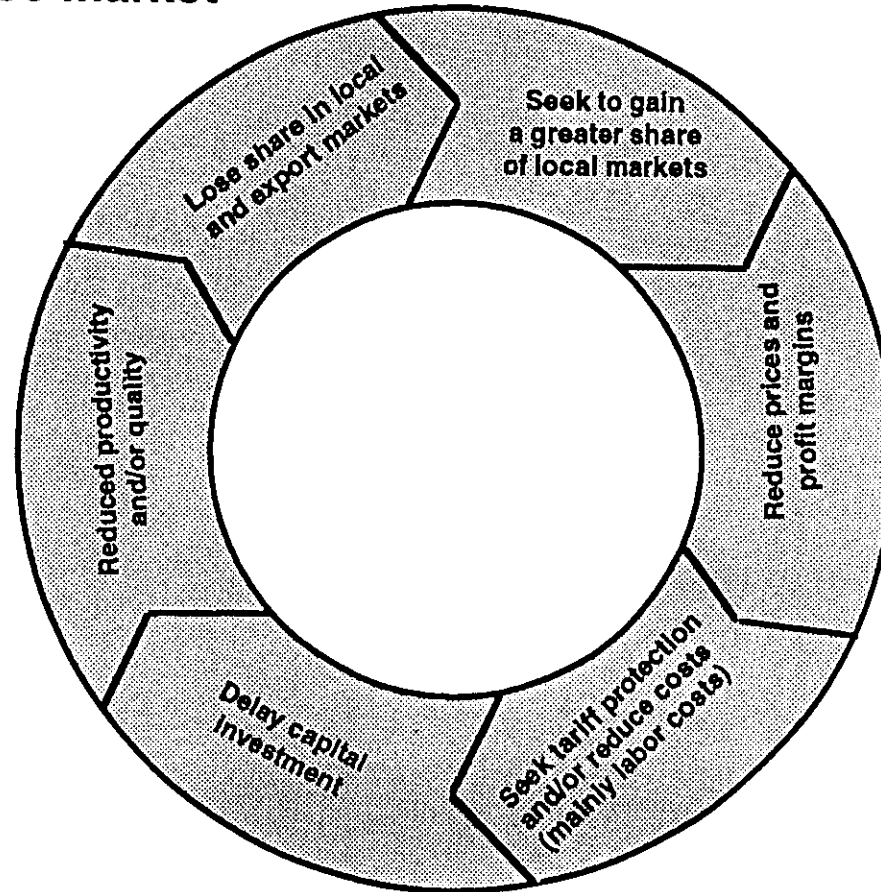
* Used as an indicator of general trends in wages

Source: Association of Lebanese Banks

The industrial sector in Lebanon is facing important challenges

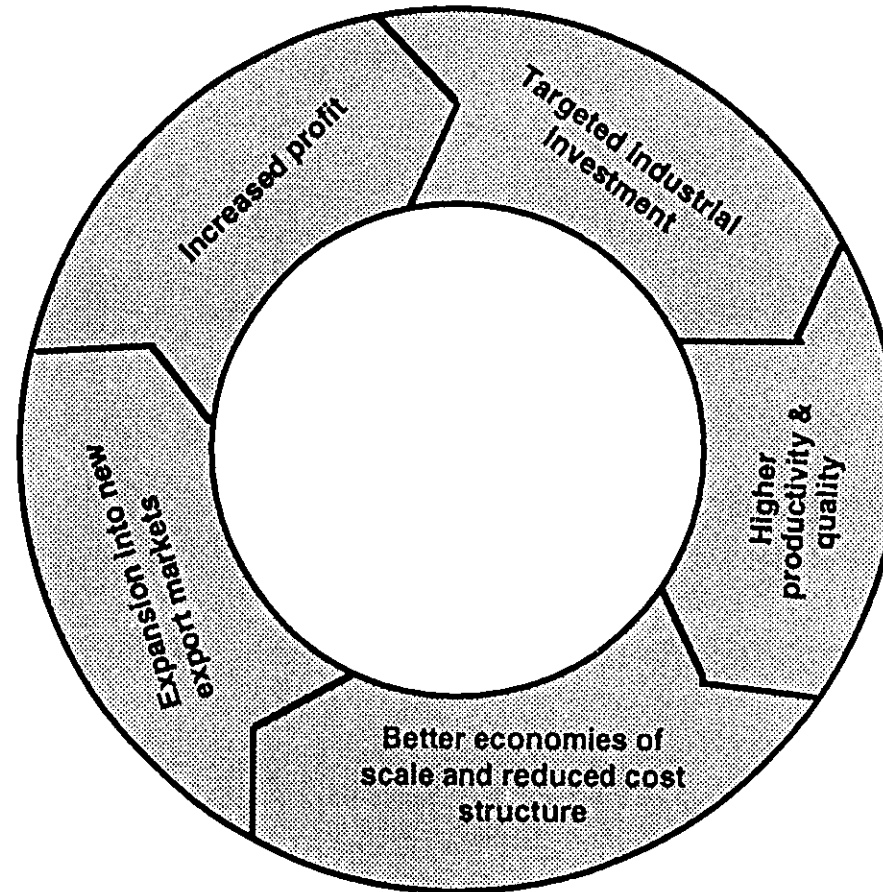
- There are strong pressures to escalate labor costs to meet labor expectations and the increasing cost of living
- Discussions are underway with the European Union (EU) to eliminate customs duties on products imported from Europe into Lebanon
- Industrial production is expanding throughout the Middle East and most countries in the region are promoting exports and regional trade
- Peace in the Middle East is expected to liberalize trade in the region thus exposing the Lebanese market to increased competition at home and abroad

Industry risks engaging in “lose-lose” wars for greater share of the local Lebanese market



The development of export markets is essential to break this vicious circle

Targeted new investments are essential to maintain and expand the Lebanese industrial sector



There is a critical need to direct new investments towards better quality, higher value added and more upmarket production

- **Towards**

- ⇒ Industries where value is added through **product design and marketing**
- ⇒ Industries which require a **fast response** to changing market conditions and requirements

- **Away from**

- ⇒ Industries which require **mass production/markets**
- ⇒ Industries which are dependent on **cheap labor**
- ⇒ **Polluting** industries
- ⇒ **Resource or energy intensive** industries

This objective should be achieved, however, through promotion and free market mechanisms rather than restrictive industrial policies or government directives

We recommend establishing clear and well focused strategic objectives for industrial development

- Industrial **growth** of 6 to 8% over the next 10 years
- Promote investments **focused** on better quality, higher value added and more upmarket production in industries such as
 - ⇒ Food and beverages
 - ⇒ Fashion
 - ⇒ Personal care, perfumes and cosmetics
 - ⇒ Printing and publishing
 - ⇒ Furniture and household products
- Improved **productivity and production technology**
- **Fast response** capabilities to changes in the market
- Increased **exports**

To support the achievement of these objectives, we recommend seven strategic thrusts

- Promote new **investments** in industry
- Develop **manpower** skills
- Establish a **supportive regulatory** environment
- Establish required **infrastructure**
 - ⇒ Free zone and industrial park development companies
 - ⇒ Industry cluster
- Provide essential **support**
 - ⇒ Technical support and advisory services
 - ⇒ Quality standards
 - ⇒ Information center
 - ⇒ Outsourcing exchange
- Develop export promotion services
- Rehabilitate existing industrial base

To implement the proposed industrial development program, the government and the private sector have to work hand-in-hand

- The government's main responsibility is to establish an economic and regulatory environment conducive for investment in general and in industry in particular and to promote Lebanon and investments in industry
- The private sector is to take the initiative, make the required investments and manage as many aspects of program implementation as practical

Agenda

1	Executive Summary
2	Industrial Mapping
3	Competitive Assessment
4	Strategic Objectives
5	Preferred Sectors
6	Strategic Thrusts
7	Implementation Program

To map the industrial sector in Lebanon, we relied on four main sources of information

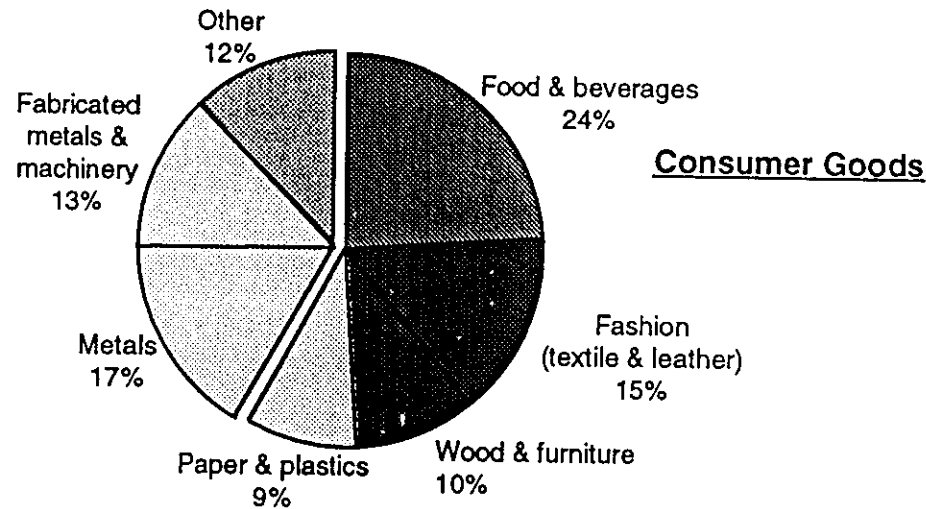
- The industrial census published by the Ministry of Industry and Petroleum in 1994
- In-depth interviews conducted by Arthur D. Little with selected industrialists and policy makers
- Trade and other readily available statistics
- Previous studies conducted on industrial development in Lebanon

Our findings may be summarized as follows

- Consumer goods represent about 50% of Lebanese industrial output
- Industrial production is highly fragmented and in most part family owned (which is both a strength and a weakness)
- The industry is highly concentrated in Beirut and Mount Lebanon
- Foreign participation in Lebanese industry is negligible
- Exports are increasing
- Significant new investments are being made in industry
- Raw materials and labor represent the most important components of cost
- Labor in Lebanon represents a larger percentage of cost than expected, a symptom of low investment in production technology
- Labor productivity is generally low
- The lack of financing tops the list of concerns of the industrialists we interviewed

Consumer goods represent about 50% of industrial production

Percentage of Industrial Production
(100% = 3.7 billion)

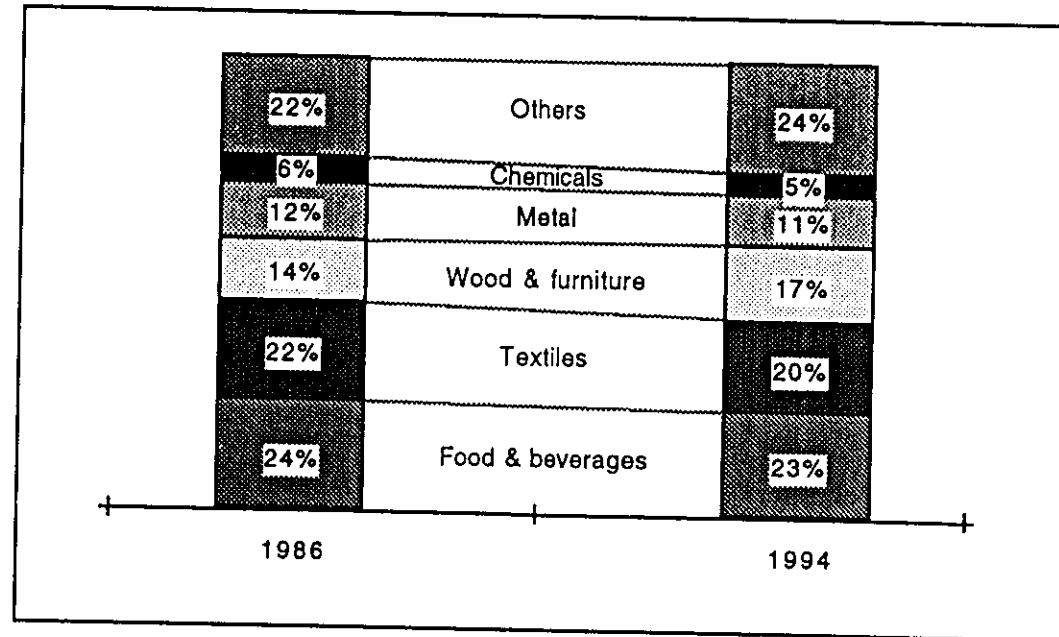


Source: Industrial Census, 1994

They naturally fit Lebanon's competitive strengths in marketing

The distribution of labor among industrial sectors has been fairly stable over the years

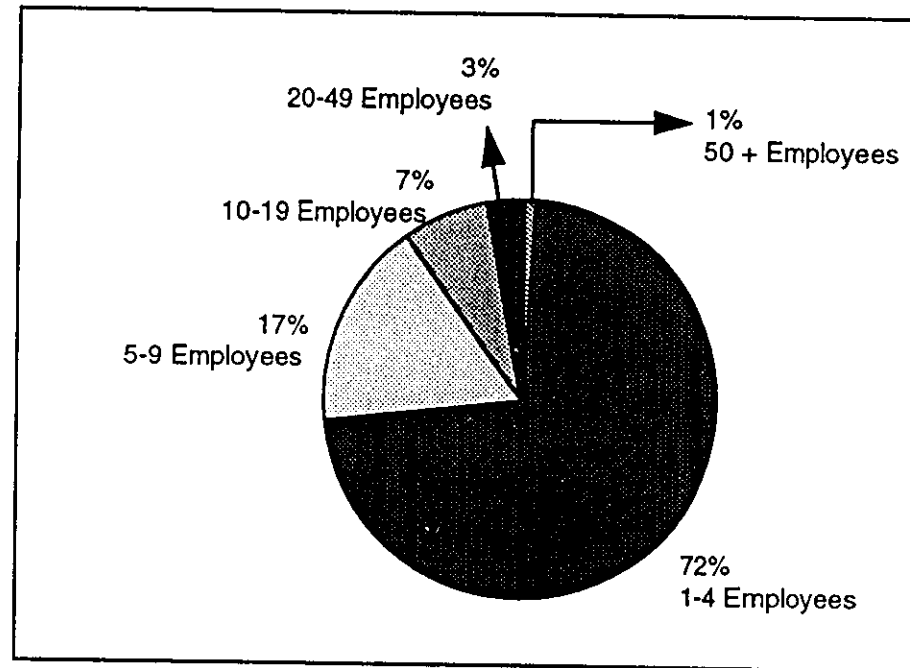
Distribution of Labor



Source: Industrial Census 1986-1994

The industrial sector is highly fragmented

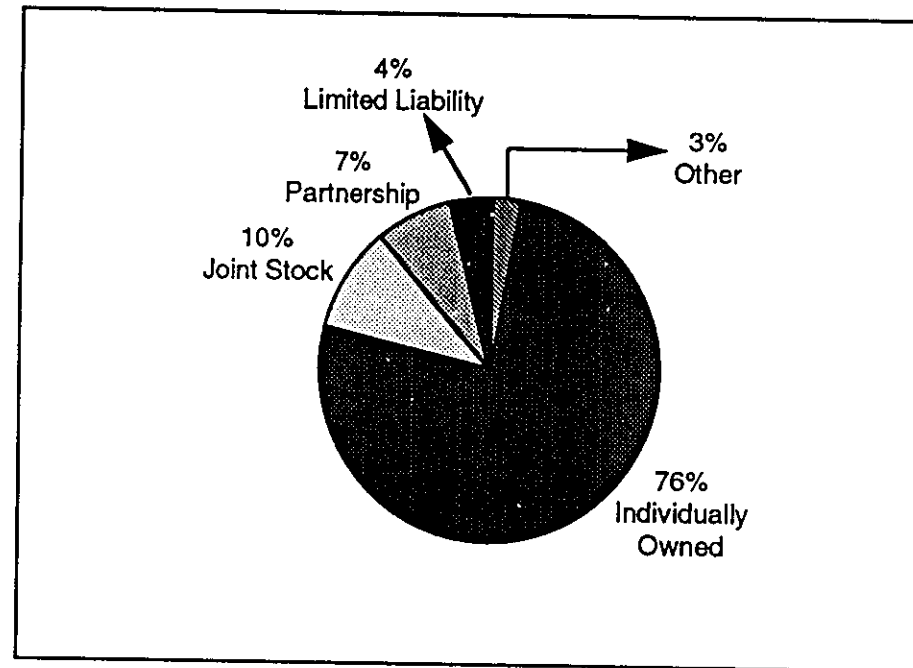
**Enterprise Distribution
According to Number of Employees**
(100% = 22 Thousand Enterprises)



Source: Industrial Census, 1994

Most industrial enterprises are individually owned

Ownership of Industrial Enterprises
(100% = 22 Thousand Enterprises)



Source: Industrial Census, 1994

Fragmentation and family ownership entail strengths as well as weaknesses

- **Strengths**

- ⇒ Loyalty, dedication, and pride
- ⇒ Flexibility
- ⇒ Minimal bureaucracy and overheads

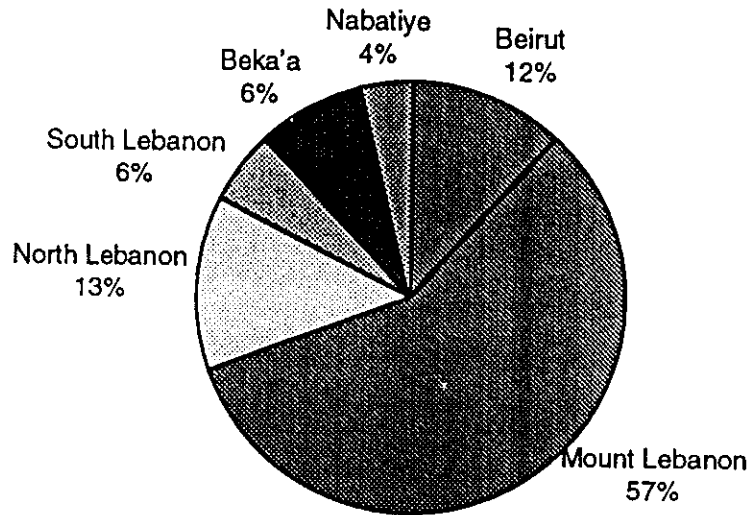
- **Weaknesses**

- ⇒ Difficulty to finance and manage rapid growth
- ⇒ Management succession

Future industrial development programs should capitalize on these strengths and provide support to overcome these weaknesses

Industry is highly concentrated in Beirut and Mount Lebanon

Percentage of Industrial Labor

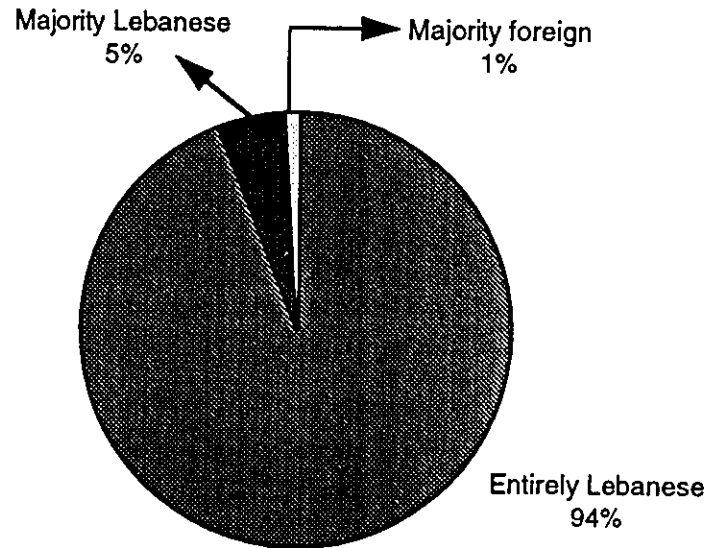


Source: Industrial Census, 1994

There is a need to develop industries in the North, South and the Beka'a region

Foreign participation in Lebanese industry is negligible

Ownership of Industrial Enterprises

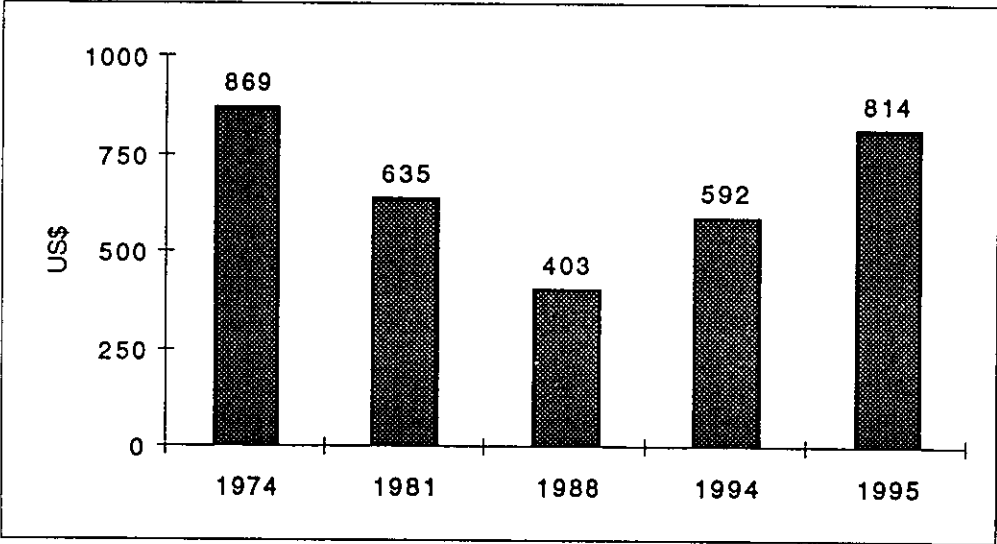


Source: Industrial Census, 1994

There is a need to establish a business and regulatory environment conducive to attracting foreign investment

Exports, have recovered and are nearing earlier peaks

Exports*
(\$ million)



Source: Trade statistics

* Note: Nearly 80% of exports are manufactured goods
Figures are in nominal US dollars

A program to promote exports is needed

Export destinations are in most part to the Gulf and the Levant

Destinations of Exports

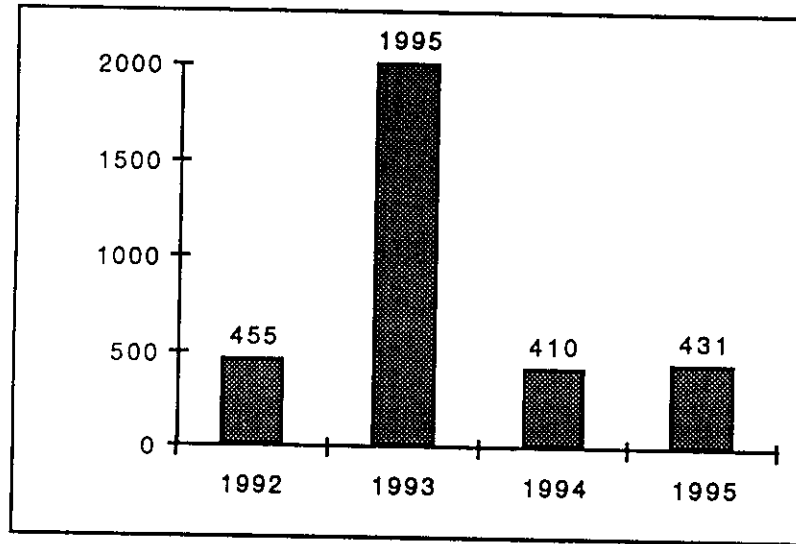
Export Destination	1993	1994	1995
Saudi Arabia	28.2%	18.6%	11.7%
UAE	6.3%	17.2%	28.7%
Syria	12.7%	16.6%	8.4%
Jordan	9.9%	8.3%	3.6%
Kuwait	4.0%	3.5%	3.9%
France	11.4%	2.9%	6.0%
Other countries	27.5%	32.9%	38.3%
Total	100%	100%	100%

Source: Trade Statistics

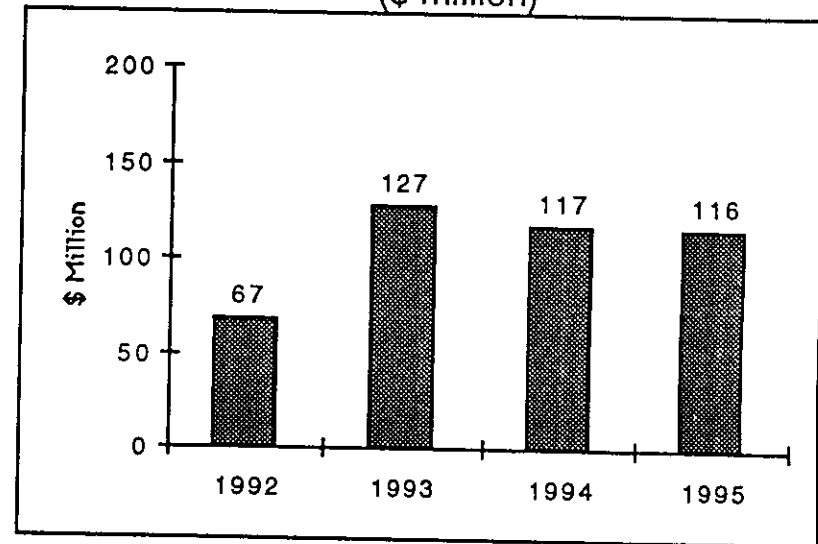
This general pattern of trade is not expected to change significantly in the coming 5 to 10 years

Significant new investments are being made in industry

Number of Industrial Licenses Issued



Imports of Industrial Machinery (\$ million)

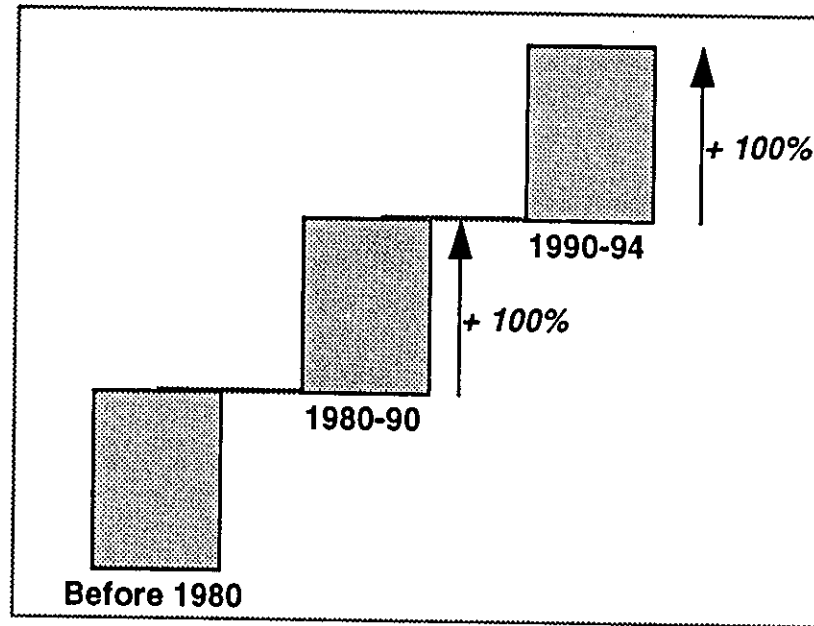


Source: Ministry of Industry & Petroleum

Gross capital formation in industry is estimated to be around \$ 200 million per year

The industrial sector is dynamic . . . roughly one third of industrial ventures in operation were established since 1990

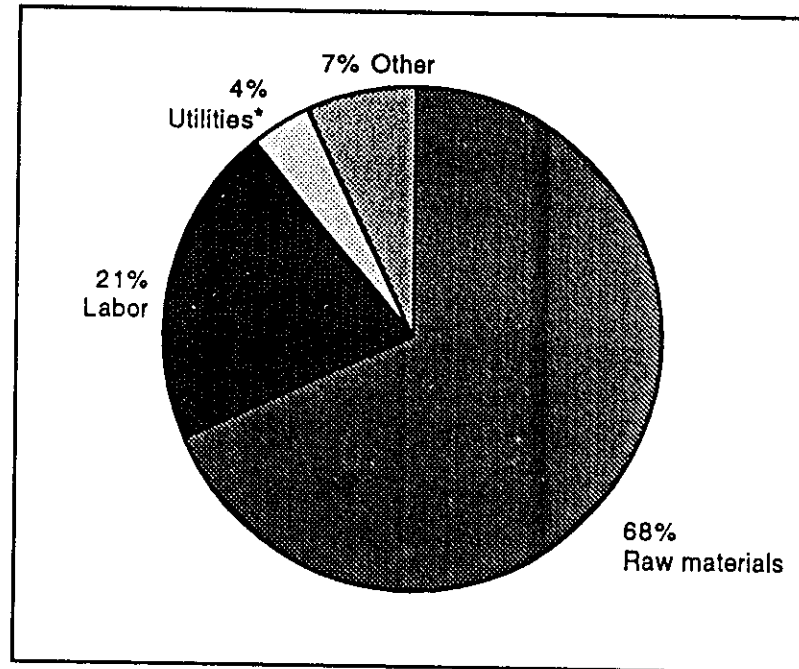
Industrial Units by Date of Establishment
1994 Census



Source: Industrial Census, 1994

Raw materials and labor represent the two most important components of cost

Cost Components of Industrial Sector



* Including electricity & fuel
Source: Industrial Census, 1994

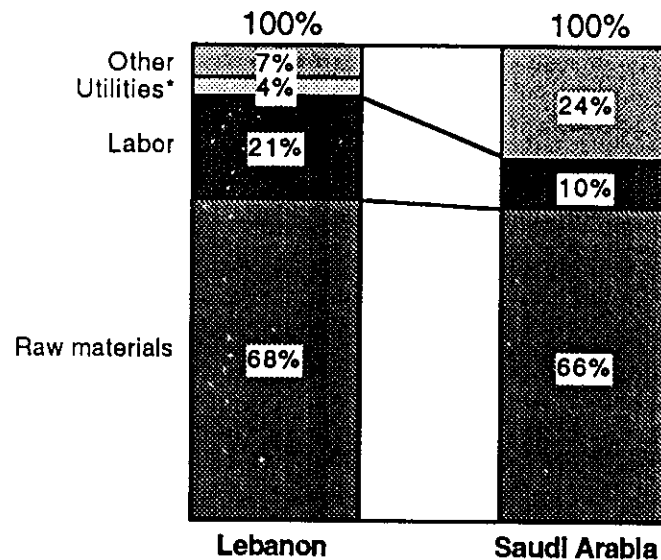
As raw materials (and industrial machinery) are mostly imported, customs duties and the (visible and invisible) costs of clearing customs are a legitimate concern

- Industrialists claim that custom formalities take up to eight days and require up to 35 signatures
- A closer look suggests that an average of five days and 12 to 15 signatures are needed
- The visible and invisible **costs** of port and customs bureaucracy are significant
 - ⇒ Industrialists claim that port and customs clearance costs are in the order of \$ 400 per container (including around \$ 150 per container in invisible costs)
 - ⇒ If true, these costs would add between 2% and 3% to the cost of raw materials (or 1% to 2% of total costs)

In Lebanon, labor represents a larger percentage of cost than in Saudi Arabia

. . . . although labor rates are roughly similar

**Cost Components of Industrial Sector
(Percentage of Total Cost)**



Average Labor Rates

Lebanon	\$2.5/hour
Saudi Arabia	\$3.2/hour

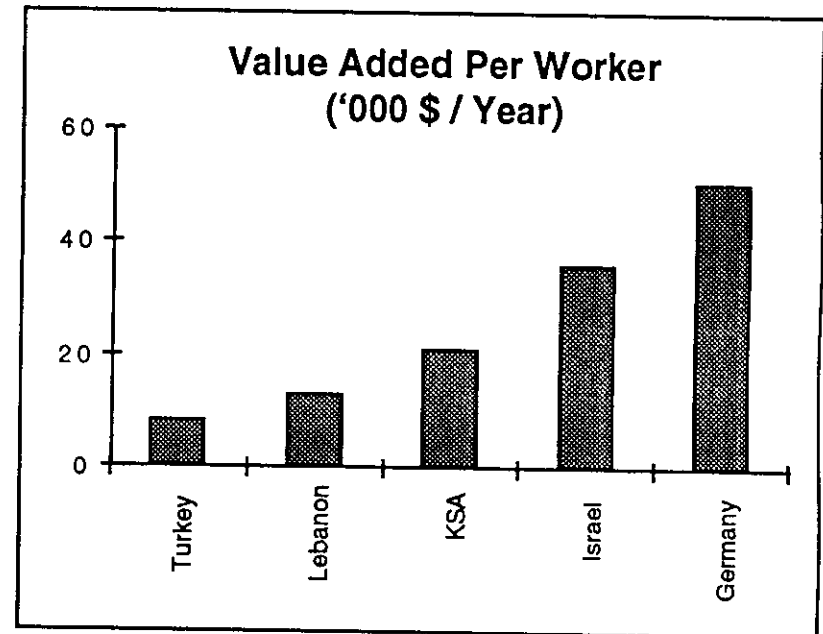
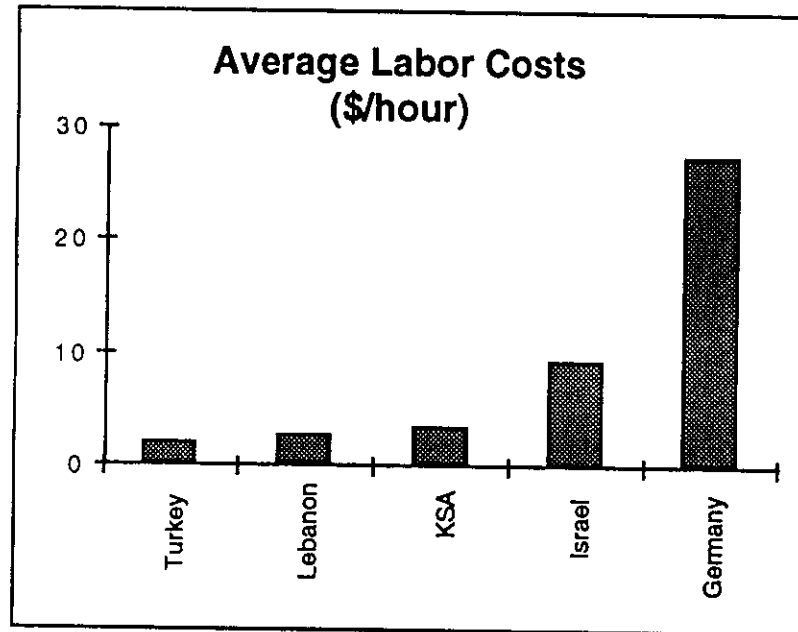
* Including electricity and fuel

Source: Lebanon Industrial Census - 1994 and Saudi Industrial Census - 1992

This may be a symptom of insufficient investment in production technology

Lebanon's labor rates are reasonable

. . . . however, productivity is low



Source: *Industrial Census, 1994*
Statistical Abstract of the World

Labor productivity in Lebanon is relatively low for several reasons

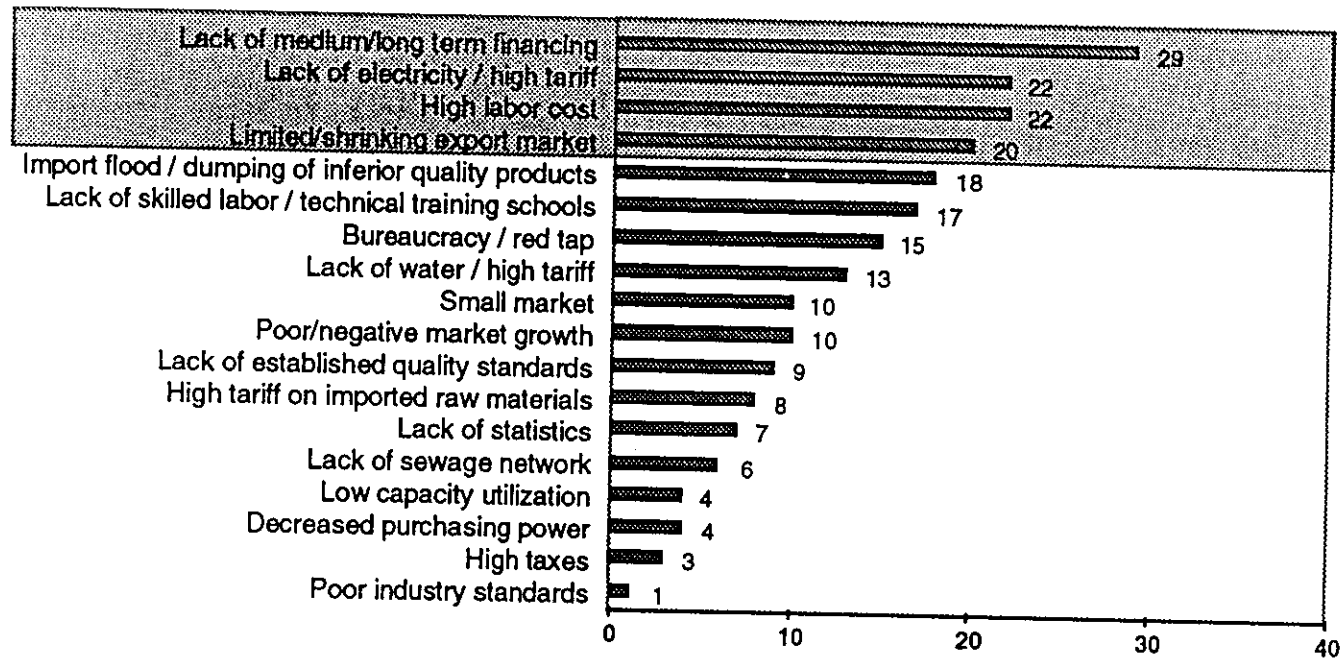
- Insufficient investments in plant and equipment
- Insufficient investments in labor training
- Labor regulations concerning holidays, vacations, and overtime

Our field interviews suggest that industrialists perceive that the main barriers to industrial development are as follows

- Lack of medium/long term financing
- Inadequate infrastructure
- High labor costs relative to labor productivity
- Limited access to export markets

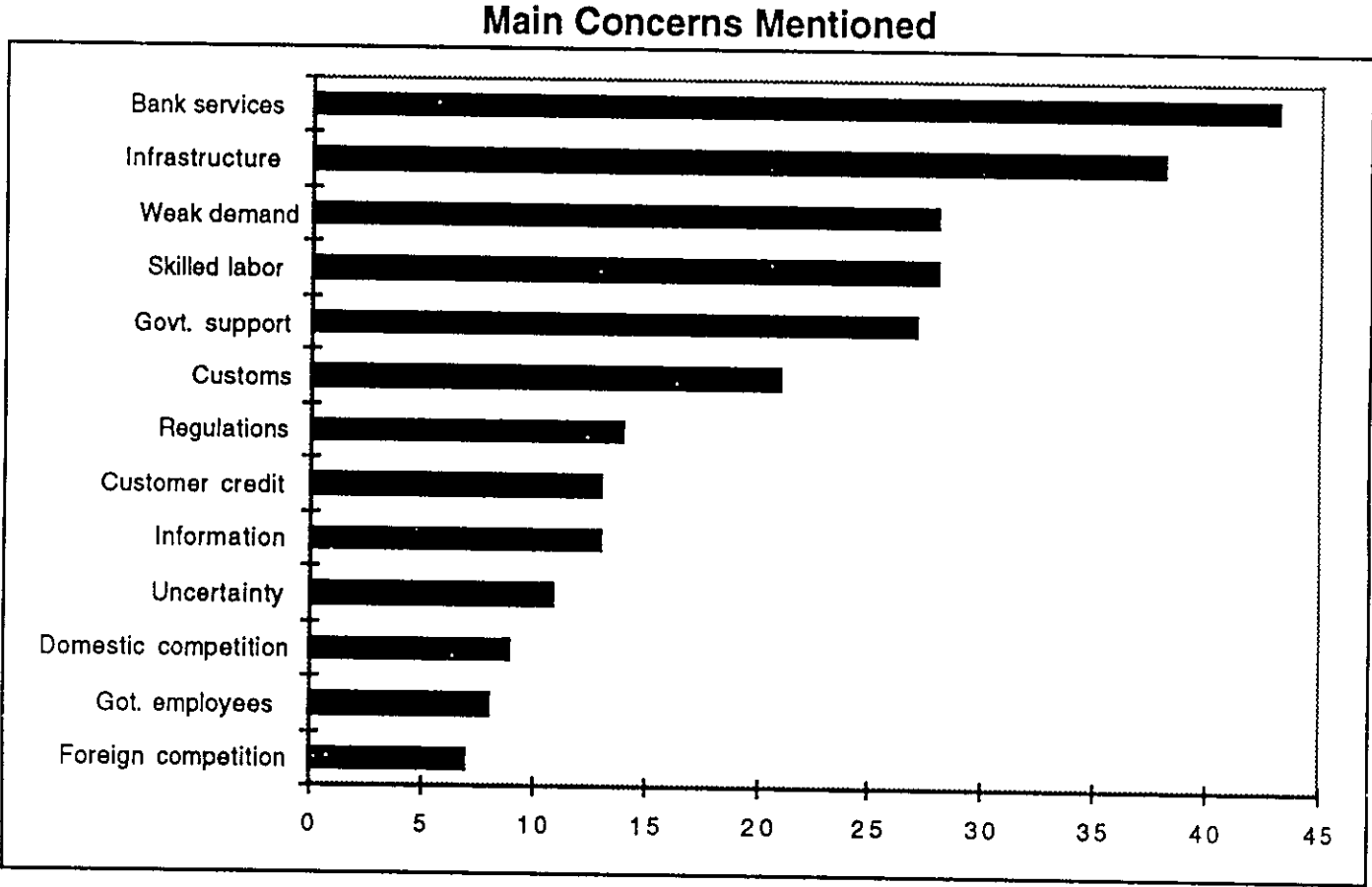
The lack of adequate financing tops the list of industrialists' concerns

Main Concerns Mentioned



Source: Arthur D. Little field interviews

Our findings are in line with those of similar investigations undertaken by other parties



Source: World Bank

Industrialists argue that these problems create a high cost environment caused by the following

- Low labor productivity
- High cost of finance
- Generally inadequate infrastructure
- High cost of government - because of legal and regulatory bottlenecks, for example
 - ⇒ Visible and invisible costs of port and customs clearance
 - ⇒ Relatively high costs for government services

Furthermore, food producers complained about the scarcity and variable quality of agricultural products

- The government's agricultural policy providing subsidies for certain products (e.g., tobacco) is diverting production away from products needed for the food industry
- The quality of agricultural products is variable
- Imports of agricultural products from neighboring countries is sometimes difficult

Government support is needed to develop industry

- The government has promulgated around 20 policies and regulations since 1967 to support industry*
- Industrialists, however, are concerned that the government does not appear to have the resources or determination needed to implement these policies and regulations

* *"Industrial Policy Recommendations", Al Iqtisad Al Lubnani Wal Arabi, February 1996*

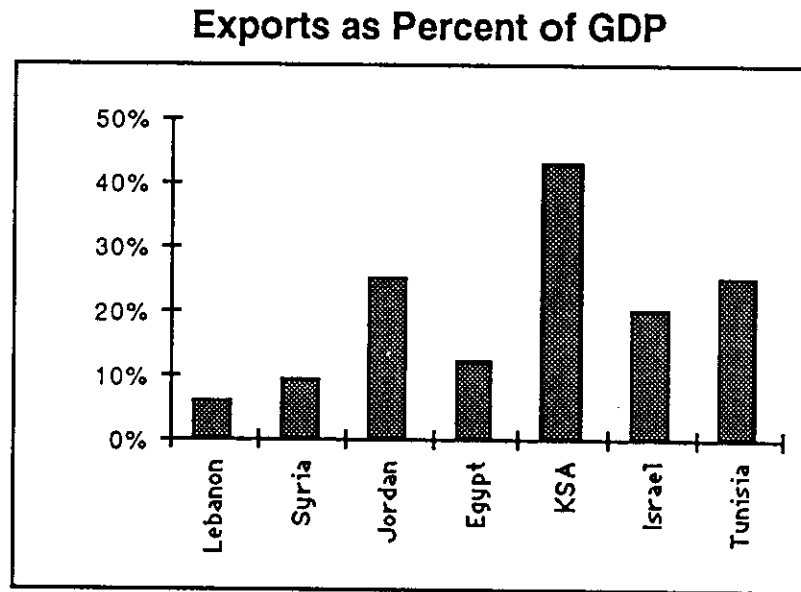
Agenda

1	Executive Summary
2	Industrial Mapping
3	Competitive Assessment
4	Strategic Objectives
5	Preferred Sectors
6	Strategic Thrusts
7	Implementation Program

The competitive position of nations (or more exactly industries within nations) may be measured by their ability to

- Generate exports
- Attract domestic and foreign investments

Exports represent around 5 to 7% of GDP in Lebanon, which is below most countries in the region



Source: Economist Intelligence Unit; Banque Audi

Since the end of the war, Lebanon has been unable to attract significant investments into productive sectors of the economy

- The \$ 200 million estimated capital formation in industry is not sufficient to replace depreciating and obsolete industrial assets and finance growth
- The flow of foreign investments into Lebanese industry is negligible

Most investments are flowing into real estate and treasury bonds

Given available information, we assessed the competitive position of Lebanon

- In relation to the following countries
 - ⇒ Syria
 - ⇒ Jordan
 - ⇒ Egypt
 - ⇒ Kingdom of Saudi Arabia (KSA)
 - ⇒ Israel
 - ⇒ Turkey
 - ⇒ Tunisia

- Focusing on
 - ⇒ Markets
 - ⇒ Factors of production

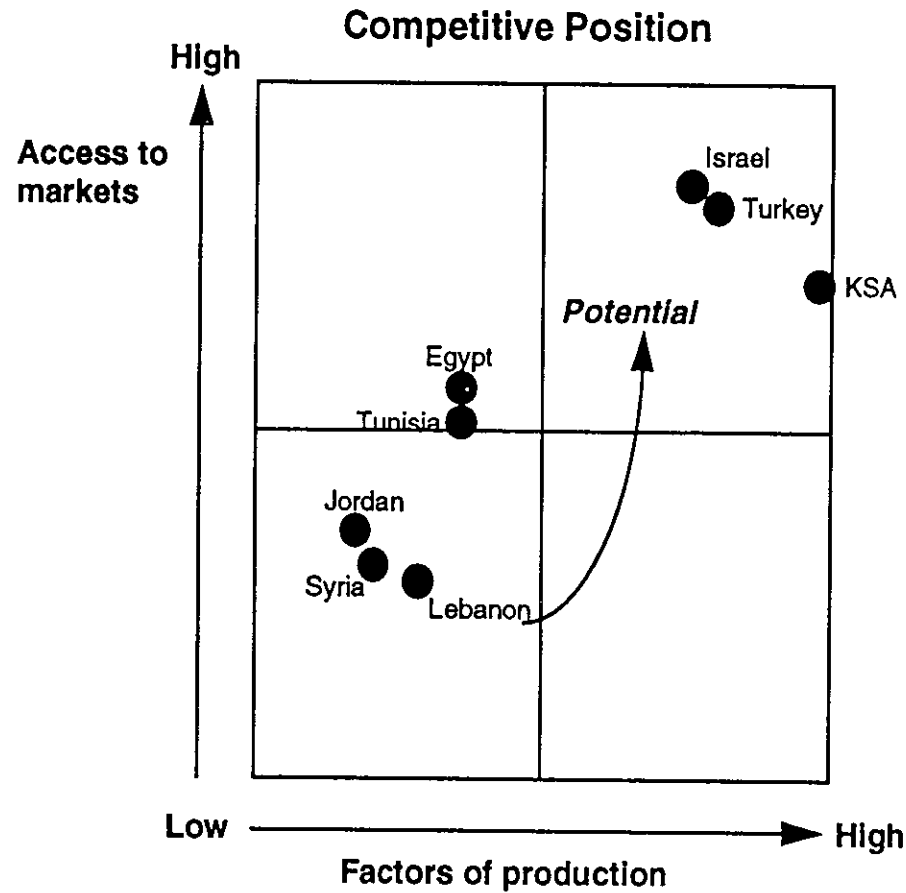
We also made a subjective assessment of other factors affecting Lebanon's competitive position

Our conclusions regarding Lebanon's competitiveness are as follows

- Lebanon's competitive position is weak today, and the situation is exacerbated by
 - ⇒ Persisting political uncertainties
 - ⇒ Low labor productivity
 - ⇒ Limited accessibility to export markets

- However, extensive potential exists given the following
 - ⇒ Openness of the Lebanese economy relative to others in the region
 - ⇒ Minimal government intervention in industry
 - ⇒ Prospects for development of the Lebanese financial markets
 - ⇒ Labor propensity for rapid learning

Lebanon's competitive position is weak today . . .



Lebanon's competitive positioning is based on the following rationale

Factors of Production

Criteria	Lebanon	Syria	Jordan	Egypt	KSA	Israel	Turkey	Tunisia
Natural resources	+	++	++	++	++++	+	+++	++
Skilled manpower	++	++	++	+	+	++++	++	++
Infrastructure	+	+	+	++	+++	+++	+++	++
Finance	+	+	++	++	++++	+++	++	++
Overall Rating	5	6	7	7	12	11	10	8

Access to Markets

Criteria	Lebanon	Syria	Jordan	Egypt	KSA	Israel	Turkey	Tunisia
Size of domestic market	+	++	+	+++	+++	+++	++++	++
Access to export markets	++	+	++	++	+++	++++	+++	+++
Overall Rating	3	3	3	5	6	7	7	5

Maximum ++++

However, Lebanon has significant potential for improvement

- Four factors are considered of prime importance in determining long term competitiveness
 - ⇒ **Openness** to trade and investment
 - ⇒ **Minimal government intervention** as reflected in public spending as a percent of GDP and low marginal tax rates
 - ⇒ **Efficiency of financial markets**
 - ⇒ **Labor flexibility**, levels of education and skills and the quality of management

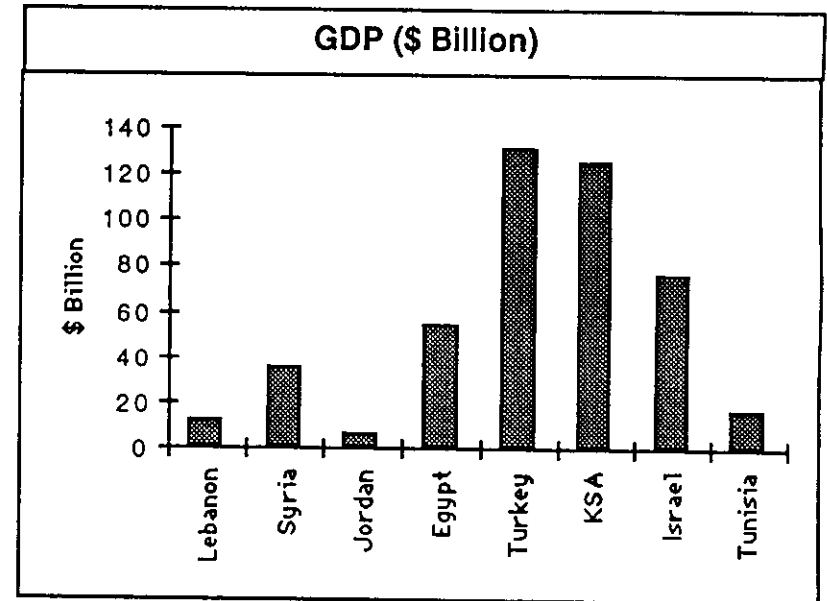
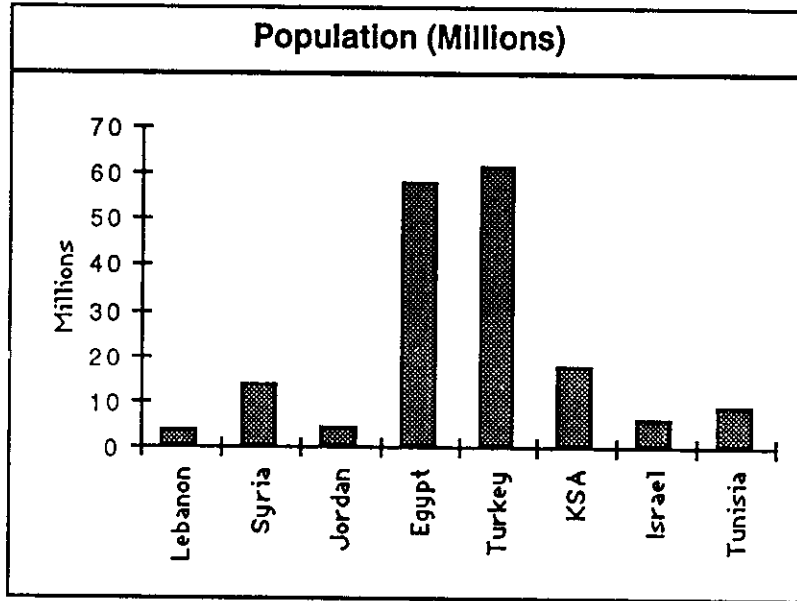
- Lebanon has good prospects in these areas
 - ⇒ Traditions of free trade . . . but need regulatory improvements to attract foreign investment
 - ⇒ Government spending is 35% of GDP, and the marginal tax rate (10%) is low by international standards
 - ⇒ Lebanon has the potential to develop efficient financial markets
 - ⇒ Labor and management have the propensity to learn fast and entrepreneurial skills are very well developed

Lebanon's access to markets is limited today

- Lebanon has one of the smallest domestic markets in the region
- Lebanon has no significant preferential treatment in terms of access to export markets
- Access to export markets is concentrated today on the Gulf and Europe; there is a potential to improve access to Europe and other countries in the Levant

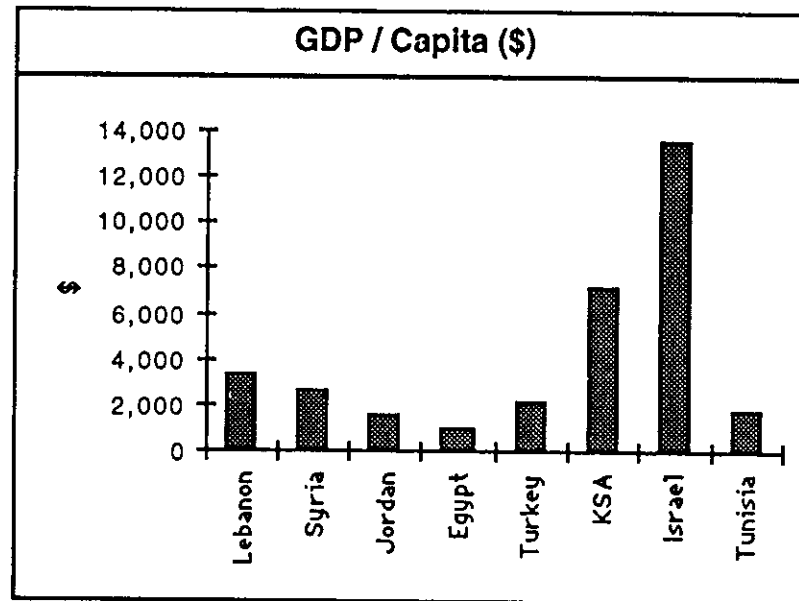
Republic of Lebanon
Office of the Minister of State for Administrative Reform
Center for Public Sector Projects and Studies
(C.P.S.P.S.)

Lebanon is one of the smallest economies in the region



Source: Economist Intelligence Unit

.... although it fairs better when compared on a per capita basis ...



Source: Economist Intelligence Unit

Unlike other countries in the region, Lebanon has limited preferential access to export markets

- Other countries in the region have secured preferential access to export markets
 - ⇒ Turkey and Tunisia to the European Union (EU)
 - ⇒ Saudi Arabia to the GCC
 - ⇒ Israel to the European Union, USA, and other EFTA countries
- Lebanon, however, is negotiating a free trade agreement with the EU
- Lebanon should negotiate similar agreements with neighboring countries

A free trade agreement is currently being negotiated with the EU

Manpower is Lebanon's most important factor of production

- **Natural resources:** Lebanon has relatively limited **natural resources**; raw materials, however, may be easily imported from Europe and neighboring countries

- **Manpower** is Lebanon's most important resource
 - ⇒ There is an abundance of university and vocational school graduates as well as entrepreneurial talent
 - ⇒ Education and training need, however, to be aligned with industry requirements
 - ⇒ Lebanese manpower has proved to be adaptable and fast learning

- **Infrastructure**
 - ⇒ Infrastructure suffered severely during the war
 - ⇒ Infrastructure is improving
 - ⇒ Priority is being given to productive industrial clusters (e.g. free zones; new industrial estates)

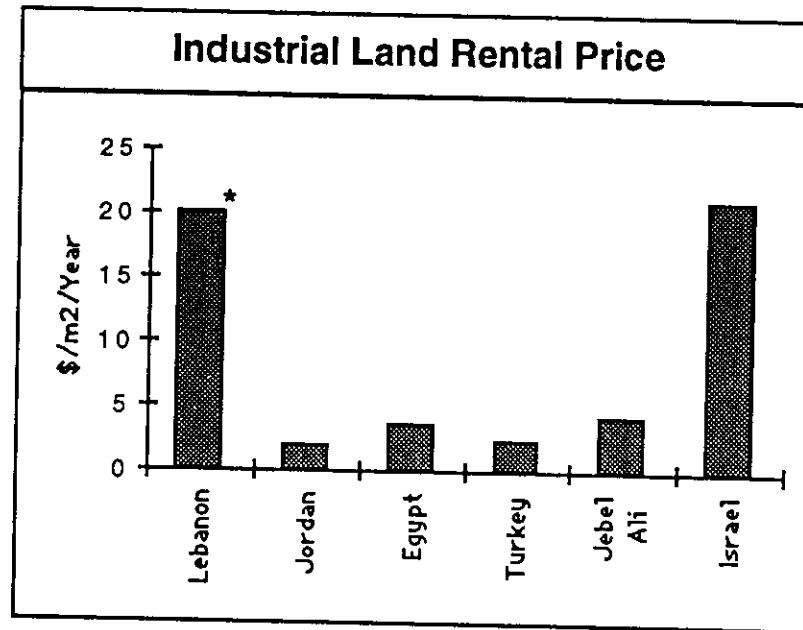
- **Finance**
 - ⇒ Significant potential exists to attract finance, given entrepreneurial and free market traditions
 - ⇒ Government monetary policy, regulations and political uncertainty may hamper access to finance in the short term

Lebanon has limited raw materials and natural resources

Natural Resources	Lebanon	Syria	Jordan	Egypt	KSA	Israel	Turkey
1. Land	+	+++	+++	+++	++++	++	++++
2. Mineral resources	+	+++	++	+++	++++	+	+++
3. Energy	+	++	+	++	++++	+	++
4. Agricultural products	+	+++	+	++	++	++	+++
5. Water	++	+	+	++	+	+	++
Overall	6	12	8	12	15	7	14

Legend: + Limited
 ++ Moderate
 +++ Good
 ++++ Excellent

Lebanon has a limited supply of land for industrial use . . . as a result, land is relatively expensive



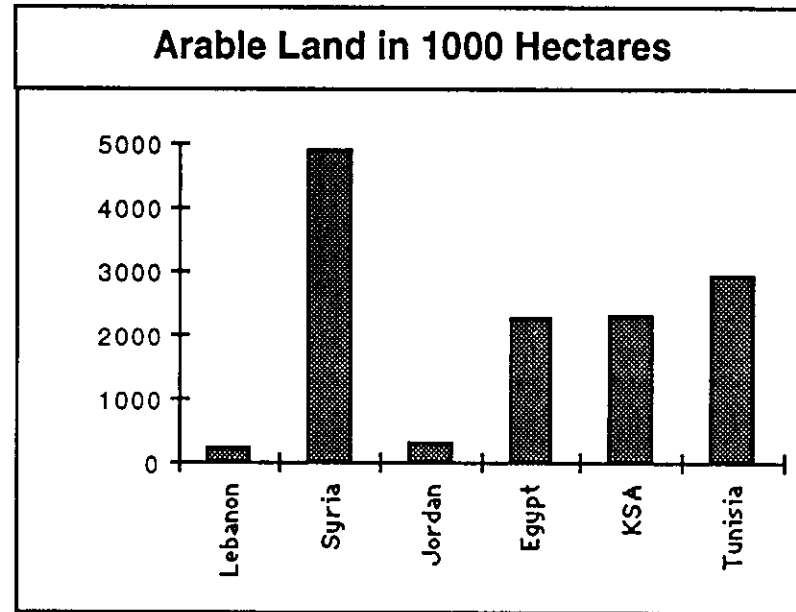
Source: Free zone operators

*Note: Industrial land is not available for rental in Lebanon.
We estimated land rental at 10% of land purchase prices

However, industrial land prices are expected to decrease with the establishment of new industrial parks

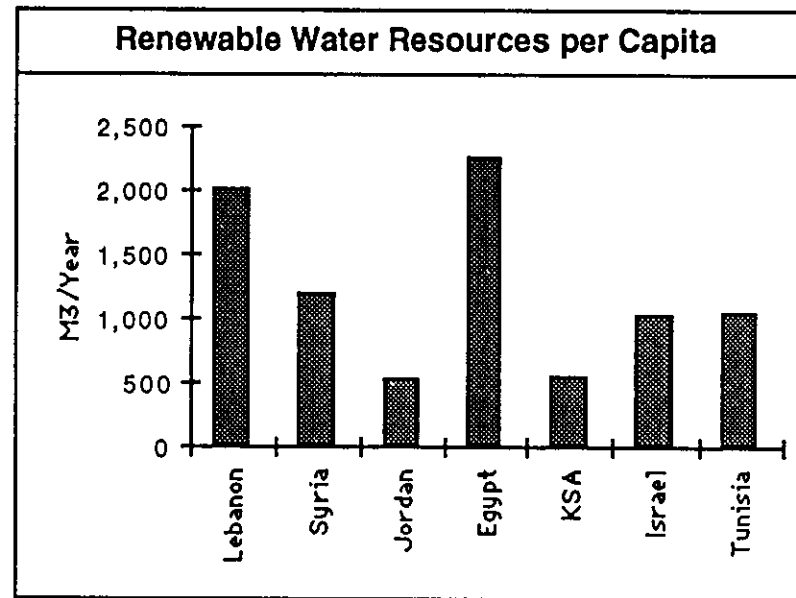
- A two million m² industrial park is being established in Al Qureiah (being developed as a model for other industrial parks)
- A one million m² of free zone land will be developed over the next 10 years on several sites around Lebanon
- More areas throughout Lebanon have been zoned for industrial use

Arable land for agricultural purposes is limited in Lebanon



Source: FAO Production Year Book - 1992

Lebanon has an edge on its neighbors in terms of renewable water resources (but water distribution systems are lacking)



Source: Middle East Economic Digest

Lebanon can draw on a wealth of management and marketing skills to support industrial development

	Lebanon	Syria	Jordan	Israel	Egypt	Turkey	KSA
Managerial Experience	+++	+	+++	+++	++	+++	++
Entrepreneurship	++++	+++	++	++++	++	+++	+++
Innovation	++	+	++	+++	+	+	+
Selling Skills	++++	++	++	++++	+	++	++
International Connections	+++	+	++	++++	++	+++	+++
Overall Rating	16	8	11	18	8	12	11

Source: ADL estimate

Legend: +++++ High
 +++ Above average
 ++ Moderate
 + Poor

Manpower cost is reasonable however, productivity is low

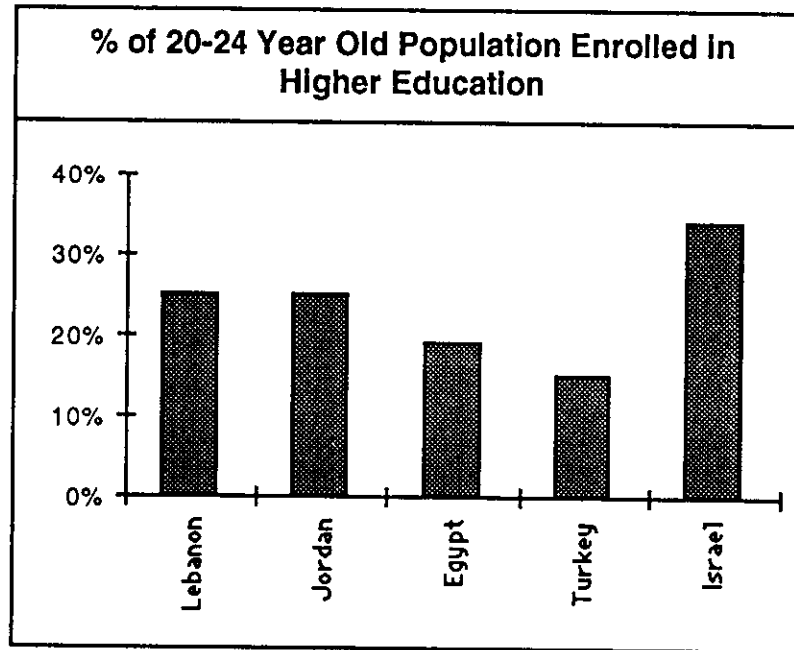
Country	Labor rates (\$/hour)	Value added per worker (\$ '000)
Germany	27.3	50.6
Japan	21.4	63.4
USA	17.1	44.3
Israel	9.1	36.0
Singapore	6.3	27.2
Saudi Arabia*	3.2	20.7
Mexico	2.6	12.6
Lebanon**	2.5	12.6
Turkey	1.8	8.0
Jordan	1.7	-
Syria	1.5	-
Egypt	1.0	-
China	0.4	1.3

* Based on the Industrial Survey, 1992

** Based on the Industrial Census, 1994

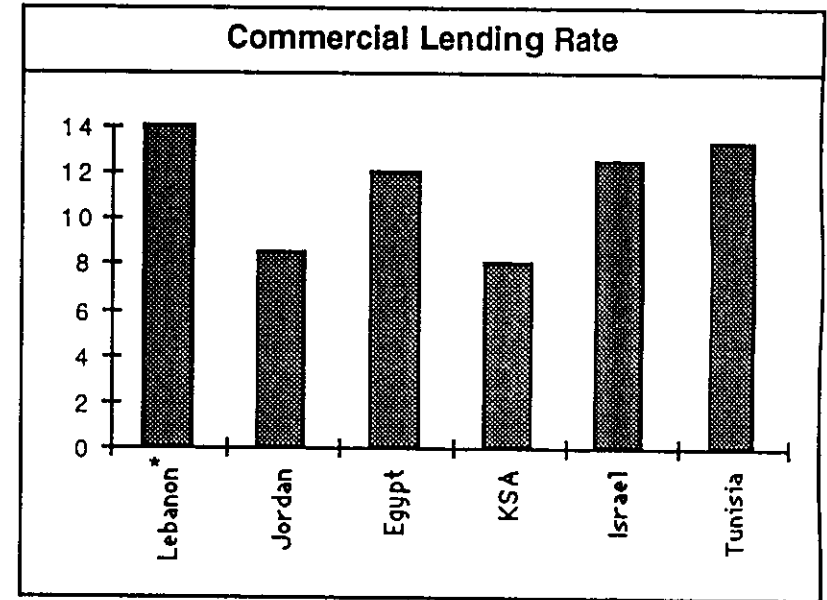
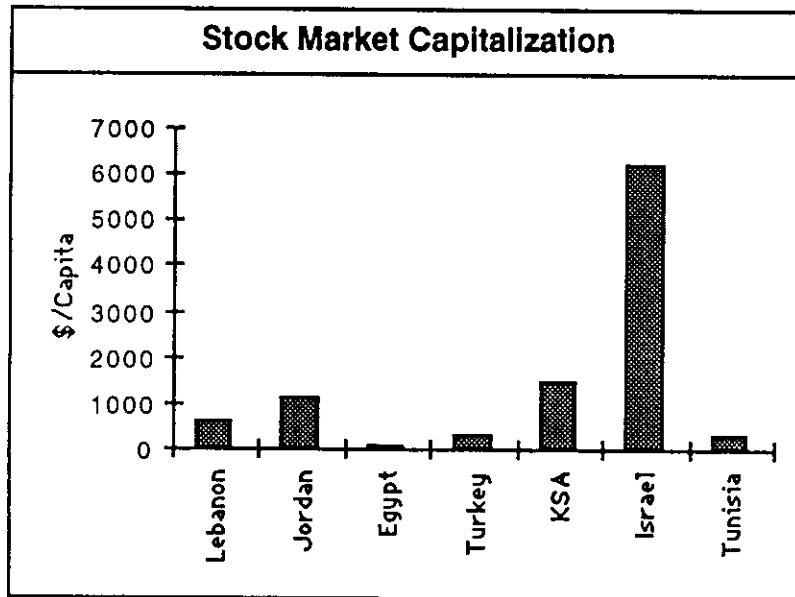
Source: Statistical Abstract of the World ; ADL estimates

Lebanon compares favorably in terms of the percentage of its population enrolled in higher education programs



Source: World Competitiveness Report; ADL estimate

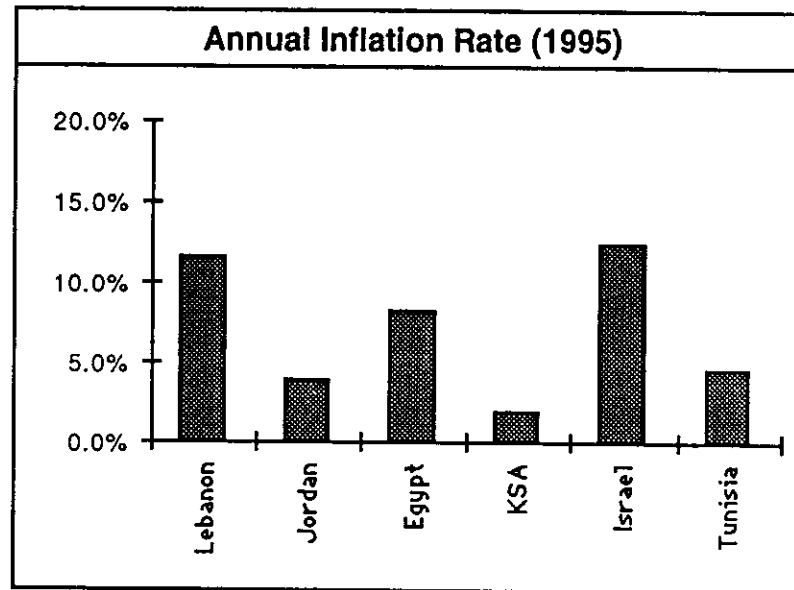
The availability of equity finance is limited and commercial debt is somewhat expensive



* For dollar denominated credit

Source: World Competitiveness Report; World Bank Country Report

Inflation in Lebanon is on the high side in spite of significant strides in bringing it down (it was around 130% in the early 1990s)



Source: IFS

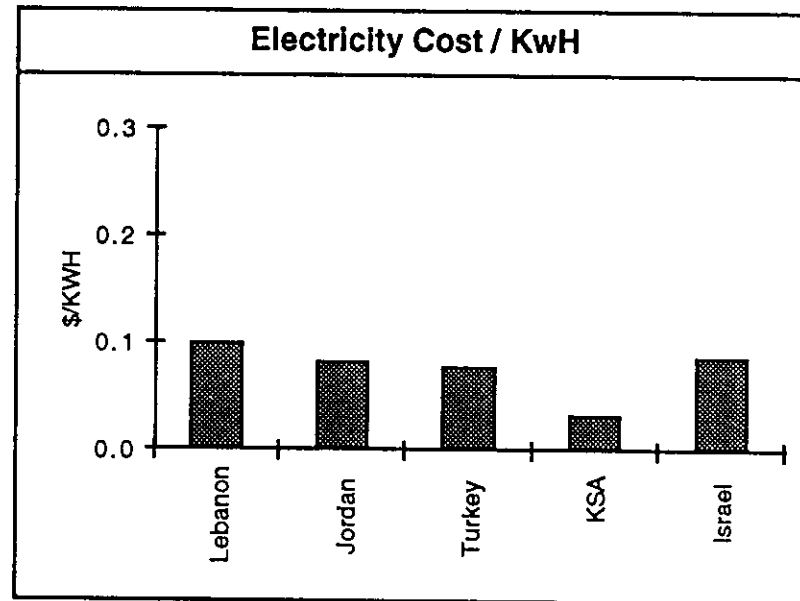
Presently the quality of infrastructure in Lebanon is understandably poor, but planned investments should improve the situation

	Lebanon	Syria	Jordan	Egypt	KSA	Israel
Electricity	++	+	++	++	++	+++
Water	++	++	++	+++	++	++
Roads	+	++	++	++	++++	+++
Telecommunications	++	++	++	++	+++	++++
Ports	++	++	++	++	++++	++++
Airports	+	++	+++	+++	++++	+++
Overall Rating	10	11	13	14	19	19

Source: ADL estimate

Legend: +++++ High
 +++ Above average
 ++ Moderate
 + Poor

On a comparative basis, Lebanon's cost of electricity for industrial users is broadly in line with competitors in the region



Source: Lebanese Ministry of Industry and Petroleum; World Competitiveness Report

Lebanon is relatively well positioned in terms of having an open and competitive market

Industry Rivalry

Criteria	Lebanon	Syria	Jordan	Egypt	KSA	Israel	Turkey	Tunisia
1. Ease of new business formation	+++	+	++	++	++	++	++	++
2. Market competitive intensity	+++	+	++	++	++++	+++	++	++
3. Openness to foreign investment	+++	+	+++	+++	+++	+++	+++	+++
4. Trade policies (openness to imports)	+++	+	++	++	+++	+++	++	++
5. Attitude of labor/trade unions	++	+++	+++	++	++++	++	++	+++
Overall Rating	14	7	12	11	16	13	11	12

Nevertheless, some improvements are recommended to further improve the present situation

Lebanon's position with respect to support industries/institutions is as follows

Support Industries/Institutions

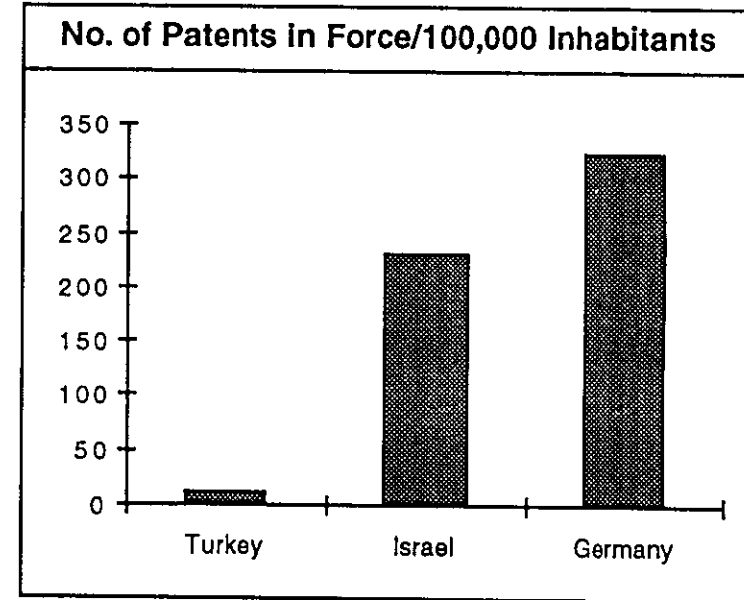
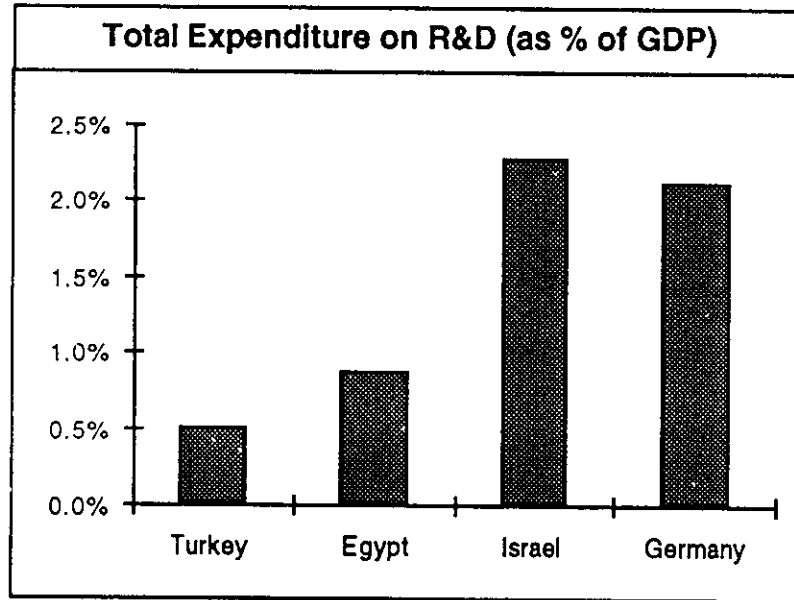
Criteria	Lebanon	Syria	Jordan	Egypt	KSA	Israel	Turkey	Tunisia
Research and development	+	+	+	++	+	++++	++	+
New product design/ development	++	+	+	++	+	+++	++	+
Parts / industrial machinery productions	++	++	++	++	++	+++	++	++
Industrial information/consulting services	+	+	+	++	+++	++++	++	++
Export promotion	+	+	+	+	+	+++	++	++
Legal system / arbitration	++	+	++	+	+	+++	++	++
Overall Rating	9	7	8	10	9	20	12	10

Advanced science and technology is not an area of competitive strength in the foreseeable future

- Israel has demonstrated the greatest commitment to investing in technology
- Lebanon has a long way to go to become competitive in industries based on advanced science and technology

Given other more promising industrial development priorities, industries based on advanced science and technology should take the back seat in the next 5 to 10 years

Israel has demonstrated the greatest commitment to investing in technology



Source: World Competitiveness Report

Seven research institutes are involved in research and development in Israel

- The Metals Institute
- The Plastics Laboratory
- The Institute for Ceramics and Silicates
- The Rubber Research Association
- The Fiber Institute
- The Applied Research Institute of the Ben-Gurion University
- The Toxicology Institute

To compete in the long term, Lebanon needs to

- Develop basic and applied research organizations
- Further develop and enforce regulations to protect intellectual property
- Attract expatriate Lebanese engineers and scientists
- Develop incentive to encourage research and development expenditure
- Foster partnerships with international research organizations

Agenda

1	Executive Summary
2	Industrial Mapping
3	Competitive Assessment
4	Strategic Objectives
5	Preferred Sectors
6	Strategic Thrusts
7	Implementation Program

Industrial development should be guided by clear strategic objectives, for example

- **Grow** industry at 1 to 3% above GDP
- **Focus** future investments on better quality/higher value added production
- Improve **quality and productivity** of existing production facilities
- Develop **fast response** capabilities to changes in the market
- Promote **exports**

Industrial development should be preferably guided by a vision of the future

- A vision would help developing a national consensus around objectives and priorities

- It will channel efforts and resources towards achieving a national goal. To succeed, several entities need to work in concert , including
 - ⇒ Industrialists/Industrialists Associations
 - ⇒ Government
 - ⇒ Labor
 - ⇒ Education and training organizations
 - ⇒ Financiers
 - ⇒ International aid organizations
 - ⇒ Support institutions

In searching for a vision for the future, some guiding principles should be considered, for example

- **Cooperation among nations** through free trade brings increased income and improved standards of living to all parties concerned
- **Exports** of manufactured products are essential to increase Lebanon's national income and improve its standards of living
- **Competition** in the Lebanese market between local production and imports is essential to develop an industry which is able to succeed in export markets
- Lebanon's **traditional strengths** should provide a launch pad for developing industry in the coming years. These strengths include in particular
 - ⇨ Entrepreneurship and marketing savvy
 - ⇨ International connections, in particular with Europe and the Middle East
 - ⇨ Flexible and adaptable production
 - ⇨ Fast learning labor and management
 - ⇨ Financial markets unencumbered by regulations

Lebanon may consider several possible alternatives

- Capitalize on trends to relocate European and other OECD production to low labor cost countries. This alternative is **not** the preferred option in the long term
 - ⇒ Relocation is limited to a few sectors (e.g., clothing, footwear, consumer electronics, assembly of spare parts)
 - ⇒ Lebanon is unlikely to be able to compete favorably with lower labor cost countries in the region if design and marketing contents are limited

- Support the entry of European and other OECD products into local and regional markets. This alternative is preferable in the long term
 - ⇒ It provides opportunities for adding value through marketing, customer service, and tailoring product designs to suit regional needs and tastes
 - ⇒ It capitalizes on Lebanon's competitive strengths in trade, marketing, services, and potentially product design

A workshop involving the most important parties involved in industrial development in Lebanon is needed to crystallize this vision

The following targets for industrial growth and employment should be considered

- Growth of the industrial sector to be 6-8% per annum over the next 10 years (faster than the GDP which is estimated to grow at around 5% per year)
- Consequently, the contribution from the industrial sector to the GDP will increase slowly over the years to 18% of GDP in ten years time, and 20% of GDP in twenty years time

These targets have implications in terms of the levels of investment required, and the need for labor and other factors of production

الجمهورية اللبنانية
مكتب وزير الدولة لشؤون التنمية الإدارية
مركز مشاريع ودراسات القطاع العام

The projected growth will have the following implications

Implications of Growth Assumptions

	1995	2005	2015
GDP (\$ billion)	11.4	18.6	27.6
Industrial Output (\$ billion)	3.9	7.0	11.4
Industrial Value Added			
• (\$ billion)	1.9	3.4	5.5
• % of GDP	16.5%	18.2%	20.0%
Labor Employed ('000)	150.0	245.7	382.1
• <i>Factories (>10 workers)</i>	67.0	94.8	134.4
• <i>Workshops (<10 workers)</i>	83.0	150.9	247.7

Source: Industrial Census, 1994; ADL estimates

The investment needed to support this growth is in the order of \$ 3.5 billion over the next 10 years (or \$ 350 million per year)

Investment Requirements
(\$ Billion)

	1996-2005	2006-2015
Growth related*	2.2	3.0
• <i>Factories (>10 workers)</i>	1.4	2.0
• <i>Workshops (<10 workers)</i>	0.8	1.0
Replacement of assets**	1.3	2.3
• <i>Factories (>10 workers)</i>	0.9	1.5
• <i>Workshops (<10 workers)</i>	0.4	0.8
Total	3.5	5.3
• <i>Factories (>10 workers)</i>	2.3	3.5
• <i>Workshops (<10 workers)</i>	1.2	1.8

* Assuming \$ 50,000 per worker in factories and \$ 10,000 per worker in workshops

** Assuming asset replacement is @ 5% per year

Source: ADL estimates

Incremental land required will be 6.2 million m² for the next 10 years costing about \$ 155 million

Incremental Land Requirements for Factories
(million m²)

	1996-2005	2006-2015
Growth related*	5.2	7.4
• <i>Factories (>10 workers)</i>	2.8	4.0
• <i>Workshops (<10 workers)</i>	2.4	3.4
Relocation**	1.0	1.0
• <i>Factories (>10 workers)</i>	0.7	0.7
• <i>Workshops (<10 workers)</i>	0.3	0.3
Total	6.2	8.4
• <i>Factories (>10 workers)</i>	3.5	4.7
• <i>Workshops (<10 workers)</i>	2.7	3.7
Cost of land development (\$ million)***	155	210

* Assuming 100 m² per worker for factories and 33 m² per worker for workshops

** Assumed @ 1% per year

*** Assuming \$ 25/m² for land development

Source: ADL Estimates

Additional labor required will be as follows

Additional Labor Requirements (‘000)

	1996-2005	2006-2015
To Support Growth	95.7	136.4
Attrition*	<u>45.0</u>	<u>45.0</u>
Total	140.7	181.4
Including		
- Admin & Sales	6.2	7.8
- Technical	8.1	10.1
- Skilled labor	47.2	60.8
- Unskilled labor	<u>79.2</u>	<u>102.7</u>
Total	140.7	181.4

* Assumed @ 3% of 1995 labor

Source: ADL Estimates

Lebanese industry should target increasing its exports over time

- From 12% of production in 1994 (i.e., \$ 450 million)
- To say 20% of production in 2005 (i.e., \$ 1,400 million)
- To 25% of production in 2015 (i.e., \$ 2,850 million)

To compete in local and export markets, the Lebanese industrial sector must improve its quality and productivity. This is achieved through

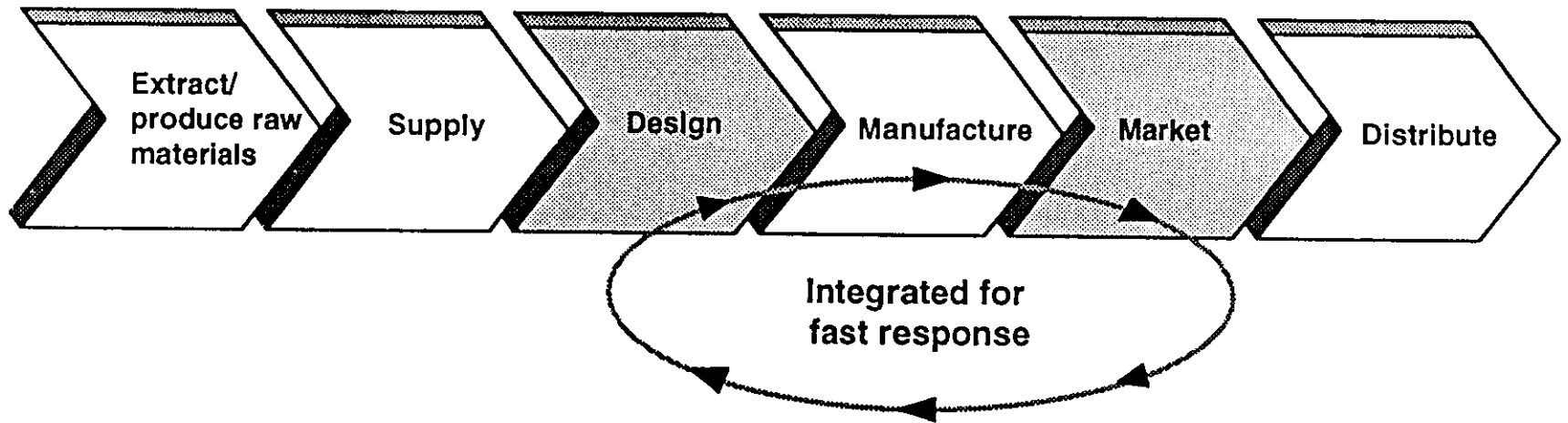
- Investment in production equipment and technology
- Promoting a quality culture
- Establishing quality standards and certification processes
- Streamlining production processes
- Investment in training
- Establishing industry networks (or clusters) to share common costs (e.g., design; testing; export promotion)
- Establishing an industrial information center

The establishment of a fast response capability is needed to adapt quickly to changing market requirements - one of the potential areas of strength for Lebanese industry. This is achieved through

- Development of effective product design processes which react rapidly to market feedback
- Investment in computer aided design/manufacturing (CAD/CAM)
- Investment in flexible production facilities (computer integrated manufacturing)

To establish fast response capabilities, product design, manufacturing, and marketing should be closely integrated

Manufacturing Value Chain



Agenda

1	Executive Summary
2	Industrial Mapping
3	Competitive Assessment
4	Strategic Objectives
5	Preferred Sectors
6	Strategic Thrusts
7	Implementation Program

In searching for preferred industrial sectors for future investment

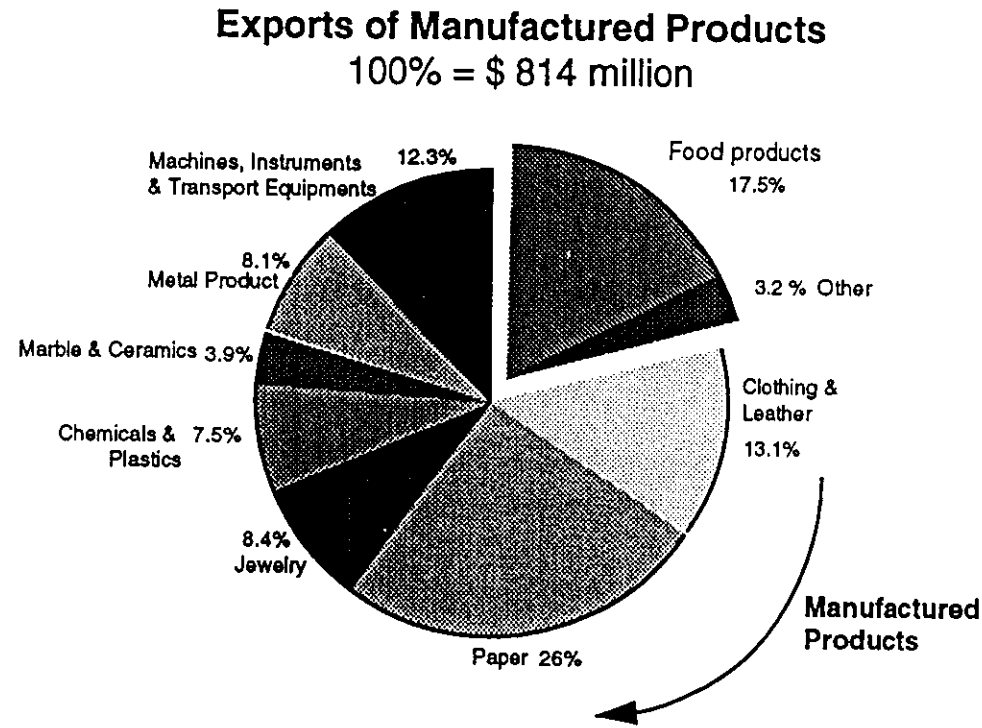
- We considered sectors and functions compatible with Lebanon's competitive strengths
- We considered industrial sectors where Lebanon has traditionally demonstrated its strengths
- We identified products within those sectors which best suit Lebanon's competitive strengths - as well as products which do not fit such strengths

The selection of preferred sectors is intended to serve as a guide for promoting future investments rather than as a basis of selective government support to certain industrial sectors

- Some countries (e.g., Korea; Japan) have targeted a small number of industrial sectors to receive selective government support in the form of tax credits, subsidies and tariff protection
- This strategy has succeeded in some countries, especially those where government bureaucracy is both efficient and disciplined
- In most cases, however, such a policy has not been successful. As a result, it is being generally abandoned today.

In Lebanon, the ultimate selection of sectors to receive future investments should be left to the free market without any distortions introduced by government industrial policy

Through the free market, preferred industries in Lebanon have been able to demonstrate a comparative advantage - e.g., through exports



Future investments should take these industries upmarket for example through better quality and/or higher value added

Preferred sectors share common characteristics

- Ability to benefit from flexible production processes
- Catering to dynamic market tastes and preferences
- Moderate level of technology and energy employed
- Low polluting production

Flexible production increases the ability of industry to respond to changing market opportunities

- Lebanon's proximity to markets in the Middle East and its entrepreneurial spirit places it in an ideal position to capitalize on changing market requirements
- Lebanon should therefore promote future investments in sectors which lends themselves to flexible production

Taste and fashion related products should be particular interest to Lebanon

- Open to East and West, Lebanon has developed an appreciation for good taste and fashion
- Regional markets are becoming more dynamic and open to new products which encompass taste and fashion
- Effective marketing skills will be key in developing promising market niches based on taste and fashion
- Examples of sectors which fall in this area include
 - ⇒ Food products
 - ⇒ Clothing and leather products
 - ⇒ Jewelry and silver
 - ⇒ Household goods
 - ⇒ Furniture and furnishings
 - ⇒ Ceramics, sanitary ware and building accessories

Target sectors for industrial development should not be energy intensive

- Energy is imported and more expensive relative to neighboring oil producing countries
- Infrastructure development and upgrading is a gradual process
- Energy resources must be harnessed and allocated to support all forms of economic and industrial development

Environment friendly industrial development makes more economic sense in the long run

- Lebanon is a small touristic country
- Polluting industries will cause more harm than benefits when viewed from a macroeconomic perspective
- As such Lebanon should
 - ⇒ Emphasize industries that do not contaminate and pollute scarce natural resources
 - ⇒ Reduce the associated costs of environmental protection (e.g., solid waste disposal; water treatment; air emissions treatment)
 - ⇒ Conform to international environmental laws

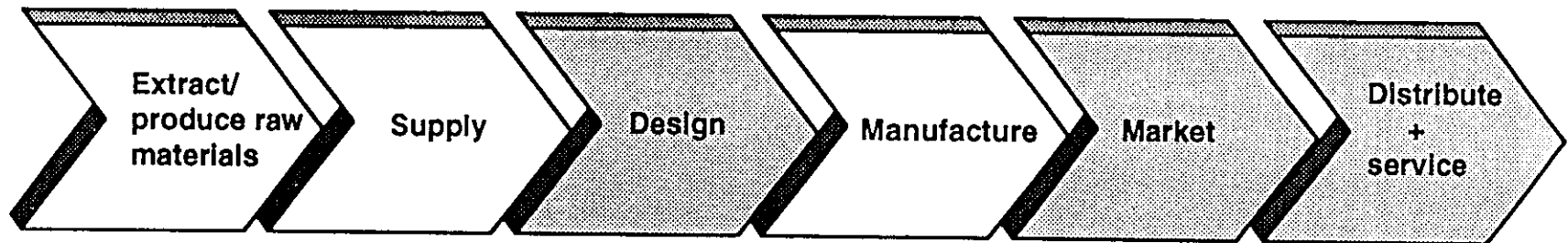
Furthermore, Lebanon should promote skill intensive rather than labor intensive investments; for example

- In **textile** production
 - ⇒ **Avoid labor intensive functions:** e.g., weaving; garment mass production
 - ⇒ **Promote skill intensive functions:** e.g., design; production of fashion items; marketing/distribution

- In **electrical and electronics**
 - ⇒ **Avoid labor intensive functions:** e.g., assembly
 - ⇒ **Promote skill intensive functions:** design; production of small volume/high value products; software production; marketing/distribution; after-sale services

Accordingly, Lebanon should concentrate on industries where significant value is realized in product design, marketing, distribution and post-sale service

Manufacturing Value Chain



Preferred investments in food and beverages may be characterized as follows

Key products/ services	<ul style="list-style-type: none"> • Convenience/health processed foods • Lebanese foods
Target markets	<ul style="list-style-type: none"> • Middle East • Lebanese communities abroad
Technology requirements	<ul style="list-style-type: none"> • Moderate
Raw materials	<ul style="list-style-type: none"> • Purpose produced in Lebanon or imported (e.g., from Syria)
Dependence on labor/energy	<ul style="list-style-type: none"> • Moderate
Economies of scale	<ul style="list-style-type: none"> • Select products which do not benefit extensively from economies of scale
Established capabilities	<ul style="list-style-type: none"> • Yes for some products; need know-how and technical assistance for others
Potential for innovation/product development	<ul style="list-style-type: none"> • Growing with increased trends in the Middle East towards processed food products for convenience and health purposes

Preferred investments in textile and leather may be characterized as follows

Key products/ services	<ul style="list-style-type: none"> • Branded products in Lebanon to suit preferences of Middle East market • Fashion • Fashion accessories
Target markets	<ul style="list-style-type: none"> • Middle East • Europe (including Eastern Europe)
Technology requirements	<ul style="list-style-type: none"> • Modest (possibly for design)
Raw materials	<ul style="list-style-type: none"> • Imported; some local production of leather products
Dependence on labor/energy	<ul style="list-style-type: none"> • Avoid labor intensive productions
Economies of scale	<ul style="list-style-type: none"> • Avoid products which benefit extensively from economies of scale
Established capabilities	<ul style="list-style-type: none"> • Yes . . . but need to go upmarket and have to develop design capabilities
Potential for innovation/product development	<ul style="list-style-type: none"> • Extensive in fashion business

Preferred investments in metals may be characterized as follows

Key products/ services	<ul style="list-style-type: none"> • Silverware; jewelry • Selected fabricated metals • Selected machinery
Target markets	<ul style="list-style-type: none"> • Worldwide (for jewelry and silverware) • Middle East (plus some African countries) • Europe
Technology requirements	<ul style="list-style-type: none"> • Modest
Raw materials	<ul style="list-style-type: none"> • Imported
Dependence on labor/energy	<ul style="list-style-type: none"> • Generally moderate
Economies of scale	<ul style="list-style-type: none"> • Select products which do not require economies of scale
Established capabilities	<ul style="list-style-type: none"> • Yes
Potential for innovation/product development	<ul style="list-style-type: none"> • Extensive, especially in jewelry and silverware

Preferred investments in wood and paper may be characterized as follows

Key products/ services	<ul style="list-style-type: none"> • Quality furniture • Quality printing/packaging
Target markets	<ul style="list-style-type: none"> • Middle East • Possibly Europe and selected African market
Technology requirements	<ul style="list-style-type: none"> • Modest (except for some printing processes)
Raw materials	<ul style="list-style-type: none"> • Imported
Dependence on labor/energy	<ul style="list-style-type: none"> • Moderate
Economies of scale	<ul style="list-style-type: none"> • Select products which do not benefit significantly from economies of scale
Established capabilities	<ul style="list-style-type: none"> • Yes . . . although design skills need to be developed
Potential for innovation/product development	<ul style="list-style-type: none"> • Extensive

Preferred investments in chemicals, plastics and ceramics may be characterized as follows

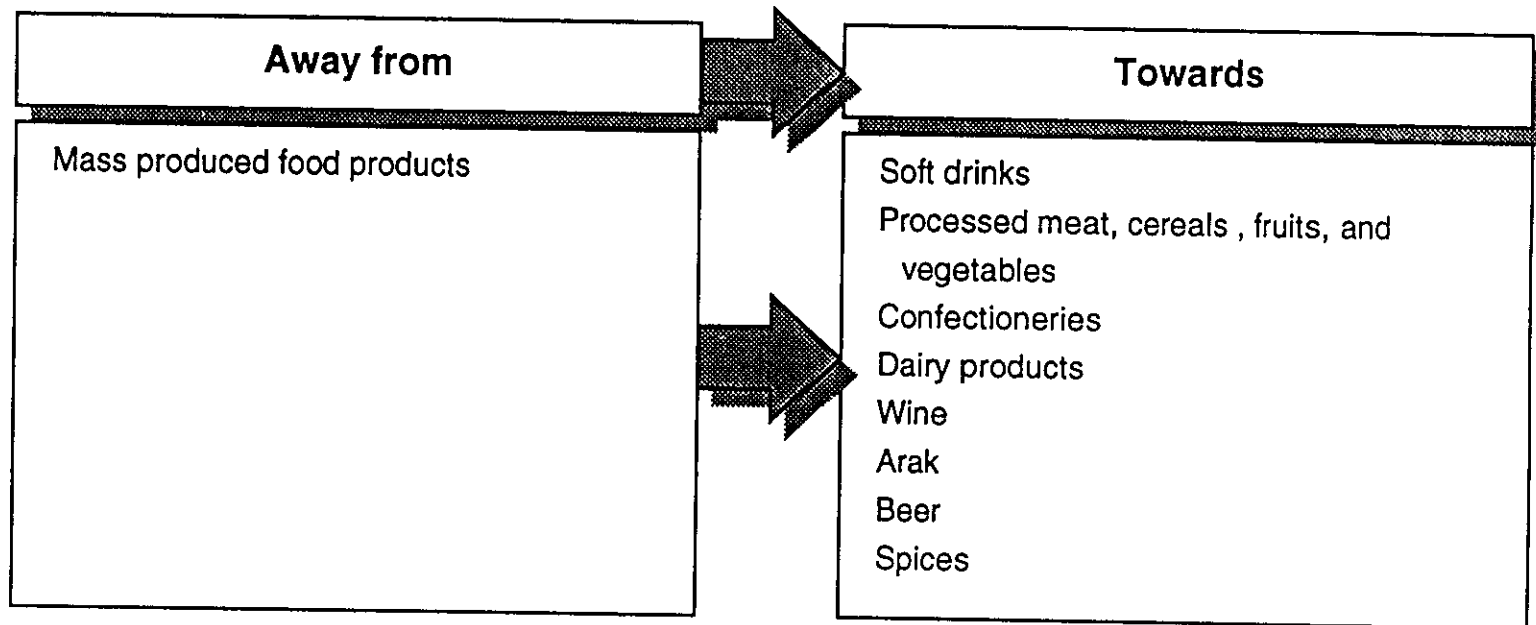
Key products/ services	<ul style="list-style-type: none"> • Chemical products which require production near markets/technical support • Pharmaceuticals (generic or under license) • Personal care products/perfumes • Quality plastic household products/packaging • Selected building materials • Ceramics (fashion related)
Target markets	<ul style="list-style-type: none"> • Middle East • Europe and Africa for selected products
Technology requirements	<ul style="list-style-type: none"> • Varies; need technology partner for some products
Raw materials	<ul style="list-style-type: none"> • Generally imported (except for building materials)
Dependence on labor/energy	<ul style="list-style-type: none"> • Select products which require skilled rather than labor
Economies of scale	<ul style="list-style-type: none"> • Select products which do not benefit significantly from economies of scale
Established capabilities	<ul style="list-style-type: none"> • Yes in some areas . . . need to acquire know-how in others
Potential for innovation/product development	<ul style="list-style-type: none"> • Significant in many areas

Preferred investments in electrical and electronics may be characterized as follows

Key products/ services	<ul style="list-style-type: none"> • May support international producers in selected functions (e.g., design; testing; software development; marketing & distribution; after-sales services) • Production of low volume/high value added products
Target markets	<ul style="list-style-type: none"> • Middle East (possibly elsewhere (depending on technology partner)
Technology requirements	<ul style="list-style-type: none"> • Generally need technology partner
Raw materials	<ul style="list-style-type: none"> • Imported
Dependence on labor/energy	<ul style="list-style-type: none"> • Select skill intensive rather than labor/energy intensive products
Economies of scale	<ul style="list-style-type: none"> • Select products which do not benefit significantly from economies of scale
Established capabilities	<ul style="list-style-type: none"> • Limited
Potential for innovation/product development	<ul style="list-style-type: none"> • Yes

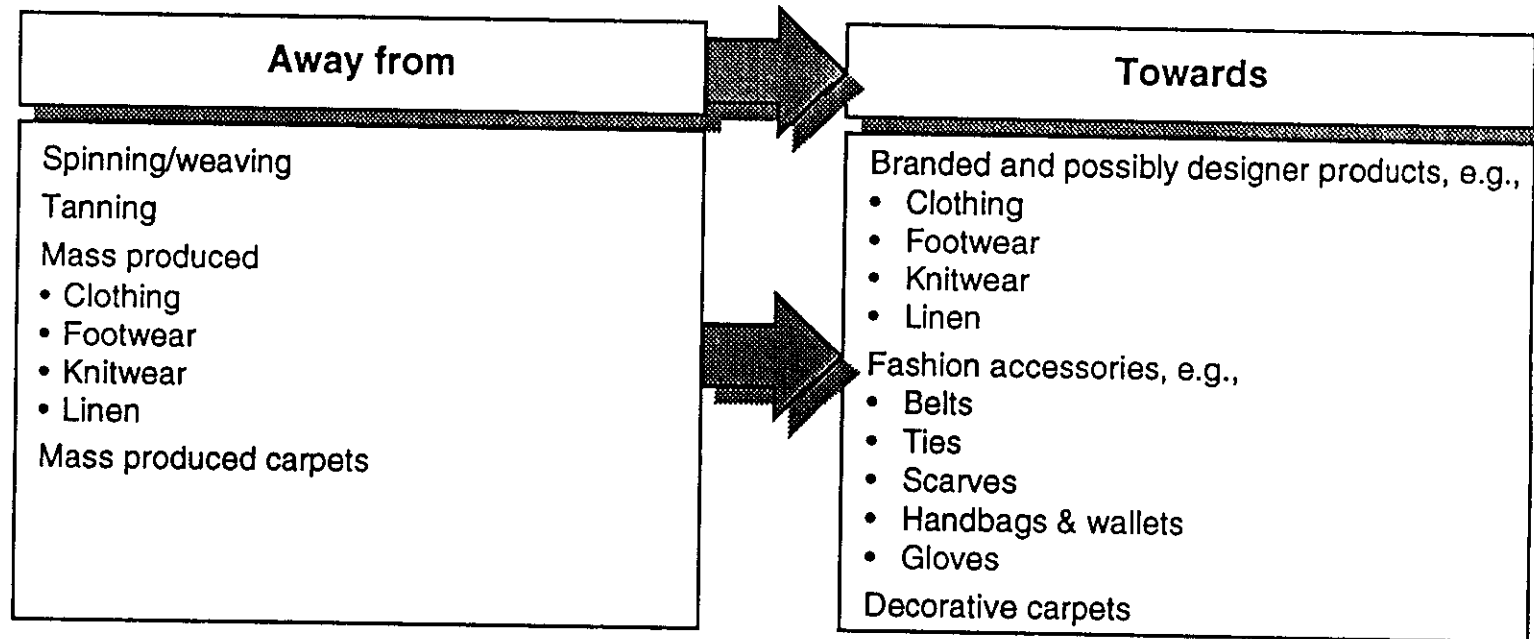
Food and beverages should focus on processed and branded food products as well as on traditional Lebanese foods for export throughout the world

Food & Beverages

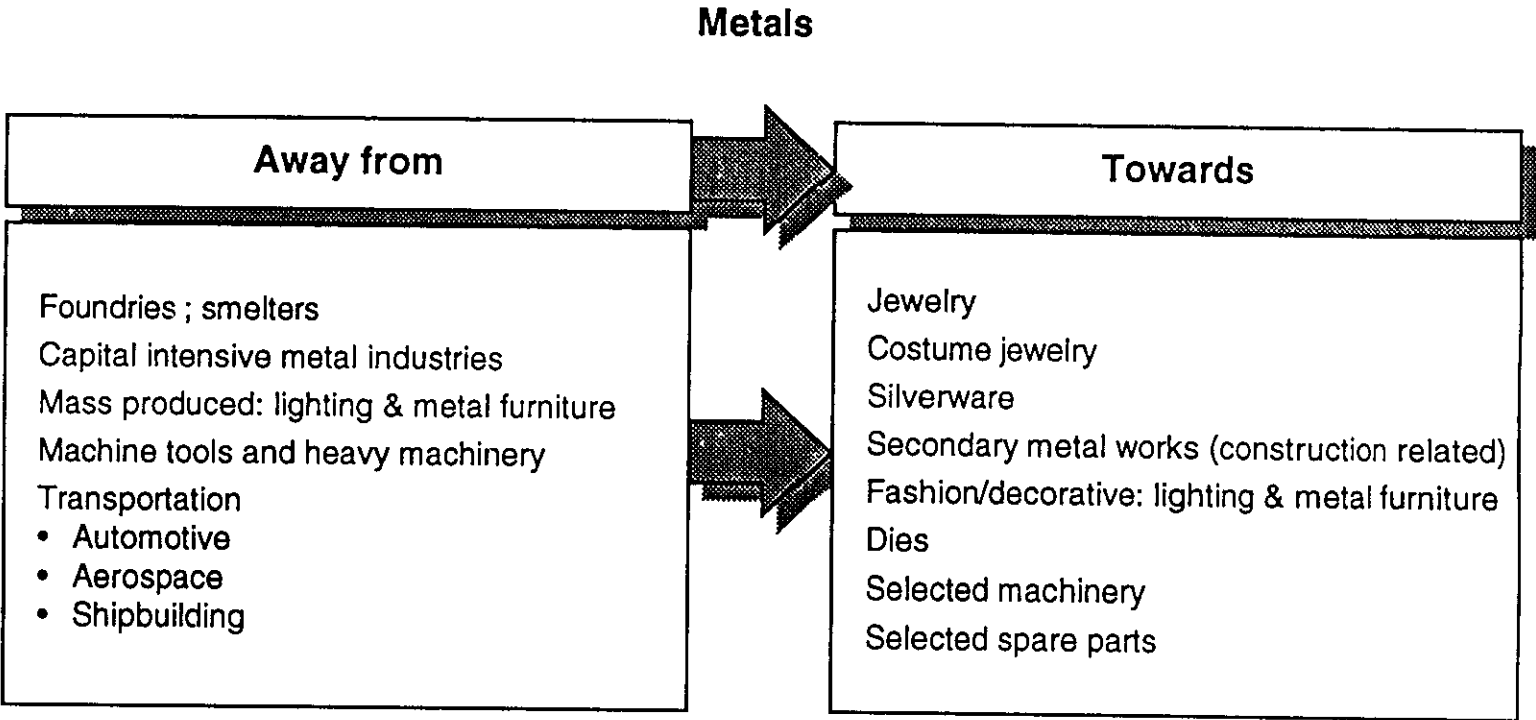


Lebanon should concentrate on high value added fashion and branded clothing and leather products

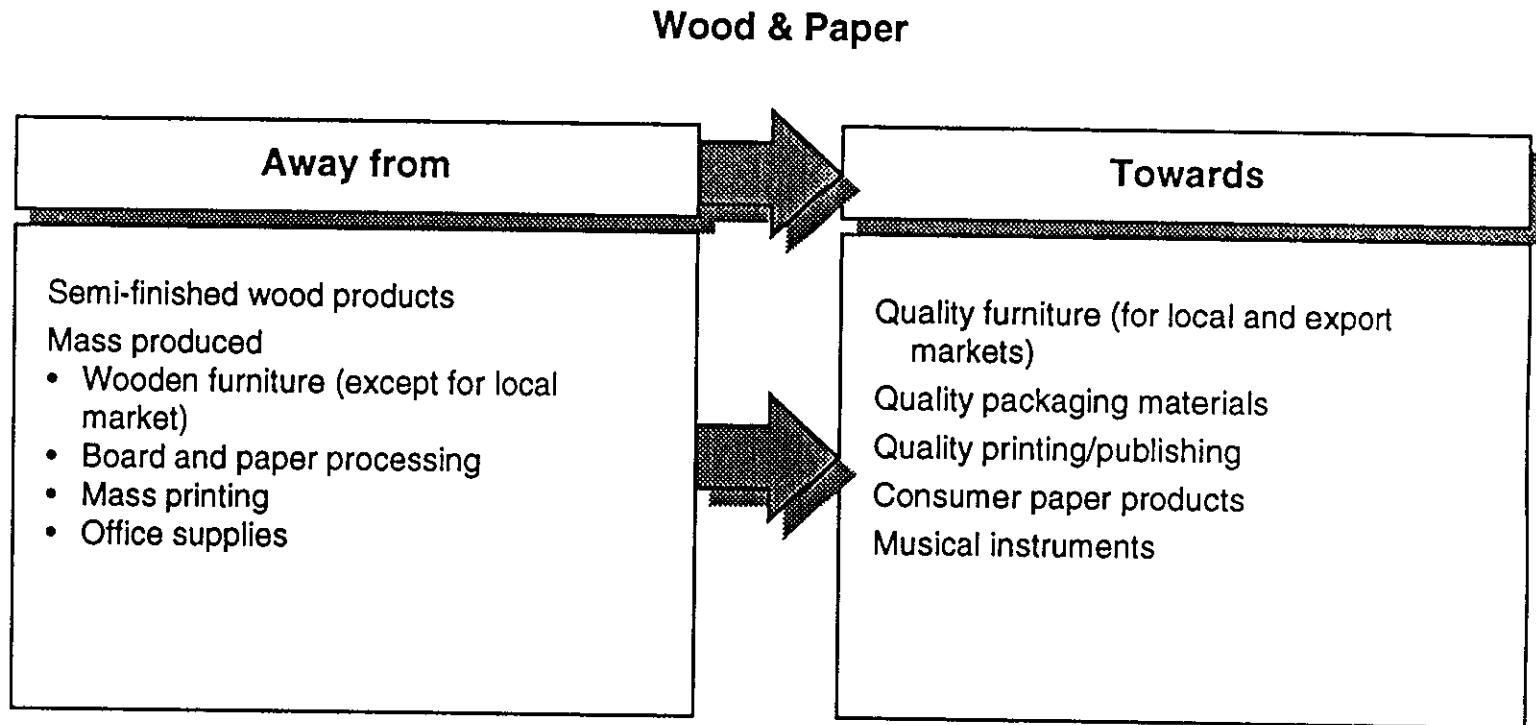
Textile & Leather



Lebanon should concentrate on high value added metal products

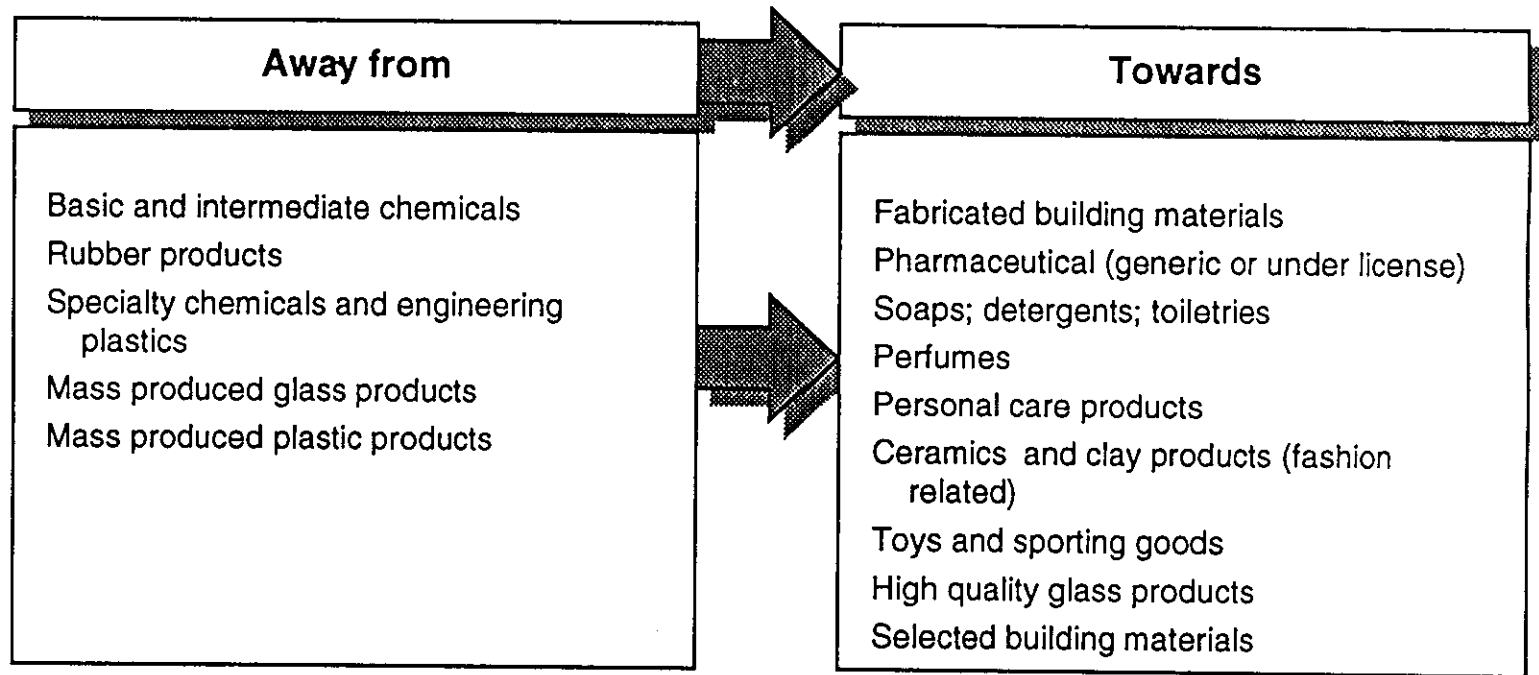


Lebanon should concentrate on quality wood and paper products which have export potential



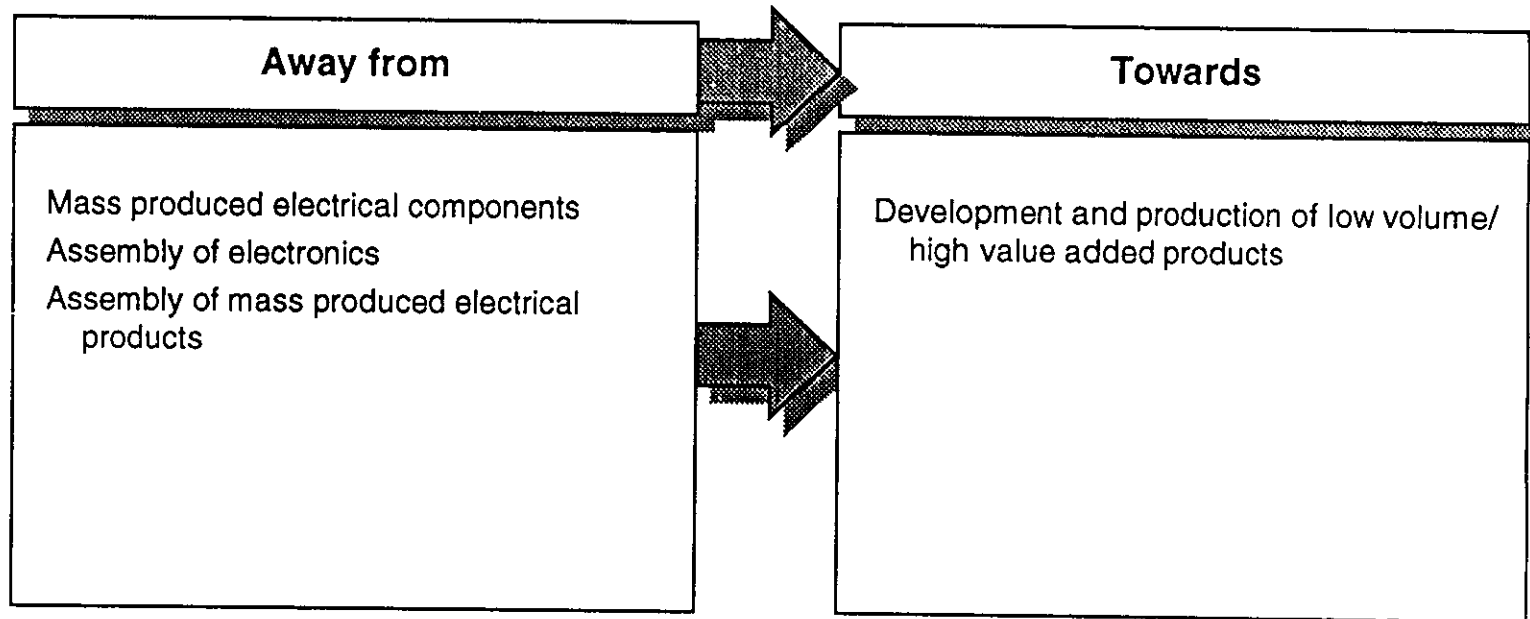
Lebanon should concentrate on end user related chemicals, building materials and personal care products

Chemicals, Plastics, & Ceramics



Lebanon should consider investing in selected products in the electrical and electronic sector

Electrical and Electronic Equipment



Agenda

1	Executive Summary
2	Industrial Mapping
3	Competitive Assessment
4	Strategic Objectives
5	Preferred Sectors
6	Strategic Thrusts
7	Implementation Program

To help achieve industrial development objectives, two main strategic thrusts are needed

- Enhancing industrial development **facilitators**, for example
 - ⇒ Investment promotion
 - ⇒ Development of manpower
 - ⇒ Development of well serviced industrial estates and free zones
 - ⇒ Supportive regulations
 - ⇒ Providing support services such as timely and accurate statistics and information, export promotion, etc.

- Overcoming industrial development **barriers**, for example
 - ⇒ Government bureaucracy
 - ⇒ Inadequate regulations

To achieve these thrusts, we propose establishing seven task forces, each having the following objectives

- Promoting new **investments** in industry
- Developing requisite **manpower**
- Modernizing of **regulations** and streamlining government processes of particular interest to industry
- Developing **industrial land and infrastructure**
 - ⇒ Free zones and industrial parks
 - ⇒ Industry clusters
- Providing requisite **support** in particular in the following areas
 - ⇒ Technical and management advice
 - ⇒ Industry networks
 - ⇒ Standards
 - ⇒ Outsourcing exchange
- Promoting and financing **exports**
- Rehabilitating existing industrial facilities

To achieve the industrial development objectives set forth, around \$ 3.5 billion will be needed over the coming 10 years (or \$ 350 million per year)

Additional Funding Required
(\$ Million)

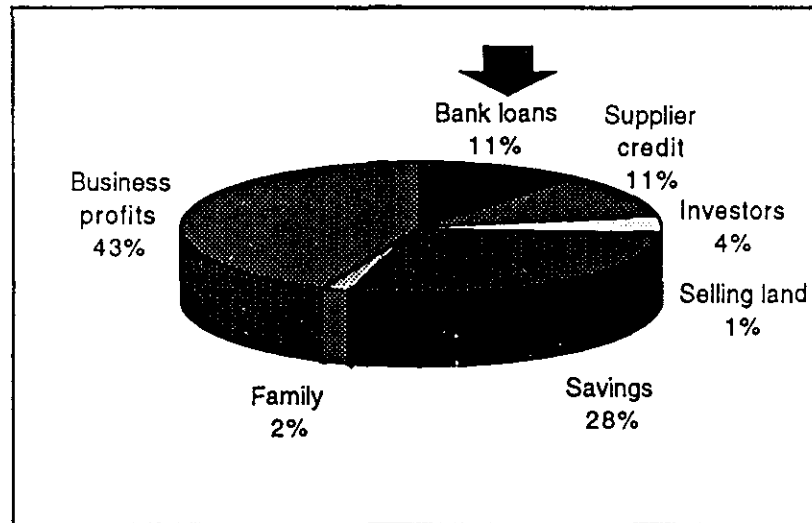
Funding Requirements	Over 10 Years	Average/Year
Equity (60%)	2,100	210
Long term debt (25%)	875	88
Short term debt (15%)	525	52
Total	3,500	350

Debt to equity 2:3

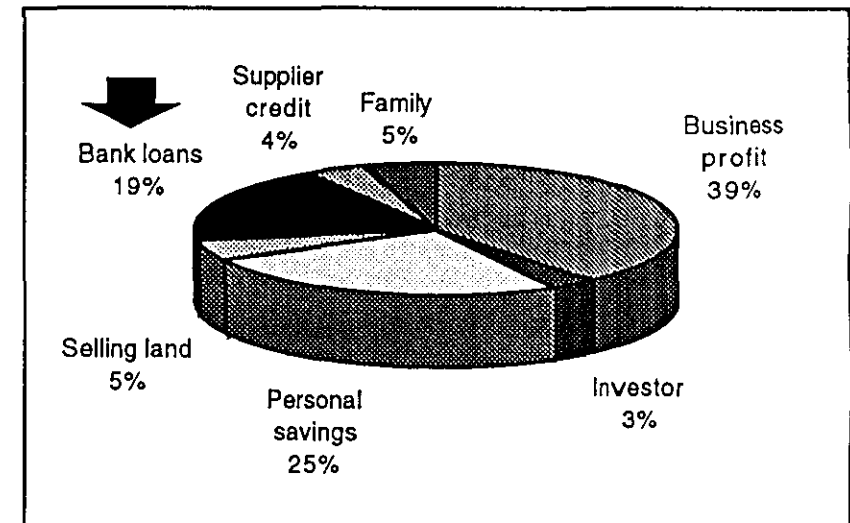
Source: ADL estimate

Today, bank credit finances 11% of working capital and 19% of capital investments

Sources of Working Capital



Sources of Capital Investment



Source: World Bank (Private Sector Development Department)

We understand, however, that large organizations receive the bulk of this credit

In the future, however, as financial markets develop, a 2:3 debt to equity ratio should be targeted. Equity investments (around \$ 2 billion over 10 years) may come from various sources

- Lebanese investors
- Capital market (applicable only for large investments)
- Venture capitalists and investment companies
- Direct foreign investment

To facilitate the sharing of risk through broadly held ownership, the establishment of industrial corporations should be encouraged

- Today, most industrial companies are family owned and ownership is typically held by a very small number of investors making it difficult to raise capital
- The establishment of corporations should be encouraged to mitigate this problem
- To facilitate the process, some changes in the Commercial Law are recommended, for example
 - ⇒ Protection of the rights of minority shareholders
 - ⇒ Better standards for information disclosure, accounting and auditing
 - ⇒ Lifting restrictions on minimum capital requirements
 - ⇒ Lifting restrictions on the composition of the Board of Directors
 - ⇒ Permitting the issuance of warrants and other financing instruments
- Also, the process of company registration should be simplified and computerized

The capital market is emerging in Lebanon and promises to become an interesting source of equity finance, especially for large investments

- Lebanon is well positioned to become a strong capital market in the region
- However, a number of regulatory improvements are recommended to promote the development of this market. In particular, the following must be improved
 - ⇒ Disclosure standards
 - ⇒ Quality of intermediation
 - ⇒ Effectiveness of market supervision, regulation and licensing of intermediaries
 - ⇒ More modern regulations to allow the issuance of new investment vehicles

Lebanon should promote the establishment of publicly held venture capital and investment companies to provide equity financing to industry

- These companies may raise funds through the capital market
- Venture capitalists take equity positions in existing or new projects developed by others. They typically finance risky but promising ventures.
- Investment companies may develop their own projects or invest in projects developed by others

Such companies have been successful in many parts of the world including the Middle East

Foreign direct investment is not only an important source of finance but a much needed source of technology, know how, brand equity and marketing support

- Today, foreign direct investment in industry is virtually non-existent
- With the globalization of production, international companies are seeking the lowest cost or most productive locations for adding value in the manufacturing and distribution process
- Lebanon is geographically and culturally well positioned to benefit from this trend

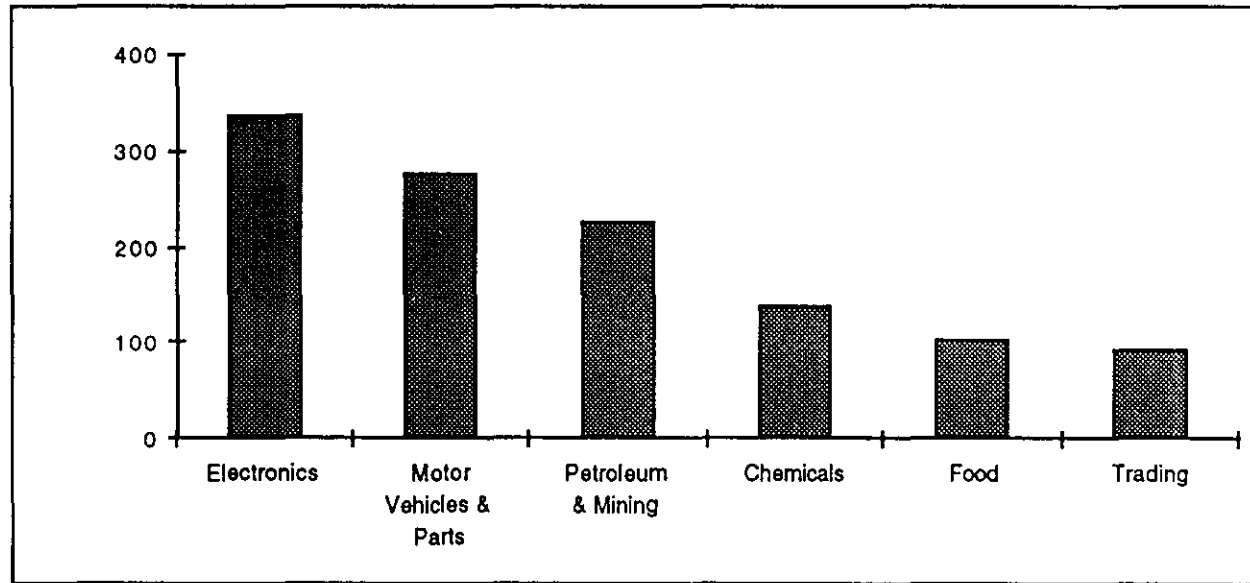
Lebanese investors should seek to establish *joint ventures* with international companies active in foreign direct investments

As discussed elsewhere in this report, to compete for these investments, Lebanon must achieve the following

- Establish political and economic stability
- Develop a productive labor force
- Establish industrial estates and free zones served by first class infrastructure
- Establish a modern regulatory environment which supports foreign investments
- Reduce government bureaucracy related to industrial investment and customs

The sectors where foreign investment is most active are as follows

Foreign Investments by Multinational Companies
(\$ Billion)



Source: UNCTAD

The largest investors in areas of interest for Lebanon include

- **Food:** Nestlé; Uniliver; Philip Morris; Grand Metropolitan; Pepsico; Sara Lee
- **Chemical/Pharmaceutical:** Ciba-Geigy; Hoechst; Dow Chemicals; BASF; Dupont; Procter&Gamble; Bayer; Glaxo; Solvay
- **Electrical/Electronics:** General Electric; Hitachi; Sony; Mitsubishi; Matsushita Electric; ABB; Philips; Alcatel; Xerox; Toshiba; Sharp; Fujitsu; AT&T; Motorola

The most important regulations which need to be established or modernized to promote foreign investment include the following

- Free zone regulations providing tariff, tax and regulatory exemptions to foreign (and local) investors who invest in specially designated free zones
- Modernization of regulations to remove certain restrictions on foreign investment, for example
 - ◊ Lebanese majority to be on Board of Directors of a corporation
 - ◊ Limits on how much property can be owned by foreign companies (long term leases may be introduced, at least in free zones or industrial estates, to overcome this restriction)

Moreover, government bureaucracy involved in processing registration, licensing and work permit formalities should be minimized through “one-stop-shop” arrangements

Long term debt (around \$ 875 million over 10 years) may come from the following sources

- Long term soft loans from international banks (e.g. IFC; EIB)
- Lebanese commercial banks - incentives are being provided to encourage commercial banks to extend medium and long term credits
- Islamic banks (e.g., leasing and export credit)
- Specialized Lebanese banks (e.g., National Bank for Industrial and Tourism Development which needs to be revitalized)
- Pension funds and mutual funds
- Capital market for large investments

Lebanon should work to secure soft loans from international banks (e.g., EIB; IFC) to support industry

- Some financing arrangements have already been made and are being distributed through Lebanese commercial banks
- We understand, however, that additional funds may be made available, especially from the EIB
- The Lebanese government should actively work to facilitate securing such facilities
- Because of the process involved, these sources of finance are likely to be suitable for medium to large investments

Incentives are being provided by the Central Bank to encourage commercial banks to extend medium to long term credit

- The Central bank has relaxed certain reserve requirements for banks extending medium to long term credit
- In effect, these incentives reduce the cost of long term debt
- They are expected to make some long term funds available
- However, the demands on these funds are huge especially to finance housing purchases by consumers
- Moreover, regulations and judicial procedures are needed to protect creditors, for example
 - ⇒ Extra-judicial foreclosures on mortgages to speed up foreclosures
 - ⇒ Regulations for liens on receivables

Islamic bank financing is available especially for leasing and export credits

- New regulations are needed to regulate the process of leasing
- Also, special registry is required to record leasing transactions

The National Bank for Industrial and Tourism Development must be revitalized

- This specialized bank is governed jointly by the government and the private sector
- Private banks have been reluctant to extend funds to support this bank
- As a result, the bank is strapped for liquidity
- Calls have been made to privatize the bank
- The bank need to be revitalized
 - ⇒ Credit evaluation and follow-up skills need to be strengthened
 - ⇒ Incentives may be needed to encourage private capital to flow into this bank

The government needs to promote the establishment of a private pension fund system which could supply long term finance to industry and other sectors of the economy

- Today a public pension scheme exists but is limited in terms of effectiveness and coverage
- Several recommendations have been made by the World Bank to improve the system, in particular
 - ⇒ Separate management of medical and pension schemes
 - ⇒ Pension funds should be managed by specialized private institutions regulated by the government
 - ⇒ Individual accounts should be established to track individual contributions and benefits
 - ⇒ Guidelines should be established regarding the kind of assets in which pension funds could invest

Also regulations are needed to promote the establishment of mutual funds which could provide a vehicle for long term savings and credit

The development of long term debt instruments which may be considered for the Lebanese capital

- This proposition may not yield near term results given the embryonic state of the Lebanese capital market
- Over time, however, some long term debt instruments may be developed
- Regulations are needed along the lines of those indicated for the equity market
- Such instruments, however, are more likely to be suitable for large investments

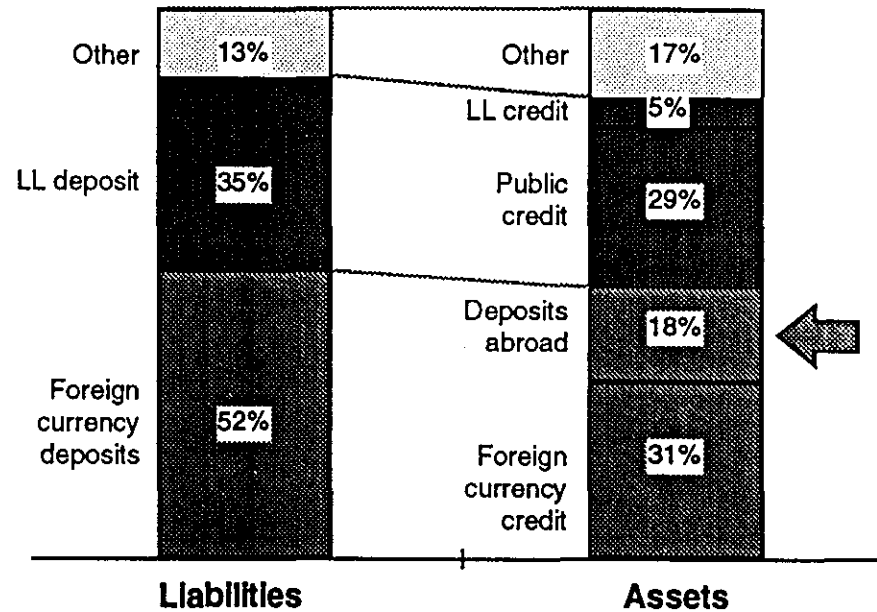
There should be no shortage of short term debt

- Additional short term debt requirements to finance industrial developments (\$ 525 million over 10 years) represent roughly 3% of total deposits available today in the Lebanese banking system
- Bank deposits abroad (about \$ 3.7 billion) provide a potential source for funding short term debt required by industry
- Industry already receives 13% of the credit extended by Lebanese banks, which is broadly in line with the share of industry in the national economy
- However, only a small number of large companies benefit from this source credit
- Lending to small and medium sized companies is considered risky
- To mitigate this problem, a number of improvements are recommended

A significant portion of foreign currency deposits are placed with banks abroad

**Consolidated Balance Sheet of Lebanese Commercial Banks
July 1996**

100% = \$ 20.6 Billion

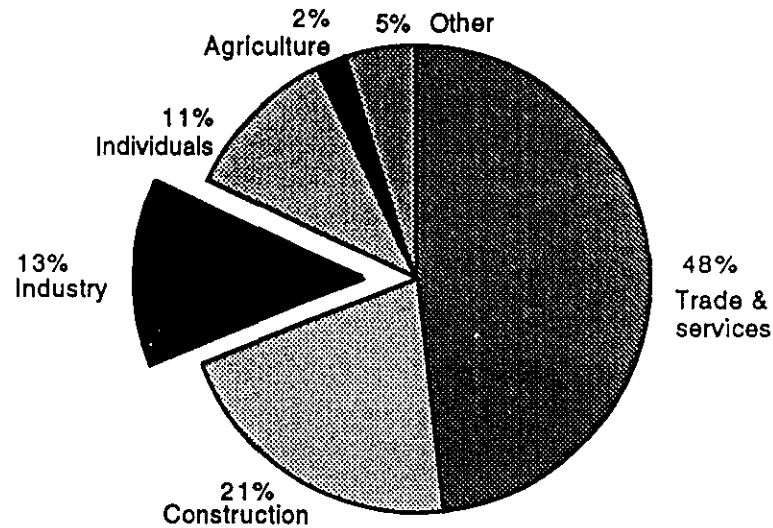


Source: Central Bank

This may provide a source of finance for the Lebanese economy

Industry receives roughly its fair share of banking credit (13% in July 1996 which represents roughly \$ 950 million)

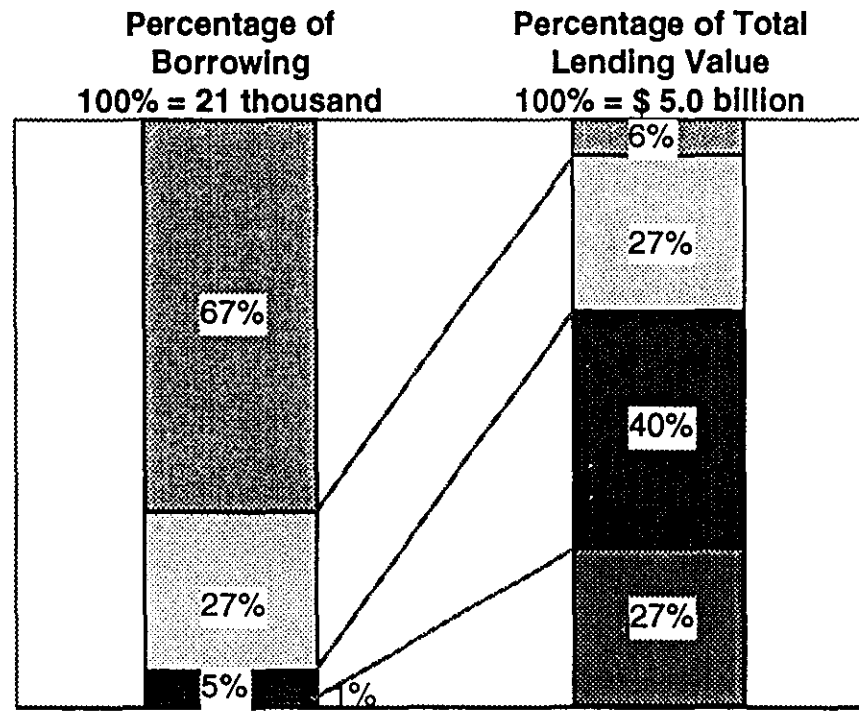
**Distribution of Banking Credit by Sector
July 1996
100% = \$ 7.3 Billion**



Source: Central Bank

However, bank lending is concentrated in small number of borrowers

Distribution of Bank Borrowing
(March 1994)



Source: World Bank

Lending to small and medium sized companies is considered risky by Lebanese banks because of the following

- Cumbersome (and hence costly) legal process for debt collection and mortgage foreclosure (discussed earlier)
- Inadequate standards for information disclosure, accounting and auditing
- The Central Bank has a Credit Information Center which provides confidential information on total exposure of customers in the banking system. However this system is not sufficient
 - ⇒ Information is limited to customers who have already borrowed from the system
 - ⇒ Financial statements are generally unreliable

To improve this situation, various recommendations have been made by the World Bank and others

- Simplify and strengthen the debt collection and mortgage foreclosure process
- Improve the standards of information disclosure, accounting and auditing
- Strengthen the credit evaluation and follow-up skills of Lebanese banks

Investment Task Force (INTAF) should have the following priorities

- Promote Lebanon as a good place to invest - this effort is already underway at IDAL
- Work with the Central Bank/Ministry of Justice task force on the development of capital markets. Of particular interest to industry are laws and judicial procedures related to
 - ⇒ Leasing (of industrial equipment)
 - ⇒ Mortgages
 - ⇒ Foreign direct investment
 - ⇒ Debt collection
- Negotiate additional lines of credit with
 - ⇒ The European Investment Bank (EIB)
 - ⇒ The International Finance Corporation (IFC)
 - ⇒ Other aid organizations
- Promote the establishment of venture capital organizations and industrial investment companies
- Explore opportunities for obtaining long term credit from the social security organization and/or through private and public pension funds

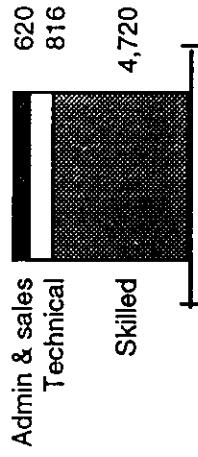
Major efforts and investments are needed to develop the skilled manpower required to achieve the industrial development objectives set forth

- The quality and productivity of Lebanon's manpower are the most critical (and in the long term perhaps the only) factors for success in securing a position in the increasingly competitive arena of industrial production
- A recent study by the World Bank concluded "that Lebanon does not have a serious and consistent system to prepare skilled workers"
- Overhauling Lebanon's education and training system is a major undertaking which requires time plus serious efforts and investments to be deployed by the government and the private sector

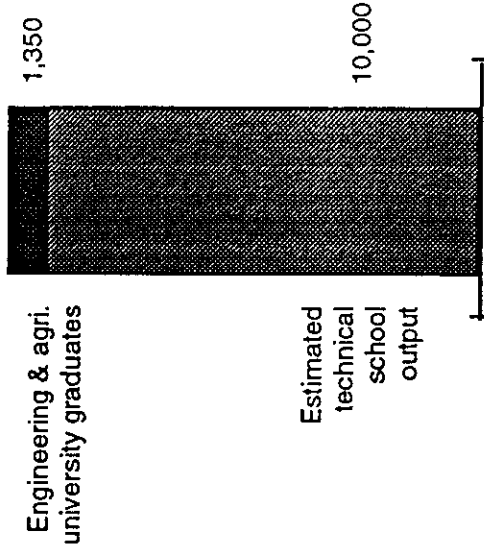
There is no shortage of educated manpower to support industry

Manpower

Average Annual Projected Demand for Industry



Average Annual Supply



The challenge is to educate and train manpower in line with industry requirements

In spite of the significant numbers of technical school graduates, industrialists complain about shortages of skilled labor

- According to the Ministry of Vocational Training, 30 to 40 thousand students are enrolled in 240 vocational/technical schools, a very large number compared to the requirements of industry
- However, technical school graduates are in most part ill equipped for the market
- Trainers are not sufficiently qualified
- Curricula are generally obsolete
- Laboratory equipment is out-dated or non-existent
- Practical training is limited

To rectify this situation, the World bank recommended a multiple thrust development program

- Industry specific apprenticeships
- Secondary vocational education
- Training by employers

The private sector should actively participate in defining requirements, setting standards and certification, and providing education and training services

The World Bank suggested the establishment of industry specific apprenticeship programs. For example, for the furniture industry, a special school may be created for apprentices employed by the industry

- Skills which are needed are established jointly by the school and employers
- Skills which are best acquired in the classroom or in school workshops are given at the school
- Other skills are learned on the job
- Students alternate between school and factory work
- At the end of the program, students would take a theoretical and practical examination, and if they pass, they receive a certificate
- The cost of the program may be shared by the government, employers and to some extent by the students themselves

Apprenticeship schools should actively recruit students from the school system

Arthur D Little

A secondary vocational education program similar to the French model may be considered

- The program offers academic study combined with hands-on training
- To succeed, the program should establish a suitable balance between theoretical study and practical training
- It should not be heavily regulated to allow the program to adapt rapidly to changing market requirements
- Employers should have an important input into establishing curricula and training and certification standards

Vocational schools should actively recruit students from the school system and train them for specific industry requirements

Improvements are also needed in university and post-secondary education programs

- Employers should work with universities to develop programs suitable for industry (e.g. industrial engineering)
- Moreover, post-secondary programs are needed for special skills (e.g. fashion design; product design; etc.)

Post-secondary school should actively recruit students from the school system

Employers should be increasingly encouraged to invest in training

- Training should be provided by qualified trainers on-the-job as well as in classrooms
- The cost of training programs may be shared by several employers working in the same area or belonging to a trade association

The priorities of the Manpower Task Force (MANTAF) should include the following

- Discuss with industrialists specific gaps they perceive in the Lebanese higher education and vocational training systems
- Agree with universities and vocational training schools programs to fill those gaps and seek international accreditation to the extent possible
- Encourage industry groups to join forces to specify and possibly fund special training programs
- Explore with the government and donor agencies opportunities for giving incentives to firms which invest in training, for example
 - ⇒ Contribute partially to the cost of training
 - ⇒ Provide tax credits

The priorities of the Manpower Task Force (MANTAF) should include the following (continued)

- Promote the establishment of private and/or private accreditation organizations - or seek accreditation from well known international organizations
- Encourage the establishment of orientation and placement centers in schools to
 - ⇨ Advise secondary school and higher education graduates on education and job opportunities
 - ⇨ Establish an information data base on job opportunities and available candidates
 - ⇨ Match job seekers with available job openings

The Lebanese legal and regulatory systems need to be modernized to meet the challenges of the future

- A study completed by the World Bank in May 1995 concluded that the Lebanese legal and regulatory system is not a major constraint for business development
- In order to compete for domestic and foreign investment , however, Lebanon has to modernize its legal and regulatory system
- We recommend establishing a task force (LAWTAF) to identify priorities for improving laws, regulations, and government processes and work with the Ministry of Justice and other parties concerned to bring about required improvements

The improvements identified by the World Bank include

- Judicial systems
 - ⇒ Training judges to familiarize them with modern concepts of domestic and international business
 - ⇒ Expediting the judicial process
 - ⇒ Establishing legal data base and information center
- Arbitration
 - ⇒ Training arbitrators
 - ⇒ Promoting wider use of arbitration
- Property rights
 - ⇒ Speeding up the land registration process
 - ⇒ Relaxing foreign ownership of land
 - ⇒ Liberalizing the rental market
 - ⇒ Modernizing intellectual property laws and strengthening enforcement practices
 - ⇒ Developing regulations for long term leases of land and equipment
- Commercial code
 - ⇒ Relaxing restrictions (e.g., reduced number of directors ; no restrictions on the nationality of directors; etc.)
 - ⇒ Regulations for franchising, sale-and-leaseback, licensing and factoring
 - ⇒ Protection of creditor's rights
 - ⇒ Extra-judicial and more rapid foreclosure
 - ⇒ Regulation of liens on receivables
 - ⇒ Speedy arbitration procedures and adherence to international arbitration bodies

The improvements identified by the World Bank include (continued)

- Labor laws
 - ⇨ Reviewing the Labor Law and the Social Security Law
 - ⇨ Promoting establishment of private pension and mutual funds
 - ⇨ Reducing social security charges
 - ⇨ Eliminating restrictions on foreign companies regarding hiring local workers
 - ⇨ Speeding up the processing of work permits for foreign companies managers and professional staff
- Money and banking
 - ⇨ Bank secrecy laws should be subject to regulations to avoid abuse
 - ⇨ Licensing brokers, intermediaries, and raising their professional standards
 - ⇨ Disclosure regulations and adoption of adequate accounting standards
 - ⇨ Regulation of insider trading
 - ⇨ Increase the amount covered by deposit guarantees
 - ⇨ Introduction of laws to regulate sophisticated investment vehicles
 - ⇨ Regulation of credit cards
 - ⇨ Regulation of the stock market
 - ⇨ Regulations for fiduciary services and collective investment vehicles
- Competition
 - ⇨ Improve anti-monopoly and anti-dumping regulations
 - ⇨ Relaxation of some restrictive agency regulations
- Tax laws: Treaties to avoid double taxation are needed
- Insurance laws: New legislations are needed to provide better regulation for the insurance industry

It is obvious that this long list of improvements will take many years to realize. We recommend giving priority to the following

- Promulgating a new **free zone** law designed to attract local and foreign investment
 - ⇒ This law would provide exemptions to industrial investors not only from customs duties but, more importantly, it will **exempt investors from selected laws and regulations** which reduce Lebanon's attractiveness to international investors
 - ⇒ It will also establish **one entity** to process government formalities required by such investors (a "one-stop-shop")
- Simplifying and automating customs procedures and adopting a more internationally accepted product classification scheme

The most important free zone related incentives needed to help Lebanon compete for investments are as follows

- 100% foreign ownership with no restrictions on the nationality of directors and management
- Tax holidays for specified periods of time
- One-stop-shop to process all government formalities
- Exemptions from selected restrictive labor regulations and possibly replacement of public social security by private alternatives
- Protection of intellectual property
- Long term leases and/or unrestricted purchase of land by foreign entities in free zones

Also, priority should be given to selected laws and regulations to improve the domestic industrial investment environment, for example

- Laws and regulations which promote investments in industry, in particular
 - ⇒ Leasing of equipment
 - ⇒ Mortgage and foreclosure procedures
 - ⇒ Long term leasing of land and industrial facilities
 - ⇒ Foreign direct investment
- Simplification of government procedures for licensing (e.g., establishment of “one-stop-shop”)
- Streamlining and automating customs procedures
 - ⇒ Reduce the number of tariff rates
 - ⇒ Adopt international nomenclature convention

The priorities of LAWTAFA are to work with the Ministry of Justice, the Central Bank and other concerned parties

- To draft, promulgate, and implement new free zone regulations to attract foreign and domestic investments in industry
- To draft laws and regulations to promote investment in industry
- To simplify government licensing procedures related to industry
- To recommend improvements to streamline customs procedures
- To work with the Ministry of Foreign Affairs and other concerned parties on the establishment of bilateral and multilateral agreements with most important trading partners

To ensure adequate infrastructure facilities are provided in a cost effective manner, we recommend the following

- The establishment of industrial real estate and free zone development companies
- The formation of business networks (or industrial clusters) - also recommended by the World bank

The industrial real estate and free zone development companies would have the following roles

- Developing industrial estates, free zones and ready-to-use industrial facilities in various sites around Lebanon for sale or long term lease
- Adopting internationally acceptable environmental standards
- Ensuring the availability of power, water, sewage treatment, telecommunication and other required utilities
- Providing common services (e.g. processing of government formalities; cafeteria; medical; cleaning; security; fire protection, etc.) to support industrial investors
- Establishing and operating shared training facilities

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

The establishment of business networks (or clusters) is also recommended*, as they offer many advantages, such as

- Establishment of strong business groups - “virtual companies” - without having to establish larger corporations
- Sharing of common support services to save cost, e.g.
 - ⇒ Export marketing
 - ⇒ Training
 - ⇒ Procurement of raw materials
 - ⇒ Testing laboratories
 - ⇒ Databases
- Integrating activities across the business value chain (e.g. from procurement to export marketing)
- Producing complementary products which are then sold through shared marketing channels

* Refer to World Bank report Lebanon, *Achieving Competitiveness in a Global Economy, Volume II, April 14, 1995*

The priority of the infrastructure task force (INFRA TAF) is to undertake the following

- Promote the establishment of industrial estates and free zones on private or government land (activity already underway, but needs additional resources and thrust)
- Promote the establishment of business networks

To provide support to industry, a number of support organizations are needed, including

- Technical and management consulting firms (e.g. Industrial Institute)
- Standards organizations (e.g. LIBNOR)
- Industrial information center
- Outsourcing exchange

We recommend the rapid revitalization of the Industry Institute to perform the following functions

- Provide laboratory testing services, and calibration
- Provide certification of conformity to local and/or international standards - perhaps it should be accredited by international organizations
- Provide technical consulting services regarding production technologies and processes
- Establish an information center and an up-to-date database on Lebanese industry, and on technologies of interest to Lebanese industrialists
- Provide product design and process engineering services
- Provide training in its areas of specialization
- It would be funded perhaps with seed money from the government plus contributions from private and donor organizations. It would charge a fee for its services to recover its costs.

Also private firms may be established to provide specialized services in one or several of the fields outlined above

Arthur D Little

10/26/96

IDAL-860306-pkt

VI-51

We also recommend the rapid revitalization of LIBNOR to establish standards for Lebanese industry

- Standards are essential to support exports
- Efforts to revitalize LIBNOR have already started. According to the World Bank 183 standards and 23 codes of practice have been prepared. An average of 3,000 to 5,000 are needed.
- A new law is apparently needed to clarify the mission of LIBNOR and the agencies responsible for monitoring and enforcing standards
- LIBNOR's mission may include
 - ⇨ Drafting and establishing mandatory and voluntary standards
 - ⇨ Following up with entities concerned with enforcing standards (e.g. Customs; Ministry of the Economy; etc.)
 - ⇨ Establishing quality labels for industry
- Furthermore, industry associations may establish voluntary quality standards

In addition to LIBNOR, voluntary standards may be adopted and certified by laboratories accredited preferably by international organizations (e.g., the International Standards Organization - ISO -; etc.)

An information center including primary as well as secondary information of interest to industry should be established. The information needed would include

- Results of period industrial surveys
- Trade statistics for Lebanon and trading partners
- Names and addresses of potential trading partners
- Specifications and standards for Lebanon and trading partners
- Trading, tax and other regulations
- Sources of industrial production and product technology
- Indicative transportation and insurance costs
- Market surveys/studies for specific products
- Investment opportunities in industry
- Publications/periodicals of interest to industry
- Government plans, budgets and projects

This information center may be established at the Industry Institute

Arthur D Little

10/26/96

IDAL-960306-pkr

VI-53

A computer based “exchange” may be established to match companies seeking outsourcing partners in the area of industrial production with those willing and able to provide this service

- A survey would be undertaken to identify outsourcing requirements of companies in Lebanon and selected countries in Europe and elsewhere as well as Lebanese companies interested to provide such services
- The results of the survey would be recorded in a data base accessible to industrialists and it would be updated periodically
- Seekers and providers of outsourcing services would be matched through this data base

This data base may be developed by IDAL, the Industry Institute or private institutions

The priorities of the support task force (SUPTAF) should include the following

- Develop business plans and action programs to revitalize
 - ↔ The Industry Institute
 - ↔ LIBNOR
- Establish an industrial information center
- Establish outsourcing exchange

Export houses and overseas offices are important tools to promote Lebanese products overseas. Their role would include

- **Market analysis**
 - ⇨ Assisting companies in assessing demand for their products in export markets
 - ⇨ Providing information concerning product requirements and standards in export market
- **Market development**
 - ⇨ Identifying opportunities for exports
 - ⇨ Assisting companies in meeting export requirements
 - ⇨ Assisting in organizing or participating exhibitions to promote Lebanese products
- **Matchmaking**
 - ⇨ Matching exporters with trading partners overseas
 - ⇨ Establishing agencies and channels of distribution
- **Processing export orders**
 - ⇨ Receiving export orders and processing them
 - ⇨ Arranging for shipping and insurance
 - ⇨ Arranging for export finance/guarantees

Export house and overseas offices should be established as private ventures funded through contributions and service fees from exporters. Seed money from the government or a small levy on exports may be collected to fund shared services.

Arthur D Little

10/26/96

IDAL-960306-pkr

VI-56

The export task force (EXTAF) should concentrate on the following

- Promote the establishment of export houses with overseas offices
- Promote the signature bilateral and multilateral agreements to assist exporters

Rehabilitating Existing Industrial Facilities

Existing industrial facilities, in most part, require extensive rehabilitation and modernization

- There is a need to invest in new plant and equipment
- **Manpower** needs to be developed
- **Infrastructure** and amenities need to be provided

Existing facilities will benefit from the same improvement program discussed earlier in this report. However, to concentrate on the special requirements of existing industry, a specialized task force (RETAF) is being recommended.

The main priorities of RETAF include the following

- Establishing private investment companies -preferably owned jointly by existing industrial companies likely to benefit from their services- to rehabilitate existing industrial zones and provide much needed infrastructure support including
 - ⇨ Road rehabilitation, street lighting and landscaping
 - ⇨ Environmental facilities such as solid and liquid waste treatment and disposal
 - ⇨ Improvements in electricity and water distribution schemes within the industrial zone
 - ⇨ Provision of common amenities and services such as cleaning, maintenance, security, training, clinic, fire fighting, etc.
- Securing technical assistance and support to modernize plant and equipment in a cost effective manner
- Securing assistance to improve internal management and develop manpower resources

Agenda

1	Executive Summary
2	Industrial Mapping
3	Competitive Assessment
4	Strategic Objectives
5	Preferred Sectors
6	Strategic Thrusts
7	Implementation Program

الجمهورية اللبنانية
مكتب وزير الدولة لشؤون التنمية الإدارية
مركز مشاريع ودراسات القطاع العام

To implement the proposed industrial development program, the government and the private sector have to work hand-in-hand

- The government's main responsibility is to establish an economic and regulatory environment conducive for investment in general and in industry in particular and to promote Lebanon and investments in industry
- The private sector is to take the initiative, make the required investments and manage as many aspects of program implementation as practical

In particular, the government's implementation priorities include the following

- Establishing as soon as possible macroeconomic stability including
 - ⇨ Reducing the fiscal deficit
 - ⇨ Reducing government borrowings, inflation and interest rates on the Lebanese pound
- Promoting Lebanon and investments in industry
- Securing necessary funding from government sources and donor organizations
- Working in concert with the private sector to address issues related to labor and manpower education
- Giving priority in infrastructure development to productive sectors in general and to industry in particular
- Working with the private sector to establish free zones and industrial estates and rehabilitate existing ones
- Promoting inter-company collaboration and regional development

In particular, the government's implementation priorities include the following (continued)

- Developing and modernizing the regulatory environment to support local and foreign investment in particular
 - ⇨ Commercial code
 - ⇨ Property laws
 - ⇨ Money and banking regulations
 - ⇨ Competition
- Streamlining government bureaucracy and judicial procedures in particular
 - ⇨ Customs
 - ⇨ Licensing
 - ⇨ Debt recovery
- Developing bilateral and multilateral agreements
- Supporting the establishment and enforcement of standards, including
 - ⇨ Quality
 - ⇨ Health and safety
 - ⇨ Environment
- Providing assistance and support in areas such as
 - ⇨ Promoting the establishment of technical support services (e.g., the Industry Institute)
 - ⇨ Collection and dissemination of statistics and information
 - ⇨ Promoting the establishment of export houses

The private sector priorities include the following

- Investing in industry - preferably in joint venture with international partners whenever appropriate
- Establishing venture capital and investment companies specializing in industry
- Investing - jointly with the government - in manpower development and labor training
- Establishing companies to develop and manage free zones and industrial estates
- Establishing support service companies, including
 - ⇨ Participation in the establishment of the Industry Institute and LIBNOR
 - ⇨ Formation of export houses with representative offices overseas

IDAL should take the lead in promoting investment in industry through seminars and direct discussions with targeted investors

IDAL	Roles and Responsibilities		Funding
	Government	Private Sector	
<ul style="list-style-type: none"> Promote Lebanon and investment in industry 		-	Government
<ul style="list-style-type: none"> Promote establishment of venture capital and investment companies 	<ul style="list-style-type: none"> Establish venture capital and investment companies 		<ul style="list-style-type: none"> Promotion funded by government Private sector investment
<ul style="list-style-type: none"> Target successful Lebanese industrialists abroad plus multinationals active in foreign investment and encourage them to invest in Lebanon 	<ul style="list-style-type: none"> Establish joint ventures/alliances with multinationals and Lebanese and other investors coming from abroad 		<ul style="list-style-type: none"> Promotion funded by government Private sector investment

IDAL should take the lead in securing additional long term financing for industry from international banks and promoting the establishment of private pensions and mutual funds

IDAL	Roles and Responsibilities		Funding
	Government	Private Sector	
<ul style="list-style-type: none"> Negotiate new/additional lines of credit with the EIB, the IFC & Islamic banks 	<ul style="list-style-type: none"> Lebanese banks will distribute credit lines 	<ul style="list-style-type: none"> International funding 	
<ul style="list-style-type: none"> Review attractiveness/feasibility of privatizing National Bank of Industrialization and Tourism Development 	<ul style="list-style-type: none"> Provide funding taking advantage of incentives made available by Central Bank 	<ul style="list-style-type: none"> Private funds 	
<ul style="list-style-type: none"> Evaluate attractiveness/feasibility of establishing private pension and mutual funds 	<ul style="list-style-type: none"> Establish private pension and mutual fund companies 	<ul style="list-style-type: none"> Studies funded by the government/interested private sector companies Private funding 	

The Association for Lebanese Industrialists (ALI) should take the lead in identifying gaps in skilled labor and promoting the establishment of government and/or private education programs to bridge those gaps

Roles and Responsibilities		Funding
Government	Private Sector	
	ALI	
<ul style="list-style-type: none"> • Provide support as needed 	<ul style="list-style-type: none"> • Review with industry associations needs for skilled manpower 	<ul style="list-style-type: none"> • Private
<ul style="list-style-type: none"> • Establish programs for selected vocational skills • Establish, jointly with the private sector, minimum standards for quality control 	<ul style="list-style-type: none"> • Encourage private and public education organizations to establish new schools and programs to provide required skills, seek accreditation plus recruit students from schools for these programs 	<p>Mixed</p> <ul style="list-style-type: none"> • Government funding for certain skills • Private funding for the rest
	<ul style="list-style-type: none"> • Encourage employers to invest in training 	<ul style="list-style-type: none"> • Private
	<ul style="list-style-type: none"> • Encourage education organizations to establish manpower placement and orientation centers 	<ul style="list-style-type: none"> • Private
<ul style="list-style-type: none"> • Provide support as needed 	<ul style="list-style-type: none"> • Promote the value and status of industrial work 	<ul style="list-style-type: none"> • Private

Regulations

7

IDAL, working with the Ministry of Industry, Justice, the Central Bank, and others should take the lead in promoting changes in regulations and government procedures to encourage investments in industry in particular

IDAL	Roles and Responsibilities		Funding
	Government	Private Sector	
• Develop new law for free zones		• Provide advice and support as needed	• Government
• Modernize commercial code		• Provide advice and support as needed	• Government
• Develop regulations for leasing and other financial instruments		• Provide advice and support as needed	• Government
• Establish standards for information disclosure, auditing and accounting		• Provide advice and support as needed	• Government
• Establish effective regulations for the capital market		• Provide advice and support as needed	• Government
• Modernize labor regulations		• Provide advice and support as needed	• Government
• Modernize property rights regulations		• Provide advice and support as needed	• Government
• Establish and enforce environmental, health, and safety standards		• Provide advice and support as needed	• Government

Government Procedures

7

IDAL, working with competent government agencies, should also take the lead in promoting the streamlining of government procedures affecting industry, in particular

	Roles and Responsibilities		Funding
	Government	Private Sector	
IDAL			
<ul style="list-style-type: none"> • Establish "one-stop-shop" for licensing industrial projects 	<ul style="list-style-type: none"> • Provide advice and support as needed 	<ul style="list-style-type: none"> • Government 	
<ul style="list-style-type: none"> • Streamline and automate customs procedures 	<ul style="list-style-type: none"> • Provide advice and support as needed 	<ul style="list-style-type: none"> • Government 	
<ul style="list-style-type: none"> • Expedite and strengthen legal process involved in debt recovery and arbitration 	<ul style="list-style-type: none"> • Establish competent arbitration entities and promote the use of arbitration to resolve disputes 	<ul style="list-style-type: none"> • Government for legal procedures • Arbitration: funded by private sector 	
<ul style="list-style-type: none"> • Expedite procedures related to issuing work permits for managers and professional staff of foreign companies investing in Lebanon 	-	<ul style="list-style-type: none"> • Government 	

IDAL should take the lead in promoting the establishment of free zones and industrial parks and in encouraging the government to give them priority in terms of infrastructure development

IDAL	Roles and Responsibilities		Funding
	Government	Private Sector	
<ul style="list-style-type: none"> • Perform initial studies for establishing free zones and industrial parks and provide government land wherever possible 	<ul style="list-style-type: none"> • Establish private development companies for free zones and industrial parks 	<ul style="list-style-type: none"> • Studies/land by the government or private sector • Development by the private sector 	
<ul style="list-style-type: none"> • Give priority to free zones/industrial parks in terms of infrastructure development 	<ul style="list-style-type: none"> • Provide support if government funding is not available in a timely fashion 	<ul style="list-style-type: none"> • Basic infrastructure by the government • Secondary infrastructure by the private sector 	
<ul style="list-style-type: none"> • Promote establishment of industry clusters 	<ul style="list-style-type: none"> • Establish industry clusters to share common facilities and support services 	<ul style="list-style-type: none"> • Private 	

IDAL should take the lead in establishing support organizations for industry

IDAL	Roles and Responsibilities		Funding
	Government	Private Sector	
<ul style="list-style-type: none"> Promote the revitalization of the Industry Institute and LIBNOR and secure funding from government sources and/or donor organizations 	<ul style="list-style-type: none"> Support the revitalization of the Industry Institute and LIBNOR by participating in funding them and using their services 	<ul style="list-style-type: none"> Joint government/private funding (private funding if government funds not available) 	
<ul style="list-style-type: none"> Establish and enforce mandatory standards 	<ul style="list-style-type: none"> Abide by mandatory standards and adopt voluntary quality standards 	<ul style="list-style-type: none"> Mixed 	
<ul style="list-style-type: none"> Promote the establishment of private consulting, information, and laboratory organizations 	<ul style="list-style-type: none"> Establish privately owned research, testing and consulting organizations to support industry 	<ul style="list-style-type: none"> Private 	
<ul style="list-style-type: none"> Encourage relevant government organizations to collect primary data for use by industry 	<ul style="list-style-type: none"> Collect and disseminate information 	<ul style="list-style-type: none"> Mixed 	
<ul style="list-style-type: none"> Promote the establishment of an outsourcing exchange 	<ul style="list-style-type: none"> Establish outsourcing exchange 	<ul style="list-style-type: none"> Private 	

IDAL and ALI should work jointly with competent organizations to promote exports

Roles and Responsibilities		Funding
Government	Private Sector	
<p>IDAL</p> <ul style="list-style-type: none"> • Revise and improve existing bilateral and multilateral agreements and sign new ones to facilitate exports • Promote the establishment of export houses and overseas representative offices • Assist as needed 	<p>ALI</p> <ul style="list-style-type: none"> • Define priority markets targeted for exports • Establish export houses and overseas representative offices • Coordinate the participation of Lebanese exporters in international exhibitions/trade missions 	<ul style="list-style-type: none"> • Government • Private (perhaps with seed money from the government) • Private

ALI should take the lead in promoting the rehabilitation of the existing industrial base

Roles and Responsibilities		Funding
Government	Private Sector	
	ALI	
<ul style="list-style-type: none"> • Provide support as needed 	<ul style="list-style-type: none"> • Establish companies to rehabilitate industrial zones and provide common service 	<ul style="list-style-type: none"> • Private
<ul style="list-style-type: none"> • Provide support as needed 	<ul style="list-style-type: none"> • Secure technical assistance to improve quality and productivity 	<ul style="list-style-type: none"> • Private
<ul style="list-style-type: none"> • Provide support as needed 	<ul style="list-style-type: none"> • Retrain the existing labor force 	<ul style="list-style-type: none"> • Private (perhaps with seed money from the government)

To achieve this implementation program, it is essential for the government and the public sector to deploy the resources needed, in particular

- Hire experienced personnel to lead and staff the task forces and implementation activities identified
- Procure from outside parties the services needed - e.g., legal support; market research; etc.
- Procure equipment - e.g., for laboratories; vocational schools; information center

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

الجمهورية اللبنانية
مكتب وزير الدولة لشؤون التسمية الإدارية
مركز مشاريع ودراسات القطاع العام