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Strategic Options for Lebanon's Agro-Food Industry in a Dynamic Global Environment:

*With Specific Reference to Sustainable Rural
Development of the Baalbek-Hermel Region*

*Consultation & Research Institute (CRI)
The Lebanese Center for Policy Studies (LCPS)*

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STRATEGIC OPTIONS FOR LEBANON'S AGRO-FOOD INDUSTRY IN A DYNAMIC GLOBAL ENVIRONMENT

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EXECUTIVE SUMMARY

In light of the local, regional and global changes the various economic sectors are facing challenges mainly in terms of competition at both local and foreign market levels. The industrial sector is one of the major sectors concerned with these challenges, and hence needs frequent reformation plans to keep up with the rapid changes affecting the world economy. The study elaborates on evaluating the comparative and competitive advantages of the agro-food sector in Lebanon relative to selected regional countries, and analyzes the conditions of the agricultural sector, being a potential source of inputs for the agro-industry.

A brief review of the Lebanese economy reveals that the agricultural sector is a basic productive sector, contributing 12.4% of GDP in 1995, and employing about 10% of total labor force. Meanwhile, the sector is facing difficulties, most of which are inherent, taking Baalbeck-Hermel region as a case study. Basically, the sector is suffering from the lack of agricultural policies and plans to enhance, among others, the irrigation system, importation of agricultural inputs, agricultural extension services, marketing channels, adequate replacement of crops, in addition to the need for financial support through agricultural micro-credits. As to the agro-food industry, a detailed analysis of the sector reveals that agro-food establishments represent around 20% of total industries, 94% of which are small - medium scale (employing less than 19 employees). It should be noted that a huge demand for agricultural and agro-food products is currently satisfied through imports.

At the local level, by analyzing the competitiveness of the agro-food sector, the study resulted in the following:

- Regarding factor conditions, Lebanon is relying on its physical resources: soil, climate and water. Meanwhile, the weaknesses are many and are mainly related to capital resources, knowledge resources and infrastructure.
- As to the demand conditions, Lebanese production of agro-food is relatively small compared to the neighboring countries, and the Lebanese consumers satisfy their needs for many products through importation
- Meanwhile, the supporting and related industries affecting the competitiveness of the sector are facing difficulties: high cost and low quality of local agricultural inputs; distribution channels through which agricultural products are marketed; problems facing imports of inputs for agro-food sector ; high cost of marketing of agro-food products in the local market; and a relatively low volume of export
- With respect to the structure of firms and rivalry, Lebanese firms are noted for having high percentage of family-owned and small-scale establishments, and a high concentration of market share among limited number of market players.

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evaluating comparative advantages and disadvantages specific to certain time periods, relative to Egypt, Syria, Jordan, Israel, Turkey and Cyprus. *Lebanon has a comparative advantage in fresh, frozen or chilled fish, cereals and cereal-based products, fruits and nuts, sugars, sugar preparation and honey, coffee, tea and cocoa, feeding stuff for animals. No clear conclusions were drawn with respect to fresh meat, beverages, tobacco, and dairy products.*

The study concludes with four sets of recommendations addressing the three major parties concerned with the agro-food sector:

- The first set of recommendations advises the **government** to act as a facilitator and promoter at an efficiently operating agro-food sector by providing basic infrastructure, such as water and electricity, regulating both the agricultural and agro-food sector, and providing institutional support in areas of credit, research and development and others.
- Given the challenges facing the **industrialists**, the second set of recommendations propose that they adopt a strategy that focuses on the premium end of the market, establishes strong position in the export markets, and develops the potential of new markets processed produce.
- The third set of recommendations encourages the establishment of cooperatives for **farmers** and the plantation of several crops, such as strategic plants, exotic fruits, and others.
- A fourth set of recommendations encourages the establishment of a partnership between the **industrialists** and the **farmers** with the objectives to increase cooperation and integration, with direct and indirect involvement of the **government**.

- On the other hand, the government intervention is minimal as to the design of policies and its role is confined to the agricultural calendar and the five years plans, in addition to other agricultural plans.

Meanwhile, at the regional level, the study considered Israel, Jordan, Syria and Egypt to study the comparative advantage of the agro-food sector:

- First Israel is characterized by a strong integration between agricultural production, processing and marketing. Also, agro-food products meet to large extent the internationally adopted standards, allowing the development of strong domestic and foreign markets. Also, the role of government is of great assistance for the sector to grow and compete by designing the necessary policies, mainly for marketing and for enhancing performance of the industrial enterprises by providing the necessary financial support.
- Jordan agro-food sector is suffering from the lack of integration among agricultural production, processing and marketing, although each separate process is well integrated into some kind of organization. Also, the processing practices do not meet the internationally adopted specifications, coupled with weak intra-sectoral competition. The government policies assist in developing marketing institutions, however, failed to create the competitive environment by adopting subsidy and protection policies.
- Syria is suffering from the lack of private sector initiatives, due to the overall investment climate (foreign exchange, high taxes, bureaucracy,...). Also, it suffers from poorly developed support institutions and the absence of intra-sectoral competition, the non-adherence internationally adopted specifications, and hence the incapability of the sector to penetrate international markets.
- In Egypt, the agro-food sector is well protected, encouraging producers to satisfy local market demand which is relatively huge. Also, the industry has the necessary practices to meet the specifications of the Gulf and Eastern European countries. The sector in general has a potential to develop long-term production and marketing strategies.

Finally at the international level, the sector is facing the challenges of globalization, the GATT agreement, the environmental issues, the trends in global consumption and the trends in global agricultural marketing

Despite the lack of reliable and conclusive data regarding the individual products, the study attempted at evaluating the comparative advantages of Lebanon's agro-food products following the qualitative approach of Porter and the quantitative approach of Balassa. It should be noted first that no clear conclusions could be deduced for several reasons: the agglomeration of several sub-sectors under broad categories, and the data for certain sub-sectors is missing. Applying Balassa models to particular products results in

firm strategy, structure, and rivalry, government regulations and policies, and chances. These elements individually and as a system determine the competitiveness of an industry.

- Analyzing the comparative advantage of Lebanon's agro-food products by using Balassa's quantitative approach. This requires the collection and analysis of data on exports and imports at the level of category and sub-category of products. The analysis examines the agro-food trade balance of Lebanon vis-à-vis Cyprus, Egypt, Israel, Jordan, Syria, and Turkey.

3. *Plan of the Report*

The report is divided into five chapters:

- Chapter I presents the main features of Lebanon's agricultural and agro-industrial sectors.
- Chapter II studies the competitiveness of the Lebanese agro-food sector. This chapter consists of two sections: *Section A* examines the competitiveness of the agro-food sector with a special focus on the factor, demand, supporting and related industries, and firm structure, strategy, and rivalry conditions. On the other hand, *section B* analyzes the competitive advantage of Lebanon's main competitors: Egypt, Israel, Jordan, and Syria with the objective to draw out lessons to be learned. This chapter has been analyzed within the conceptual framework of Porter.
- Chapter III identifies the products that Lebanon has or may have a comparative advantage in with respect to the countries in the region.
- Chapter IV presents the main findings of the Baalbek-Hermel rapid appraisal report and highlights the main problems and constraints the agro-food sector is facing in that region.
- Chapter V presents the conclusions, policy implications, recommendations and strategic options that will foster development in rural areas and promote agro-food exports.
- Finally, the annexes include the methodology adopted in the report, a brief survey on the previous studies on agriculture and agro-food sectors, four country reports, tables, charts, and graphs.

INTRODUCTION

1. Objective

The objective of this report is to examine the competitiveness of the agro-food sector, assess its performance, and examine its prospects. To this end, the study aims:

- to outline the main characteristics of Lebanon's agricultural and agro-food sectors;
- to examine the competitiveness and efficiency of the agro-food sector;
- to identify the products that Lebanon has a comparative advantage in with respect to the countries in the region;
- to examine the agricultural production and marketing system, with a view to determine the main problems and constraints facing the sector with particular emphasis on the Baalbek-Hermel Region;
- to identify the main features of the Government policies and programs related to both sectors;
- to outline the main international developments and changes and assess their implications;
- to recommend strategic options and policy measures that will foster development in rural areas and promote agro-industrial exports.

2. Methodology

The team of researchers working on the project used several approaches to meet the objectives of the study. In brief, the approaches used are as follows (find a detailed explanation of the methodology in appendix 1):

- Collection of data from various sources including the Central Administration of Statistics, Bank of Lebanon Annual Reports, Saade, Ministry of Agriculture, Industrial Census published by the Ministry of Industry, and CCIAB.
- Reviewing the literature on international changes and developments that cover issues such as globalization, Uruguay Round of Trade Negotiations, environmental concerns and issues, trends in global consumption and agricultural marketing.
- Conducting field surveys in Lebanon and other neighboring countries including Egypt, Israel, Jordan, Palestine, and Syria. In the case of Lebanon, the criteria of selecting the companies interviewed are export orientation, market share, and size of enterprises.
- Conducting a field survey with the farmers of the Baalbek Hermel. The interviews were conducted informally with the Local Development Community Committees in the communities of Hermel, El-Qaa', Nabi Othman, Laboueh, Irsal, and Baalbek, Chief Technical Advisor and staff members of the United Nations Development Program, Members of the Program who initiated Local Development and Credit Committees, and Program Local Committee in the region.
- Analyzing the competitiveness of the agro-food sector in Lebanon and the comparative advantage of Lebanon's main competitors using the conceptual framework of Porter. In his seminal work, Michael Porter has constructed a model that analyzes the competitiveness of an industry by examining 6 factors which include: factor, demand, related and supporting industries,

was about 10.5 percent of total population (see table 1.2). In addition, the sector produces a variety of food crops and is an important source of foreign currency earnings contributing close to 25 percent of total exports.

Table 1.2 The Importance of Agriculture in the Economy

| | 1974 | 1990 | 1991 | 1993 | 1995 | 1996 |
|--|------|------|------|------|------|------|
| Agric. as % of GDP (a) | 9 | | | 12 | 12.4 | |
| Agric. population as % of total population (b) | 14 | 16 | 15 | 12 | 11 | 10.5 |
| Agric. Labor as % of total labor (b) | 20 | 9 | 9 | 9 | 8 | 7.8 |

Source: a: Saade, Annual Report 1993, b: Ministry of Agriculture, Census 1997

The agricultural sector is not only a source of income to the farmers who live in rural areas but a way of life. Hence the success or failure of the sector has strong repercussions on poverty problems, social inequity, and economic deprivation in Lebanon, especially in the Baalbek - Hermel region.

Lebanon produces a wide variety of food crops. Because local production does not meet the needs of the local markets, products such as cereals, dairy products, livestock, and fisheries are imported. On the other hand, products such as apples, potatoes, tomatoes, cucumber, onion, garlic, and other fruits and vegetables which exceed local needs are exported. However, citrus is an exception since it is produced mainly for exports (Jaber, 1997).

Table 1.3 Trade Structure Indicators in US\$ Million

| | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997* |
|--------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|--------|--------|--------|--------|
| Total Export | 606.1 | 485.3 | 455 | 546 | 601 | 686 | 743 | 985 | 1,018 | 716 |
| Agricultural Export | 153.5 | 153.3 | 170.1 | 140.1 | 180 | 137 | 109 | 172 | 159.6 | 143.2 |
| Agricultural Export (%) | 25.3 % | 31.6 % | 37.4 % | 25.7 % | 30% | 20% | 14.7% | 17.5% | 15.7% | 20% |
| Total Import | 2,333 | 2,237 | 2,528 | 3,748 | 3,786 | 4,908 | 5,541 | 6,755 | 7,559 | 7,463 |
| Agricultural Import | 627.3 | 677.2 | 644.5 | 624.9 | 750 | 927 | 1,191 | 1,297 | 1,506 | 1,483 |
| Agricultural Import (%) | 26.9 % | 30.3 % | 25.5 % | 16.7 % | 19.8 % | 18.9 % | 21.5% | 19.2% | 19.9% | 19.9% |
| Agricultural Export/Import | 24.5 % | 22.6 % | 26.4 % | 22.4 % | 24% | 14.8 % | 9.2% | 10.3% | 10.6% | 8.5% |
| Trade Balance | - | - | - | - | - | - | -4,798 | -5,770 | -6,541 | -6,747 |
| | 1,727 | 1,752 | 2,073 | 3,202 | 3,185 | 4,222 | | | | |
| Agricultural Deficit | - | - | - | - | -570 | -790 | -1,082 | -1,121 | -1,347 | -1,340 |
| | 473.8 | 523.9 | 474.4 | 484.8 | | | | | | |
| Agricultural deficit (% of total) | 27% | 30% | 23% | 15% | 18% | 19% | 23% | 19.4% | 20.6% | 19.9% |

Source: BOL Annual Reports 1990-5 and CCIAB, 1997

* until september

CHAPTER I

MACRO-ECONOMIC OVERVIEW:

PROFILE OF THE AGRICULTURE AND AGRO-FOOD SECTORS

This part presents the main features of Lebanon's agricultural and agro-food sectors. However, a brief note on the structure of the Lebanese economy will first be presented.

I. Macro-Economic Overview

The economy is characterized by a limited resource base, moderate industrial development, dependence on both agricultural and industrial exports, and minimum government intervention. In 1996, the Gross Domestic Product (GDP) amounted to \$13,079 billion of which services, industry, and agriculture contributed 70.3 percent, 17.3 percent, and 12.4 percent, respectively. With the end of the civil war in 1990, the Lebanese Government launched an ambitious reconstruction plan to rebuild the infrastructure devastated by civil strife. The greatest beneficiaries were the construction industry and the service sector, particularly the banking sector. In fact, capital inflow in 1996 amounted to about \$7 billion to Lebanon by Lebanese expatriates.

Table 1.1 Main Economic Indicators

| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|-------------------------------|-------|-------|-------|--------|--------|------|
| GDP (Bn US\$) | 5.546 | 7.535 | 9.110 | 11.122 | 13.079 | |
| Real GDP growth rate | | | 8.5% | 7% | 4% | 3.5% |
| Per Capita income (US\$) | | | 3,100 | 3,800 | 4,400 | n.a. |
| Annual Inflation Rate (in LL) | 99.77 | 24.68 | 7.92 | 10.58 | 8.87 | 7.76 |
| Annual Inflation Rate (in \$) | 8.17 | 22.68 | 11.86 | 14.58 | 12.33 | 10 |
| Share of GDP: | | | | | | |
| Agriculture | | | 12 | 12.4 | | |
| Industry | | | 17.7 | 17.3 | | |
| Services | | | 70.3 | 70.3 | | |

Source: Central Administration of Statistics and Bank of Lebanon Annual Reports 1995,

In 1995 and 1996, GDP grew at about 7 percent and 4 percent resulting in an increase in per capita income from \$3,100 in 1994 to \$4,400 in 1996. This has been largely attributed to steady economic environment which include low inflation rates and stable exchange rates.

II. The Agricultural Sector

Agriculture is a basic productive sector in the economy. The sector contributed about 12.4% of GDP in 1995. It provides employment to about 10 percent of total labor force where direct employment was estimated at 7.8% of the economically active population. Moreover, the agricultural population

The agro-food sector is very concentrated. For instance, around 6% of the enterprises contribute 55% of production, while the remaining 94% produce around 45% of the total production.

The bill of agro-industrial imports increased from LL 308,559 millions in 1993 to LL 730,829 millions in 1996, reflecting a high and growing agro-industrial import bill. Also, the ratio of agro-industrial imports to total imports is low and declining (from 29.7 percent in 1993 to 10.63 percent in 1996), reflecting an increase in domestic demand for agro-industrial products and, importantly, indicating a growing domestic market potential for these products.

IV. Agricultural /Agro-Food Markets

The major destinations for agricultural and agro-industrial exports and imports are presented in Table 1.5 and 1.6. United Arab Emirates and Saudi Arabia are the major markets for Lebanese exports, comprising 34 and 27 percent of total exports in 1996 and 1997, respectively. The Arab-Gulf countries purchase 46 percent of Lebanon's total agricultural products. On another note, total exports to Syria declined by 70% (from LL 110,453 millions in 1996 to LL 57,861 millions in 1997). It is estimated that it could be due to the fact that Syria has developed its own agricultural and agro-industrial sectors and, thus, becoming less dependent on imports from Lebanon. As a result, Syria's imports from Lebanon declined coupled with increase in exports, thus, inducing a widening trade deficit in Lebanon's agricultural trade balance.

Table 1.5 Major Export Markets in millions of Lebanese Pound

| | 1996 | Percent of 1996 | | 1997 | Percent of 1997 |
|-----------------|------------------|--------------------|-----------------|----------------|--------------------|
| U.A.E. | 375,592 | 23.43 | Saudi Arabia | 149,407 | 15.09 |
| Saudi Arabia | 218,640 | 13.65 | U.A.E. | 88,961 | 8.99 |
| Kuwait | 122,455 | 7.63 | France | 70,790 | 7.15 |
| Syria | 110,453 | 6.89 | USA | 59,398 | 6.00 |
| France | 73,886 | 4.60 | Kuwait | 44,311 | 4.48 |
| Italy | 60,697 | 3.87 | Turkey | 41,040 | 4.15 |
| USA | 43,212 | 3.03 | Jordan | 38,280 | 3.87 |
| Other Countries | 592,913 | 36.99 | Italy | 32,733 | 3.31 |
| | | | Other Countries | 465,038 | 46.98 |
| Total | 1,602,848 | 100 | Total | 989,958 | 100 |

Source: Central Administration of Statistics 1997

Lebanon buys over 60 percent of its total imports from the European Union, with Italy, Germany, France, and the United Kingdom representing the main import markets. Historically, Lebanon had a substantial trade deficit with its main trading partners.

To examine the agricultural trade performance, the pattern of agricultural exports and imports are reviewed. In fact, the ratio of agricultural exports to imports indicates the significance of agricultural exports in financing agricultural imports (Table. 1.3). The share of agricultural imports in total imports increased from 18.9% in 1993 to 19.9% in 1996, although small in percentage, it reflects a growing food gap problem. Also, the ratio of agricultural export to imports is very low and declining from 14.8% in 1993 to 10.6% in 1996, not only indicating a widening deficit in agricultural trade but, also, reflecting a growing food import dependence.

III. The Agro-Food Sector

According to the Industrial census conducted in 1994 by the Ministry of Industry, there are around 4,456 enterprises in the agro-food-sector, representing 20% of the total industrial enterprises. In fact, 94% of the agro-food enterprises employ between 1 to 19 workers. The following table shows the distribution of enterprises according to the number of employees.

Table 1.4 Breakdown of enterprises per number of employee

| | Agro-food Sector | | Total Enterprises | |
|-------------------------|------------------|------|-------------------|-----|
| | Number | % | Number | % |
| Total enterprises | 4,456 | | 22,107 | |
| From 1 to 4 employees | 3,117 | 70 | 15,446 | 70 |
| From 5 to 9 employees | 819 | 18.3 | 3,970 | 18 |
| From 10 to 19 employees | 252 | 5.7 | 1,326 | 6 |
| From 20 to 34 employees | 76 | 1.7 | 446 | 2 |
| From 35 to 49 employees | 20 | 0.4 | 132 | 0.6 |
| From 50 to 99 employees | 23 | 0.5 | 116 | 0.5 |
| More than 100 employees | 19 | 0.4 | 78 | 0.3 |
| No Answer | 130 | 3 | 593 | 2.6 |

Source: Industrial Census conducted in 1994 by the Ministry of Industry

The sector employs around 31,000 workers, representing 21% of total workers in the industrial sector. On average, the agro-food sector employs roughly 6.88 workers per enterprise, the highest in the industrial sector. While the agro-food enterprises represent 20% of total industrial enterprises, their production represent 23% of total industrial production. The annual production of agro-food sector amounted to \$866 million with \$422 million in value added in 1994. The average production per enterprise was found to be positively correlated with the size of the enterprise due to economy of scale factors. For example, the average production of small scale enterprises employing less than 10 employees is around \$100,000, while it is \$3,000,000 for large scale enterprises employing more than 100 employees. Also, the productivity is proportional to the size of the enterprise. The productivity of small scale enterprises was estimated at \$20,000 compare to \$50,000 for large scale enterprises.

Regarding fixed capital investments, it has been estimated that \$40.3 million were invested in the agro-food sector comprising 20.5% of total industrial capital investments. Hence, an average of \$9,060 per firm has been invested slightly over the national average of \$8,889.

CHAPTER II

COMPETITIVENESS OF THE AGRO-FOOD INDUSTRY IN LEBANON

This chapter examines the competitiveness of the Lebanese agro-food industry. The analysis is divided into three sections.

The first section assesses the competitiveness of the agro-food industry with the objective to determine the weaknesses and capitalize on the strengths. The analysis focuses particularly on 4 conditions. They are as follows:

1. Factor conditions - concern the inputs necessary to compete in the agro-food industry.
2. Demand conditions - examine the size, composition, and growth of the agro-food industry.
3. Supporting and related industries- relate to downstream, upstream industries, and other related industries that affect the agro-food sector.
4. Firm structure, strategy, and rivalry - assess the structure, conduct, and performance of the sector.

The second section assesses the competitive advantage of Lebanon's main competitors: Egypt, Israel, Jordan and Syria with the objective to draw out lessons to be learned.

The third section reviews the international changes and developments taking place in the agro-food sector.

The analysis is based on the conceptual framework of Porter. A detailed review of his framework is presented in the annex.

I. The competitiveness of the Lebanese agro-food industry

1. Factor conditions

There are six factor conditions that are crucial for the competitiveness of the agro-food industry: physical, labor, machinery, capital, knowledge, and infrastructural resources. Lebanon's strength is mainly attributed to its basic physical resources. On the other hand, its weaknesses are many and include outdated machinery, lack of capital, poor knowledge resources, and poor infrastructure resources. The labor and capital resources are a mixed bag.

Lebanon's strength is based on its basic physical resources such as fertile soil, diverse climate, rich and water resources. Additionally, Lebanon has been able to capitalize on its advantageous geographical location on the Mediterranean sea and near to the Gulf countries.

- *Fertile soil* - despite the small size of the country, Lebanon's arable land is 33% (Oxford Business Group) of the total land distributed along the coast, the mountains, and the Beqaa valley.
- *Climate* - Lebanon enjoys three climatic conditions: subtropical along the coast, moderate in the mountains, and continental in the Beqaa Valley. The diversified climatic conditions permit the

Table 1.6 Major Sources of Imports (in Million Lebanese Pounds)

| | 1996 | % of 1996 | | 1997 | % of 1997 |
|-----------------|------------|-----------|-----------------|------------|-----------|
| Italy | 1,440,420 | 12.1 | Italy | 1,397,402 | 13.30 |
| USA | 1,298,422 | 10.9 | France | 1,005,765 | 9.57 |
| Germany | 1,014,156 | 8.5 | USA | 978,184 | 9.31 |
| France | 927,035 | 7.8 | Germany | 913,724 | 8.70 |
| EEC | 753,018 | 6.3 | Syria | 463,778 | 4.42 |
| Syria | 484,335 | 4.1 | United Kingdom | 460,097 | 4.38 |
| United Kingdom | 479,851 | 4 | | | |
| Other Countries | 5,506,477 | 46.3 | Other Countries | 5,285,180 | 50.32 |
| Total | 11,903,714 | 100 | Total | 10,504,130 | 100 |

Source: Central Administration of Statistics 1997

V. Conclusion

Lebanon runs a substantial food trade deficit. In an economy with a high import bill, exports have become increasingly important to finance this bill. In summary, the increase in agricultural and agro-industrial imports reflects the failure of the domestic food production and processing systems to keep pace with domestic consumption patterns. Hence, the imbalance between food production and consumption poses serious problem on the economy. Specifically, filling the growing gap problem between production and consumption trends by imports places heavy demand on foreign exchange sources, increases unemployment, and makes poverty problems even more pronounced.

production of a wide variety of crops such as citrus, bananas, avocado, wheat, corn, apples, potatoes, sugar beet, grape vines, and other fruits and vegetables.

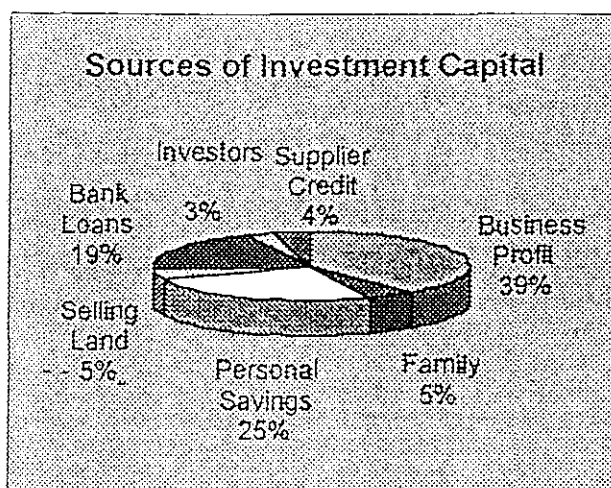
- *Water* - located at the eastern end of the Mediterranean, Lebanon enjoys rich rainfall. The average annual precipitation is 1,100 mm along the coast, 1,500 mm in the mountains, and 400 mm in the Beqaa Valley. Although 60% of the water is supplied by rainfall, Lebanon has underground resources totaling 3 billion cubic meters (Jaber).
- *Proximity to the GULF Countries* - Historically, agro industrial food exporters have been able to develop relatively strong commercial position in the Gulf markets

On the other hand, the competitiveness of the agro-food industry in Lebanon is suffering from lack of capital, poor knowledge resources, and weak and expensive infrastructure.

- *Capital resources*, which refer to the amount and costs of capital available to finance the agro-food industry are either lacking or available at a very high cost. The major problems can be summarized as follows:
 - a. The interest rates are high ranging between 18 - 22% in Lebanese Pounds and 12 - 14% in dollars. In addition, collateral requirements are excessive.
 - b. The duration of the loans provided by banks are short and medium term hence not appropriate for undergoing long term capital investment
 - c. The provision of loans is based on personal networks and connection rather than on the feasibility of the projects.
 - d. The procedure of taking a loan from the bank is cumbersome and bureaucratic.
 - e. The Central Bank subsidized loans of 5% must meet several requirements.

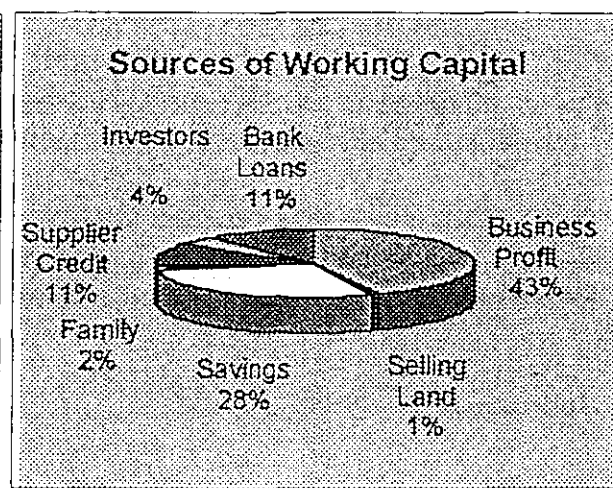
Consequently, three quarters of all working and investment capital is derived from own sources, which include personal savings, business profits, family money, and land sales.

Chart 2.1: Sources of Investment Capital



Source: World Bank

Chart 2.2: Sources of Working Capital



- *Knowledge resources* refer to the research and development and market information. The competitiveness of the industry is restrained by the following:

- a. Primarily due to the high investment capital, important scientific research and development programs focusing on enhancing post-harvest technology, handling, and transportation, and

improving the quality of processed food is absent. This, in turn, severely restricts the necessary innovations and improvements in the quality of agro-industrial production and marketing operations. There is lack of research and development institutes specialized for the agro-food industry.

- b. Moreover, supporting extension institutions focusing on developing and disseminating information on new production and marketing methods, such as harvesting, grading, processing, packaging, storage, and transportation, are also lacking.
 - c. There is a lack of market information on demand conditions, consumers tastes and preferences, prices and quality needed. This information bridges the gap between producers and consumers and allow the agro-industrial sector to carry out long term analysis of changing market conditions and to adjust their production and marketing accordingly. There exists a department in the Ministry of Agriculture whose responsibility is to collect and provide market information, but its has been dormant due to lack of funds.
- With respect to *infrastructure resources*, the industry suffers from three major obstacles:
 - a. Electricity - is considered to be very high of 11.2 cents per kw. This scores unfavorably in the region where costs of electricity range between 0.16 cent per kw in Egypt and 8 cents per kw in Palestine.
 - b. Transportation - in general the major highways are moderately developed. However, the transportation network surrounding the production and distribution areas is completely inadequate.
 - c. Storage facilities - On one hand, costly land increases tremendously storage cost. On the other hand, the lack of modern and storage rooms does not insure a reliable and dependable products' quality.
 - *Labor and machinery* are less obvious. With respect to labor, there are generally two categories:
 - a. Skilled labor force - this refers to the bosses in the factory, better known as the *Maalemeen* who are usually Lebanese. They are productive and relatively expensive since industry pays their social security and other benefits.
 - b. Unskilled labor force - this refers to the cheap foreign labor working at a fraction of the cost of Lebanese workers. Foreign labor is not as productive mainly due to high turnover rate. It is estimated that on average 40% of a firm's workers are unskilled (field study result).

Concerning machinery and equipment, they have been depleted during the civil war. However, the industry is keen on replacing the old machines with new state of the art equipment. The major constraint industrialists face is the shortage of capital.

2. Demand Conditions

- The size of the Lebanese agro-food production of \$867 million, as revealed by the 1994 industrial Census, is small relative to the countries in the region hence denying producers from economies of scale in production. Intermediate consumption is \$445 million (Industrial census) and annual final food consumption is estimated in 1997 at \$3,726 million (Administration Centrale de la Statistique. Condition de vie des menages en 1997, Feb 1998).
- The industry is open to foreign competition. The table below shows the extent of foreign penetration in the Lebanese market.

Table 2.1 Local vs. foreign consumption of a basket of selected goods:

| Item | Consumption of Imported Products | Consumption of Locally Produced items |
|----------------------|----------------------------------|---------------------------------------|
| Peas and Carrots | 97% | 3% |
| Peas | 96% | 4% |
| Tomatoes Derivatives | 95% | 5% |
| Green haricots | 94% | 6% |
| Frozen Vegetables | 94% | 6% |
| Powder Juice | 94% | 6% |
| Liquid Juice | 71% | 29% |
| Jam | 53% | 47% |
| Cooked Fava Beans | 50% | 50% |
| Chick Pea Dip | 35% | 65% |

Source: Compiled by LCPS field researchers

Additionally, if we look at imports as a percentage of local production (shown in Table 2.2) it is 1,106% for cereals, 518% for sweeteners, 515% for vegetable oils, 1,400% for animal fats, and 103% for milk, indicating at least in principle a potential growth for domestic production.

Table 2.2 Lebanon's Food balance Sheet for the year 1995

| Products | Production (1000 Metric tons) | Imports (% of local production) | Products | Production (1000 Metric tons) | Imports (% of local production) |
|--------------------------|-------------------------------------|---------------------------------------|----------------------------|-------------------------------------|---------------------------------------|
| Cereals Excl. beer | 77 | 1106% | Fruits excl. wine | 1316 | 6% |
| Starchy Roots | 327 | 20% | <i>oranges, mandarins</i> | 204 | 2% |
| Sugar Crops | 234 | 0% | <i>Lemon, limes</i> | 99 | 0% |
| Sweeteners | 22 | 518% | <i>grapefruit</i> | 49 | 0% |
| Pulses | 39 | 36% | <i>bananas</i> | 98 | 10% |
| Treenuts | 19 | 74% | <i>Apples</i> | 135 | 0% |
| Oil Crops | 58 | 57% | <i>Grapes, excl. wine</i> | 330 | 0% |
| Vegetable oils | 13 | 515% | <i>Fruit, other</i> | 401 | 17% |
| Vegetables | 850 | 17% | Alcoholic beverages | 55 | 18% |
| <i>Tomatoes</i> | 236 | 29% | <i>Wine</i> | 30 | — |
| <i>Onions</i> | 71 | 20% | <i>Barley, Beer</i> | 10 | 50% |
| <i>Vegetables, other</i> | 543 | 11% | <i>Beverages alcoholic</i> | 14 | 29% |
| Milk, excluding butter | 183 | 103% | <i>Alcohol, non food</i> | 2 | 0% |
| Eggs | 65 | 3% | Meat | 77 | 40% |
| Fish, seafood | 2 | 0% | Offal | 5 | 0% |
| | | | Animal fats | 2 | 1400% |

Source: FAO Database

- The agro-food industry has been experiencing high growth rates in the last few years. Although data on domestic consumption is not available for the past years, the import bill of agro-food is a good proxy variable. Hence, the growth rate has averaged around 48% from 1993 to 1996.

Table 2.3 Foreign trade, for Agricultural and Agro-food products 1994-1997

| | 1994 | 1995 | 1996 | 1997 |
|----------|---------|-----------|-----------|-----------|
| Imports | 567,441 | 1,401,096 | 1,510,245 | 1,605,099 |
| % Change | | 146.91% | 7.79% | 6.28% |
| Exports | 108,639 | 144,337 | 160,040 | 140,975 |
| % Change | | 32.86% | 10.88% | -11.91% |

Source: Administration Centrale de la Statistique

- The Lebanese consumer is considered to be a sophisticated buyer. There are several measures that indicate this.
 - a. The availability of excessive number of brands per product.
 - b. The literacy rate is high relative to the region with 91% for males and 83% for females in 1996 (Lebanon 1997-1998, Oxford Business Group).
 - c. 85% of the population is urban and one third lives in the capital (Lebanon 1997-1998, Oxford Business Group).
 - d. Almost 50% of the population between the age of 15 and 64 years old is considered active (administration centrale de la statistique, condition de vie des manages en 1997).
 - e. There are at least 6 newspapers with a circulation of 92,000 per day (Lebanon 1997-1998, Oxford Business Group).
- In 1996, the agro-food export as a percentage of total export of 15.69% (9.67% for agricultural products, and 6.02% for agro industrial products) is low. The share of Lebanese agro-food exports in the destination country imports is in most cases very low (less than 5%). Yet, given the high number of Lebanese living abroad and the good reputation of Lebanese cuisine there is a potential growth for exporting ethnic food. One of the major constraints impeding this is the lack of developed aggressive marketing strategy.
- Finally, the rise in consumers' health and environmental awareness which is changing consumers demand for food products creates challenges and opportunities for the sector.

3. Supporting and related industries

There are 7 supporting and related industries that affect the competitiveness of the agro-food industry in Lebanon. (see figures 2.3, 2.4, 2.5.)

3.1 Local Agricultural inputs

This refers to the local agricultural produce supplied by Lebanese farmers. Local agricultural produces are costly, fail to meet the specifications of the agro-food industry, and are inadequate to meet the needs of the industry. This is due to the following:

- Urbanization, taking place in the most fertile areas is decreasing the total surface of agricultural land.
- Farm holdings are generally small to medium in size depending on the geographical location. For example, farm holdings in the South are small in size and distributed along the coastal strip of Damour, Sidon, and Tyre. However, farm holding are medium sized in the north and large in the Beqaa valley and the Baalbek-Hermel region. The size of the land has implications on the economies of scale of production.

- Land tenancy and share cropping contracts, which are concluded verbally are for a short period ranging from one season to one year. The short duration of contracts has negative effects on the treatment of the land.
- The supply of agricultural inputs such as pesticides sold to farmers is often spoiled since it is not subjected effectively to any sort of regulations by the government or an independent agency. Moreover, there are four main firms in Lebanon, which import and distribute such inputs hence controlling the market for these products. The lack of regulation and the monopoly power granted has negative consequences on the costs of farmers.
- The irrigation system which, is based either on furrow and basin flooding or on digging wells is considered inefficient. Moreover, farmers pay for the irrigation water on hourly or dunum basis, a historic Ottoman tradition, which fails to encourage efficient allocation of water. The production techniques which include cultivation, pruning, weeding, fertilizers application, spraying, irrigation, and ploughing are labor intensive and considered to be primitive. However, in the Beqaa valley, the production techniques are more capital intensive.
- Farmers have no access to funds from banks hence preventing the adoption of new machinery and equipment that enhance production. However, a common source of credit is suppliers and distributors who then exercise their bargaining power to buy the produce at low prices.

3.2 Distribution of local agricultural products

The distribution of agricultural produce involves several intermediaries and different types of channels. Generally, the intermediaries include Dammans*, primary and secondary wholesalers, and retailers. There are various distribution channels used depending, among other things, on the volume of the produce, the crop, and the region of plantation. The issues of concern with respect to distribution channels include the following:

- The types of distribution channels are as follows:
 - a. Producer → Damman → Wholesaler → Secondary Wholesaler → Retailer → Consumer
 - b. Producer → Damman → Wholesaler → Retailer → Consumer
 - c. Producer → Wholesaler → Secondary Wholesaler → Retailer → Consumer
 - d. Producer → Wholesaler → Retailer → Consumer
 - e. Damman → Wholesaler → Retailer → Consumer
 - f. Damman → Wholesaler → Secondary Wholesaler → Retailer → Consumer
 - g. Producer → Exporter
 - h. Damman → Exporter
 - i. Producer → Exporter/Wholesaler

Domestic trade is characterized by channels (a) to (f). Channels (g) and (h) are used for external trade and channel (i) represent a combination of domestic and export trade. It is estimated that 38%

*A Damman is an intermediary who either rents the land from the farmer (production Damman) and becomes responsible for the whole production, cropping etc. or buys the whole produce from the farmers (cropping Damman), at a predetermined price and becomes responsible for the cropping and marketing of the produce.

of farmers use channels (a) and (b), 21% use channels (c) and (d), 5% use channels (e); and 36% use channels (f). (See table 2.4).

Table 2.4 Percentage of Framers using various distribution channels
Farmers

| Intermediaries | Number | Percent |
|-------------------------|--------|---------|
| Dammans | 62 | 38 |
| Wholesalers | 35 | 21 |
| Exporters | 8 | 5 |
| Wholesalers & Exporters | 59 | 36 |
| Total | 164 | 100 |

Source: T. Jaber 1995, Field Survey

- Generally, 62% of agricultural products are handled by wholesalers and exporters compared with only 38% handled by Damman, hence implying the importance of wholesalers and exporters in the distribution channels. However, the strong bargaining power of the intermediary is highly contingent on the size of the farms and hence their geographical locations. For example, the farmers selling exclusively to exporters are usually the owners of large farms in the Beqaa valley and the Baalbek-Hermel region. Hence exporters play an important role in the Beqaa region. On the other hand, wholesalers are more pertinent in the South, and the Dammans in the North.
- The lack of strong farmers' cooperatives relegate farmers to a secondary position in the bargaining chain. Consequently, farmers are stuck between strong importers/distributors of agricultural inputs and strong wholesalers and dammans.
- The duration of the distribution is of concern since it affects the competitive edge of the firms and in some cases the goods delivered are about to expire.
- A common problem is the lack of contract enforcement between the farmers and the intermediaries hence increasing the transaction costs of doing business.
- Some intermediaries find it profitable to mislead either the second intermediary or end user on the quality of the products.
- Because of poor conditions of the word especially in rural areas, transportation is considered to be high.

3.3 Import of inputs for the agro-food sector

The inputs include agricultural inputs, machinery and equipment, spare parts, and packaging material.

Although Lebanon's economy is open to trade and has lower import duties than other countries in the region, several problems persist. They are summarized below:

- The corruption in the customs agency increases the cost of delivering the imported products by 10% and delays the release of goods.
- In addition, the cumbersome bureaucratic procedures of the customs prevent importers from claiming back the duties paid on imported raw materials to be used in producing finished goods to be exported.
- The transportation costs from the Port to the factory are high.

3.4 Local Packaging Materials Industry

The local packaging industry is considered to be competitive and innovative due to high concentration of the industry. The industry covers glass bottles, jars, nylon bags, corrugated cardboard, board, paper (Kraft), cans and tin cans, and labels. Its main attributes are the variety of the products manufactured, good quality, and competitive prices. On the other hand, the industry is working at less than full capacity and unable to expand due to the lack of new export markets.

3.5 Distribution of agro-food products to local consumers

There are two distribution channels. One, the agro-food firm that is vertically integrated distributes directly to the retailer. The second mechanism is to go through distributors. However, few distributors have a national network and adequate resources to carry their functions properly. Moreover, since many of the local distributors are also traders and importers, they have been able to pressure domestic firms to lower their margins. Finally, since there are only 69 cooperatives and 219 medium to large outlets, the costs of distributing to the many small groceries are expensive.

Table 2.5 Number of cooperative and large outlets by region

| | Number of cooperatives | Number of medium to large outlets |
|-----------------------|------------------------|-----------------------------------|
| Greater Beirut | 43 | 118 |
| Mount Lebanon (South) | 4 | 20 |
| Mount Lebanon (North) | 6 | 26 |
| North | 5 | 5 |
| South | 4 | 11 |
| Bekaa | 7 | 39 |
| Total | 69 | 219 |

Source: LCPS Interviews with supermarkets managers and syndicate

3.6 Export

The agro-food export is very low. The reasons are as follows:

- There is no export control of the products leaving the country. This can harm the image of Lebanese products.
- Only few agro-food firms have ISO 9000- license.
- Many neighboring countries have protected economies (high customs in Jordan, no imports to Syria).
- Exporters lack information on foreign markets.
- Local transport and port services are very high.

3.7 Marketing and Advertisement

Lebanese agro-food firms are not market but production oriented. In fact, building long term relationship with retailers and nurturing consumer loyalty is very rare in the agro-food sector. On the other hand few promotional campaigns are carried out by agro-industrialist in the export market. Since, the advertisement sector is considered innovative, the agro-food industry is relying on local advertising companies to develop their ads and their advertisement campaign.

4. Firms Structure, Strategy and Rivalry

There are three aspects to this.

4.1 Firm Structure

- Ownership Structure of agro-industrial companies confirms the predominance of family ownership and the prevalence of small to medium size firms. 74% of the firms in the food products and beverages industry are individually or family owned. On the other hand, joint stock and partnership make up only 11% and 8% of the total firms, respectively.

Table 2.6 Distribution of agro-food firms according to their Legal Forms

| | Total | | Individual Company | | Public Company | | Joint stock SAL | | Partnership | | Ltd. Company | | COOP | |
|---------------------------|-------|---|--------------------|-----|----------------|----|-----------------|-----|-------------|----|--------------|----|------|----|
| | unit | % | unit | % | unit | % | unit | % | unit | % | unit | % | unit | % |
| Food products & Beverages | 4,838 | | 3,601 | 74% | 1 | 0% | 521 | 11% | 395 | 8% | 126 | 3% | 4 | 0% |

Source: Ministry of Industry, Report on Industrial Census, Appendix III, December 1994.

- The firms in the agro-food industry are small in size measured by the number of employees. In fact, 97% of the firms in the agro-food sector employ less than 50 employees (see table 2.7)

Table 2.7 Main food sub sectors distributed according to workforce

| Sub-sector | Firms having less than 50 employees | | Firms having more than 50 employees | |
|--|-------------------------------------|------|-------------------------------------|------|
| | units | % | units | % |
| Fresh & Preserved Meat, | 42 | 95% | 2 | 5% |
| Processed & Preserved Fish & Fish Products | 3 | 100% | 0 | 0% |
| Fruit & Vegetable Juices | 7 | 78% | 2 | 22% |
| Processed & Preserved Fruit & Vegetables | 128 | 96% | 5 | 4% |
| Oils & Fats | 167 | 100% | 0 | 0% |
| Dairy Products +ice cream | 327 | 98% | 6 | 2% |
| Grain Mill Products | 157 | 99% | 2 | 1% |
| Confectionery | 161 | 95% | 8 | 5% |
| Coffee & Tea | 179 | 100% | 0 | 0% |
| Condiments & Seasonings | 19 | 100% | 0 | 0% |
| Other Food Products | 34 | 87% | 5 | 13% |
| Distilled Alcoholic Beverages | 95 | 100% | 0 | 0% |
| Wines | 4 | 100% | 0 | 0% |
| Beer Made from Malt | 0 | 0% | 2 | 100% |
| Mineral Waters and soft Drinks | 64 | 94% | 4 | 6% |
| Main food products and Beverages* | 1387 | 97% | 36 | 3% |

Source: Ministry of Industry, Report on Industrial Census, Appendix III, December 1994.

*Excluding fresh pastries, bakeries and sweet

- The firms are geographically scattered and operate on an individual basis. Agro industrialists are fragmented producers, although they are organized in a union, they lack cooperation amongst themselves. Vertical and horizontal integration, along production and marketing systems, are poorly developed.

4.2 Firm Strategy

There are two aspects towards strategy. Inward and outward strategy which refer to management practices with respect to the firm and to the market, respectively.

- Inward Strategy – this refers to management practices inside the firm. The agro-food industry is characterized by the following:
 - a. The top managerial level is skilled, educated, and experienced. However, their managerial practices are set on short-term basis. Overall, the management style is old fashioned and hierarchical in nature. Salaries and benefits are generous for family members and for skilled and key personnel in the factory. However, non-family members are under-appreciated and hence paid lower salaries. Most of the training is conducted in-house. Although roughly 65% of firms (field study) have Research and Development department, it is usually understaffed and very rudimentary.
 - The production techniques and marketing practices have focused on supply management rather than emphasized on the development of domestic and export markets. That is they have not been updated to adjust to change in consumer's demand and to meet the sophisticated export market requirements.
 - c. The marketing and distribution practices are not oriented towards consumers need. This reflects that industrialist do not understand what the final buyer wants, or what the major trader who is servicing the final consumer wants. These practices limit the industrialist's capacity: to develop and hold long term policies; to develop new product mix; and to comply to international standards.
- Outward Strategy – this refers to management strategy towards the market. They are as follows:
 - a. Many of the firms have a short-term outlook due to uncertain economic environment/policies. Also as a result of this, some firms have adopted a diversified strategy in unrelated products to hedge risk.
 - b. Some firms have vertically integrated and hence assuming the activities of suppliers and distributors because of the high cost of doing business in Lebanon.
 - c. Quality and price are medium. This is not a strategy but an outcome of the foreign competition.
 - d. Production techniques and marketing practices have focused on supply management rather than emphasized on the development of domestic and export markets: few firms are export oriented since most can not comply with the international standards (ISO 9000).
 - e. Many factories are under-utilized.
 - f. Firms do not focus so much labeling and packaging.
 - g. However, the industry has shown great flexibility and adaptability during the war.

4.3 Firm Rivalry

The third and most important component of competitiveness is the rivalry. The Lebanese agro-food industry is characterized by the following:

- The analysis of concentration of economic power in each sub-sector reveals that, whilst there are many producers, the largest market share is shared by the four to five top firms each employing 50 or more employees. This situation of economic concentration is classified as less than perfect competition.

- The intensity of competition is stronger when barriers to entry are low. However, there are significant barriers limiting the entry of potential entrants in the Lebanese agro-food sector. 359 new firms have registered to enter the market between 1994 and 1997 with capital investment of \$58,141,478 and employing 2,889 workers showing an interest and confidence in the industry. On the other hand, there is no data available concerning closed or bankrupted firms.

Table 2.8 Planned Food and Beverage Firms

| | 1994 | 1995 | 1996 | 1997 |
|------------------------|------------|------------|------------|------------|
| Number of new entrants | 83 | 80 | 90 | 106 |
| Number of employees | 727 | 706 | 687 | 769 |
| Capital In US\$ | 12,426,923 | 22,647,970 | 11,488,663 | 11,577,922 |

Source: Administration Centrale de la Statistique

- Although obtaining the required licenses (trade, investment) from the concerned authorities are considered to be relatively easy, the most relevant constraints include the need for substantial capital to cover investment and trade operating expenses, build up good reputation in production and trade, and establish contacts with suppliers.

5. Government Policies

The government's policies towards the agriculture and the agro-food sectors have been either minimal or lacked a coherent strategy. Government policies are presented below under two headings: present and past policies

5.1 Present policies

- Provides *price support* for cash crops, such as tobacco, sugar beet, and wheat to encourage the replacement of illegal crops.
- *Import Control Policy: The Agricultural Calendar* -the government has adopted the *Agricultural Calendar* as an instrument to protect domestic production of fruits and vegetables. The policy bans the import of specific agricultural products such as citrus, apples, potatoes, allows the import of some agricultural products upon a possession of a license from the Ministry of Agriculture, and allows the import of particular products during a defined period of time without a license. The Agricultural Calendar has been used since the 1960s, however, it has been modified in 1992 and 1995.
- *The Government Five-Year Agricultural Plan (Year 2000)* - In 1997, the Minister of Agriculture announced a Development Plan for the year 2000, within the framework of "A General Agricultural Policy." This plan is financed by both the government and international organizations such as FAO. The plan aims to
 - increase net farming income;
 - maintain stable and competitive farm gate prices for agricultural inputs and output;
 - increase agricultural output through increasing the productivity and to reduce agricultural imports through diversifying agricultural production;
 - conserve agricultural resources and to achieve a balanced integrated rural development;
 - increase the efficiency of the marketing system for agricultural produce.

However, the project is on-hold due to lack of funding.

- One of the treaties which was signed with Jordan allowed the exports of Lebanese fruits and potatoes during a specified period of time. Reciprocally, Jordan will export vegetables during a defined period of time.

In addition, the government of Lebanon has signed several agreements with the international organizations. These include the following:

- a. A project to develop the agricultural sector with a particular focus on land reform with the International Bank for Development and Reconstruction. The loan is valued at \$31 million, of which \$28.2 million are channeled to Green Plan project, for a period of 5 to 6 years:
 - b. A project on the extension of the First Phase of the Rural Development Program for the Baalbak-Hermel Region. The loan amounts to \$12 million financed by the UNDP. However, the project is on-hold.
 - c. A project on agricultural irrigation with the World Bank and the International Fund for Rural Development. The loan is estimated at \$10 million for a period of 6 years.
 - d. The Ministry of Agriculture concluded an agreement with the USA to import 3,000 cow to be distributed to small farmers.
 - e. A number of Agricultural projects were agreed on during the Friends of Lebanon Conference, amounting to \$600 million. However, nothing has materialized.
- With respect to decrees and laws, the following has been accomplished:
 - a. The Minister of Agriculture and the Minister of Industry issued a common decision requesting importers of agricultural raw materials to purchase domestic inputs limit the imports.
 - b. A study to modernize agricultural legislation and prepare an agricultural plan based on the result of the survey undertaken by the Ministry of Agriculture in the next 5 years.
 - c. The Ministry of Agriculture has prepared a project to organize the marketing and export of agricultural products.

5.2 Past Plans

Prior to the civil war, the government embarked on several agricultural projects which were limited to the provision of agricultural infrastructure including rural roads, irrigation canals, and land reclamation. A brief overview of these projects include the following:

- **The Green Plan (GP)** - the project, initiated in 1963, aimed to: (a) increase the agricultural area; (b) rehabilitate rural roads and construct new ones; (c) reforestate and conserve water resources; (d) introduce greenhouses and hydroponics to increase crop production; and (e) develop water retention techniques, such as building canals, and reservoirs, and irrigation. To this end, the GP (a) provided rental of tractors, ploughs, and other terrace-building equipment to farmers at cost; (b) distributed citrus seedlings for free and seed wheat for credit; (c) constructed rural roads and developed water retention techniques such as canals,

and reservoirs. The government worked closely with FAO, UNDP, and the World Food Program (WFP), and benefited in technical assistance and expertise from the US and France.

- *The Irrigation Projects* - Several irrigation projects were adopted with the objective to upgrade the irrigation network through the construction of dams, reservoirs, canals, and pumping stations. Such included the Litani and Kassmieh Irrigation Projects (KIP) in the South and projects in the Akkar Plain and Minieh region in the North. These projects came to a halt since the outbreak of the war in 1975.

The Research and Extension Service - the government has financed agricultural research, extension, and educational programs to develop and improve farmers' agricultural techniques. These projects resulted in the birth of the Agricultural Extension department which was established as a unit in 1954 in the Ministry of Agriculture. The department main responsibility include publishing agricultural bulletins and disseminating research results to farmers. This department is currently inactive due to lack of funding.

6. Summary and Conclusions

Against this background, it is important to chart Lebanon's competitive strengths and weaknesses; opportunities and threats facing the agro-industrial sector, with a view to develop a production and marketing strategy for fostering sectoral development.

6.1 Strengths and Weaknesses

The favorable basic factors of the production allow the production of good quality agricultural produce. Agro-industrialists can benefit from: the proximity of Lebanon to the Gulf and EU markets; the stability of currency; the relatively low inflation rate; the relatively moderate economic growth; the favorable basic factors of the production; and their good trading skills to establish themselves in the export markets and to have a recognized presence. These basic factors should, therefore, provide the impetus for enhancing agricultural quality and, through it, agro-industrial exports. The strengths and weaknesses of the agricultural sector are summarized in the following table.

Lebanon is weak in basic transportation infrastructure, research and development in post-harvest marketing facilities and services, market information and communication, promotional campaigns, and finance and credit. The lack of supporting marketing institutions and organizations, and poor farmers' education are considerable points of weakness that may influence the future development of the agro-industrial sector. Also, the absence both of produce promotion in the export markets and timely information on market conditions are a matter of concern for the future, as information constitutes a key ingredient for success. Thus, the ability of the agro-industrial sector to improve the output quality and to modernize the marketing practices may be considerably affected. Also, lack of basic knowledge about consumers and market trends in the export markets handicaps any future expansion of the sector.

Table 2.9 Strengths and Weaknesses of Lebanon's Agro-industrial Sector

| | Strength | Weaknesses |
|---|--|---|
| Climate | <ul style="list-style-type: none"> •29029 Favorable warm climate •13244 Possibility for growing diverse high quality agricultural produce suitable for use as raw material for agro-industry | |
| Agriculture | <ul style="list-style-type: none"> •29029 Fertile soil suitable for producing various products | <ul style="list-style-type: none"> •29029 Small land •29029 Uncompleted irrigation system •29029 No education or training for farmers extension services |
| Raw materials: Agro-Industry | | <ul style="list-style-type: none"> •29029 Input raw material is scarce, not suited for processing and is of low quality •29029 Sporadic availability of local raw material and variability in quality |
| Labor | <ul style="list-style-type: none"> •29029 Cheap unskilled labor compared to industrial countries: sourced from Syria and Egypt | <ul style="list-style-type: none"> •29029 No trained marketing personnel •29029 Expensive and scarce skilled labor |
| Cost and Quality of production factors | | <ul style="list-style-type: none"> •29029 High production costs: inputs, and machinery are imported •29029 Under utilization of production capacity: High fixed costs. |
| Infrastructure and Institutions | | <ul style="list-style-type: none"> •29029 Inadequate transportation network •29029 Basic lack of export marketing organizations •29029 Inadequate post-harvest marketing facilities •29029 Weak farmers commercial and bargaining position due to the inefficient cooperatives |
| Marketing and distribution | | <ul style="list-style-type: none"> •29029 Small scale and sporadic exports •29029 Virtually non-existent information on market conditions and consumers •29029 No market information on demand, and prices •29029 Variability in exported produce due to improper application of quality measures and standards |
| Market knowledge: R&D, Extension, Government role | | <ul style="list-style-type: none"> •29029 Absence of R&D on new growing and marketing techniques. Lack of promotional campaigns •29029 Lack of government policy, support and commitment |

6.2 Opportunities and Threat

In general, Lebanon holds a weak commercial position in its agro-industrial sector. Also, the agro-industrial exports are facing considerable threats and changes which influence future development of the sector. These changes require not only structural adjustments in production and marketing practices but, also, remarkable transition in the development of production and marketing thinking - one in which agricultural development should be seen as integral element for national development. Without such comprehensive development strategy, services and industrial development would either be stultified or, if it is successful, would create severe internal imbalances in the economy that the problems of poverty, inequality, and unemployment would become even more pronounced. Thus, overcoming these problems requires coherent agricultural planning, strong will to change, and commitment by the government.

II. Regional Comparative Analysis

This section assesses the competitive advantage of four neighboring countries: Egypt, Israel, Jordan, and Syria which are considered to be Lebanon's main competitor in a number of major export markets - particularly, the Gulf. Turkey, a major competitor in the agro-food sector, has not been studied due project limitation.

This section examines the performance of the agro- industrial sector in these countries, paying particular attention to the performance of the production and marketing systems. In fact, there is considerable interest in examining the extent to which the production and marketing systems of the agro - industrial sector in major competing countries be a suitable models or, otherwise, provide examples to emulate in an attempt to improve the performance of Lebanon's agro-industrial sector.

The comparative analysis of the agro-industrial sector in these countries is important as it helps identify the factors contributing to their development and effectiveness and draw-out lessons to be learned. Therefore, a variety of factors need to be examined and compared to determine the particular success of the agro-industrial sector of major competing countries, including Egypt, Israel, Jordan, and Syria. These factors are:

- * Basic Factor Conditions;
- * Demand Conditions;
- * Related and Support Institutions;
- * Firm Strategy and Rivalry;
- * Government Role;
- * Macro-economic Indicators.

1. ISRAEL

1.1 Basic Factor Conditions

Geography, Climate, Raw Materials: Overturning the disadvantage of a limited agricultural land base, farmers in Israel have intensified their agriculture and increased the output of market-worthy produce to satisfy the wants of major buyers. Agro-industrialists and farmers have benefited from the proximity of their country to major European markets and ready access to markets in the United States. Agro-industrial exporters have been able to develop a relatively strong commercial position in the European markets. As a result, consumers, gradually, became familiar with and well-disposed to their products.

Similar to Lebanon, climate and soil in Israel are suitable for the production of a wide variety of food crops that are well suited for use as raw material for the agro-industrial sector. However, water for irrigation is scarce, forcing farmers to use drip irrigation system in their production process, which increases efficiency in production.

The Quality of Production Factors and Production Cost: In Israel, the quality factor inputs is good and consistent, enabling agro-industrialists to provide domestic and export markets with consistently good quality produce. Very little amount of raw inputs is imported and the agro-industrial sector has access to the required raw material for processing from domestic markets. This, in turn, enables agro-industrialists to utilize the full capacity of their factories.

A combination of good quality factor inputs, consistent product quality and long-term perspective help agro-industrialist comply with strict European, USA and Japanese quality requirements. This is enhanced with export organization and timely access to market information. However, Israel is not a low cost producer and, therefore, agro-industrialists exporters follow a market leader strategy - offering high quality produce for a high price.

1.2 Demand Conditions

In Israel, the agro-industrial sector has developed production and marketing bases for export, where certain disciplines, quality measures and standards are imperative. As a result, the agro-industrial sector was modernized to keep pace with international developments, reflecting long-vision management decisions.

Agro-industrial exporters have focused their sales on the European Union and the US consumers, who by world standards, have high incomes and are willing to pay high prices for high quality produce. Importantly, the agro-industrial sector is equipped with the necessary means to meet consumer requirements.

Finally, most of Israeli consumers buy only kosher products which can be procured by few countries and of course Israel. Thus, Israel has a great advantage in the local market. In the same line of thought, Israeli exporters have an advantage in meeting foreign markets for kosher products.

1.3 Related and Support Institutions

Degree of Vertical and Horizontal Integration: In Israel, the production and marketing of the agro-industrial sector are characterized by high vertical and horizontal integration, international orientation. Agricultural products are marketed through farmer's cooperatives in the domestic market; agro-industrial and agricultural products are marketed in the export market through an export company, called AGREXCO.

Farmer's cooperatives are large-scale enterprises, integrating farmers of similar commodities with one another, and improving their bargaining power. These cooperatives are customer-oriented, offering high quality products, year round supplies, a wide assortment and large volumes well suited for processing. Two important reasons may help explain why cooperatives are so strong and successful in Israel. These are history and internal structure. In terms of historical factors, traditional government encouragement, coupled with fiscal advantages, loans and grants, helped cooperatives to develop. In terms of structure, cooperatives are run close to private limited company style, with strong management, long-term investment plans, flexibility in procurement from all members, and a focus on matching home-grown production with export market and processing requirements. Importantly, the export-oriented mentality of farmers has been the principal factor in integrating cooperative activity into a cohesive whole.

Vertical integration links farmer's cooperatives with agro-industrialists, who develop contractual agreements with cooperatives for ensuring the supplies suitable for processing. Agro-industrialists deal directly with these cooperatives. Direct links with cooperatives create a more advantageous production efficiency for agro-industrialists and play a bona fide role in increasing agricultural output with processing needs.

In conclusion, agricultural production, marketing and processing is a highly integrated system linking farmers with agro-industrialists. There exists strong commercial integration of farmer's cooperative, and agro-industrialists into an export company. The high degree of vertical and horizontal integration enables agro-industrialists to enter into advance contracts with cooperatives, procure large core supplies of raw material, and have control over varietal and quality. Such integration evolved with direct support from and encouragement by the government. The primary objective of matching home-grown production to domestic and export market processing requirements. This, in turn, reflects strong partnership between government, agro-industrialists and farmers.

Market Information, Promotional Campaigns Finance and Basic Infrastructure: More understanding the performance of the agro-industrial sector in Israel, is to examine the role of market information, advertising, and finance.

In terms of market information, agro-industrialists have continuous access to market information. AGREXCO has permanent representation and maintains offices in major export markets, including EU, USA and Japan. These offices are run by managers who provide information on demand conditions, consumers tastes and preferences in terms of quality and prices and quality requirements. This information is conveyed on weekly basis to AGREXCO office which, in turn, updates agro-industrialists on export market conditions. AGREXCO has distribution facilities in major export markets where managers play a key role in expanding sales and providing marketing services. This is supplemented with extensive advertising and promotional campaigns to create brand awareness and develop consumer loyalty. International representation helps the agro-industrialists in Israel to monitor trends

markets, make the necessary adaptations to meet the changes, and take advantage of evolving market opportunities. Importantly, direct representation in international markets helps them understand what the final consumer wants and what the major buyers who are servicing the final consumers want.

Agro-industrialists and farmers have good access to credit facilities. In Israel the government has a long tradition of serving the agricultural and agro-industrial sectors, through providing long-term loans and credit facilities. The government is sympathetic to farmers and agro-industrialists and charges loan rates which are much lower than commercial banks rates.

Major infrastructure is well developed and conducive to successful production and marketing performance. Transportation and communication networks are well developed. Post-harvest marketing facilities - viz., storage, market information system, and communications between markets is available and easily accessible.

Research and Development, Innovation and Extension: Government, agro-industrialists and farmers have created a partnership, which resulted in an ever growing joint contribution to R&D and innovation. Investment in research and development is highly focused, inter alia, on improving the quality of agricultural and agro-industrial produce to meet consumer's demand. Considerable attention is also given to develop new processing and packaging technology, improve product presentation and packaging, and increase shelf-life for high value-added produce. Results of technological innovations, research and developments are conveyed to farmers and agro-industrialists by government extension department. The mechanism for financing R&D is based on 50/50 basis. That is, 50 percent is paid by the government and 50 percent is paid by farmers and agro-industrialists. This is a good example of how private-public cooperation and coordination can breed success.

In brief, the willingness of the agro-industrialists to cooperate amongst themselves and to share the results of technological innovations, research and development may also explain their success in international markets.

1.4 Firm Strategy and Rivalry

Firm Strategy and Rivalry and Export Orientation: Having realized the limited size of the domestic markets, the agro-industrialists in Israel have, traditionally, adopted an export oriented policy. They focused on penetrating new markets, with innovation, long-term perspective, and consumer- market orientation being priority in their marketing strategy.

Agro-industrialists offer premium-grade produce that is processed in facilities and with practices that meet the highest international accepted standards, and packaged and labeled to meet regulatory consumer standards. They provide year-around-supply of products and have developed long-term commercial strategy with key export markets. Also, importantly, they focus on changing their product mix to take advantage of evolving market opportunities, placing greater emphasis on product differentiation, and adding value through greater marketing services. Their continual innovation - constantly adapting their products to meet the changing wants of consumers in major markets - international export-orientation strategy, and market knowledge have been pivotal in helping them offer consistent quality product range away from traditional and saturated markets.

In conclusion, agro-industrialists in Israel have a market-oriented marketing strategy, with strong initiative and capacity to develop and offer new products. They offer consistent quality produce that

is packaged and labeled to meet consumer requirements. Their processing facilities and practices meet internationally accepted standards.

1.5 Government Role

Government policies have, generally, focused on establishing an environment conducive for the sustainable development of the agro-industrial and agricultural sectors, and creating optimal conditions for private sector initiative.

Considerable attention is given to providing long-term loans and credit facilities at low interest rates. Also, Government policies are set to foster vertical and horizontal integration. For example, Government supported the development of farmer's marketing organizations, through grant program, and promoted the development of export organization - AGREXCO. Having recognized the importance of innovation, Government, agro-industrialists and farmers have created a partnership, which resulted in an ever growing joint contribution to R&D. Substantial public investments have focused, inter alia,, on developing new production and marketing techniques, storage facilities, and quality of processed food. This has been supplemented with advice, education and extension services for farmers and agro-industrialists.

1.6 Macro-economic Indicators

Inflation Rate, Monetary Policy, Capital, Finance, and Labor Force: The macro-economic policy environment is characterized with direct government intervention and support to private sector initiative. Exchange rates are stable. Annual rate of inflation was about 12 percent in 1997 and economic growth was 2.1 percent. Loans are readily available for agro- industrialists, farmers and marketing people from government financial institutions. Skilled labor is available, but costly. Unskilled labor is relatively cheap because it comes from the occupied territories.

1.7 Conclusions

In conclusion, agricultural production, marketing and processing is a highly integrated system, linking the point of production with the point of processing. The agro-industrial processing facilities and practices meet internationally accepted standards and packaged and labeled to meet consumer requirements. Agro-industrialists strive to secure year-round-supply, develop long-term commercial relationships, and expand their product range as a means of differentiating themselves from their competitors. The agro-industrial strategy focused on developing domestic and export markets and meeting the changing needs of consumers. Through continual innovation, export organization and market knowledge, agro-industrialists were able to offer high quality produce, product mix to meet changing consumer needs.

Success in inter-and-intra-industry communication and cooperation may well explain the success of the agro-industrial sector in Israel. The focus of agro-industrialists on export markets and the shared view of industry participants that cooperation is commercially constructive and beneficial to agro-industrialists. This is a pivotal factor in explaining the success of the Agro-industrial sector.

Government policies have succeeded in creating an environment in which companies can gain competitive advantage. It served as a catalyst and supporter for the development of marketing

institutions. Also, government encouraged companies to move to higher levels of competitive performance and provided the needed loans to do so.

In brief, underpinning the success of the agro-industrial sector in Israel is a production and marketing system that has delivered consistency, quality and volume for consumers. These are pre-requisites for sustained sectoral development in a highly competitive international environment. Other essential elements are:

- * producing premium-grade product;
- * initiative and capacity for developing new products;
- * developing of long-term strategic managerial views;
- * paying attention to future market development;
- * knowing what consumers need and adjust to changing market conditions.

2. JORDAN

2.1 Basic Factor Conditions

Geography, Climate, Raw Materials: Jordan has very limited cultivable land, as the majority of land area is desert and not suitable for agricultural purposes. Jordan is an arid country, where rainfall does not exceed 450mm per annum. Water for irrigation is scarce, forcing farmers to use drip irrigation system in agricultural production. Farmers rely on intensive agriculture production for satisfying domestic market demand, using green-house technology. The basic natural resources allow the production of a wide variety of agricultural produce.

Agro-industrialists and farmers can benefit from the proximity of their country to the Gulf and European markets. Agro-industrial exporters have developed good commercial position in Egypt, Yemen and Gulf markets. However, Jordanian products have a generally poor reputation, and are perceived as being of low quality relative to their competitors. Recently, agro-industrial exporters began exporting to the United States. This was made possible after establishing, in conjunction with Israel, a new free-trade-area which is used as a base for agro-industrial exports to the USA.

The Quality of Production Factors and Production Cost: The quality of production factors allows the production of good quality produce, but domestic agricultural supplies are of low quality, sporadic and not well suited for processing.

Domestic supplies fall short of agro-industrial demand and, therefore, the bulk of raw inputs is imported. Procurement of raw materials is subject to minimum import tariff and prior licensing from the Ministry of Supplies and Ministry of Agriculture. Jordanian Government imposes high custom duties on all agro-industrial and agricultural imports, with a view to protect these sectors from foreign competition. The implications are that domestic competition is reduced, and the ability of the agro-industrial sector to improve production and marketing efficiency is abated.

In brief, Jordan offers low prices for low quality produce. The irregularity in supplies, the poor quality of factor inputs and the Government's protectionist policy reduce the ability of the agro-industrialists to utilize its full capacity, and constrain its future development. This, in turn, reflects, inefficient allocation of production resources. Agro-industrialists should compete to improve the efficiency of their individual business and operate on long-term basis to be able to take advantage of evolving market opportunities in the USA market. Competition should also stimulate management to look for innovative ways to establish competitive edge.

2.2 Demand Conditions

Jordan has a population of about 4.44 million and, a relatively low per-capita income estimated at US\$ 1,636, in 1996. The agro-industrial sector has, therefore, a small domestic market to serve, where standardization of quality and measures is not essential. The sector is well protected by Government and has developed production and marketing bases to serve domestic demand. It, therefore, was not modernized to keep pace with international market requirements, reflecting short-sighted managerial decisions and absence of long-term development policies.

The 1990's, however, witnessed change and increase in consumer's demand in the domestic market. For example, domestic markets witnessed increase in demand for new imported processed products, including beverages, frozen vegetables, meat and chicken. This, in turn, has created challenges for the Jordanian agro-industrial sector to meet this demand. However, agro-industrialists have not been

able to accommodate the evolving market developments, forcing government to relax its protectionist policy and reduce import tariffs. This reflects that the production and marketing strategies within which agro-industrialists are operating are neither adequate nor appropriate to facilitate adaptation to new evolving market realities.

2.3-Related and Support Institutions

Degree of Vertical and Horizontal Integration: In Jordan, vertical and horizontal integration of farmers and agro-industrialists are well developed.

Farmer of similar interests are integrated in three main cooperatives, with direct support from government. Jordan Valley Farmers Cooperative (JVFC) being the largest, integrating farmers in Jordan Valley. Cooperatives are semi-government organizations mainly concerned with enhancing the bargaining position of farmers, providing credit facilities and facilitating agricultural marketing in domestic markets. Cooperatives are, also, production oriented, offering a wide variety of low-quality produce for domestic consumption.

Agro-industrial and agricultural exports are marketed through Jordan Export Development and Commercial Center Corporation. JEDCO is a semi-government organization set-up, mainly, for promoting export trade. Agro-industrialists are small-to-medium scale fragmented producers who lack organization in a cohesive institution. Domestic supplies are sporadic and fall short of agro-industrial demand. The bulk of raw inputs for processing needs are imported, reflecting weak vertical integration links between agro-industrialists and farmers, and production-oriented mentality by farmers.

In conclusion, there is good commercial horizontal integration of farmers into cooperatives, and exporters into export organization. Cooperatives facilitate the marketing of agricultural products in domestic markets. JEDCO is responsible for exporting agro-industrial and agricultural products in overseas markets. Integration of farmers into cooperatives evolved with direct support by the government, coupled with loans and credit facilities. Similar support is given for developing export organizations, with the primary objective of facilitating exports. However, vertical integration links between farmers and agro-industrialists are weak, forcing the latter to import the bulk of needed raw inputs. This, in turn, reduces the efficiency of the production and marketing system of the agro-industrial sector.

Market Information, Promotional Campaigns and Basic Infrastructure: In Jordan, agro-industrialists are provided with information on export market conditions. JEDCO has permanent offices in most exporting markets, including Egypt, Morocco, Libya, Russia, Sudan, Yemen, Tunisia, Gulf markets and the United States. These offices are run by representatives who provide information on demand conditions, quantity needed, trade opportunities, prices, current market developments and quality requirements. This information is conveyed to JEDCO main office and, through it, to agro-industrial. JEDCO representatives also participate in major exhibitions and promote Jordanian products in the countries where they have representation, supplemented with extensive advertisement and promotional campaigns. Direct representation in export markets helps the agro-industrialists in Jordan to monitor changing trends in consumer markets, to make the necessary adaptations to meet these changes, and to take advantage of evolving market opportunities.

JEDCO is also concerned in providing agro-industrialists with a wide variety of services, including:

- * undertaking market studies to identify consumer wants in new export markets;
- * identifying opportunities for developing exports, providing assistance where needed, and communicating essential information to tap new international markets;
- * providing assistance to improve Jordanian products and capitalize on export market sales opportunities.
- * assisting overseas buyers to locate the products and services they came to buy from Jordan agro-industrial and agricultural firms.

Major road-network is well developed and conducive to successful production and marketing performance. Communication facilities are also well developed. Post-harvest marketing facilities, including storage, grading, packaging and handling are sparse.

Research and Development, Innovation and Extension: Research and development programs directed at improving the quality of agricultural and processed food are lacking. Very little attention is given for scientific research, focusing on developing new processing and packaging methods, innovative production techniques, new products and post-harvest services. The agro-industrial sector, also, lacks the required support institutions for testing hygiene conditions and providing certification for processed food stuff. Given this ethos, international recognition of the quality of processed food is severely constrained, exacerbated with basic lack of accredited quality certification institutions (ISO 9000). Agro-industrialists wishing to modernize production and marketing methods are faced with paucity of support institutions to help them do so.

In conclusion, basic lack of necessary innovations and improvements in the quality of production and marketing operations, severely constrains the efficient performance of the agro-industrial sector. This is exacerbated with basic lack of managerial initiative to modernize their practices and paucity of support institutions.

Quality Control Measures and Standards: In 1995, Jordan Institute of Standardization and Measurements (JISM) was established with a view to enforce quality measures and standards on exported agricultural and agro-industrial products. Measures, including hygiene supervision, food labeling, pesticides residues control, direct control of food additives entering in the processing stage and packaging will be directly enforced by JISM to increase international acceptability of Jordanian products.

JISM is currently considering granting Quality Marks that meet ISO 9000 standards. The Institute is putting forth basic conditions and requirements for hygienic preparation of raw material and food stuff entering into processing, including aspects of hygiene in procurement, production, handling, processing, packaging and labeling processes, in collaboration with the Ministry of Health. These measures are enforced by JISM, to meet basic export conditions required by the Partnership Agreement Jordan signed with the European Union, in 1997.

2.4 Ownership Structure, Firm Strategy and Rivalry

Ownership structure and entry conditions: Ownership structure of agro-industrial companies reveals the presence of small to-medium size enterprises. Similar to Lebanon, family-ownership characterize the structure of agro-industrial firms in Jordan. The analysis of concentration of economic power in each sub-sector reveals that, whilst there are many producers, the largest market share (about 70 percent) is shared by three big firms (table below). This situation of economic concentration is classified as less than perfect competition.

Table 2.10 Concentration of Economic Power in the Agro-industrial Sector

| <u>Sector</u> | <u>Concentration Ratio of Output for the</u> |
|--------------------------------------|--|
| <u>Largest Three Firms</u> | |
| Spirits and Wine | 100 % |
| Fruit and Vegetable Processing Firms | 97 % |
| Meat Processing Firms | 70 % |
| Milled Grain Processing Firms | 58 % |
| Dairy Products Firms | 51 % |
| <u>Confectionery Firms</u> | <u>50 %</u> |

Source: Official Industrial Survey, Jordan 1995

Entry of new firms into the agro-industrial sector requires meeting three main conditions, including: licensing from the Ministry of Agriculture; investment capital; and land. New entrants are required to secure a license from the concerned Ministry. Also, they need to have access to land for setting up the factory and substantial capital to cover operating expenses.

Firm Strategy and Rivalry and Export Orientation: Managerial practices are production-oriented, with little or no initiative by agro-industrialists to improve quality and offer new products. Their production strategy is mainly targeted to domestic markets, where quality measures and standards are not required. The quality of produce offered is inconsistent and lacks the necessary international certification. Little attention is given to export market requirements and, as a result, the agro-industrial sector was not modernized to keep pace with international developments in consumer markets.

Although promotional campaigns in export markets and support institutions exist, agro-industrialists lack managerial initiative to modernize their production and marketing practices. This is exacerbated with basic lack of domestic competition. Under these conditions, agro-industrialists ability to develop new products, and take advantage of evolving market opportunities, is severely constrained, reflecting short-sighted managerial focus.

In conclusion, Agro-industrialists in Jordan have production-oriented marketing strategy, with weak initiative to develop and offer new products. Their management decisions lack long-term development motivation. Products offered are inconsistent and packaged and labeled to meet domestic market demand, where there is less virtue in standardization of quality. Agro-industrial processing facilities and practices fail to meet the international quality measures and standards. Under these conditions, the ability of the agro-industrial sector to promote sustainable development is severely hampered.

2.5 Government Role

Government policies have, traditionally, been sympathetic to farmers and agro-industrialists in Jordan. Considerable support has been given for fostering institution building, including integration of farmers into cooperatives and exporters into export organization. Direct subsidies, in cash and in kind, have been provided for farmers, coupled with loans and credit facilities. Similar support has been provided for meat processing industries, milling industry, and dairy industry. Export incentives

are also in evidence. For example, agro-industrial and agricultural exports are tax exempt, coupled with full exemption of income tax to farmers.

At present, the Jordanian Government is revising its laws and regulations, with a view to promote private and foreign direct investments. Fiscal reforms, de-regulation and privatization of state-owned companies are the main features of policy reforms. Additional measures are taken and enforced for facilitating integration into the world economy, including hygiene supervision, food labeling, pesticides residues control, direct control of food additives entering in the processing stage and packaging. Policy reforms and measures are taken to meet basic export conditions required by the Partnership Agreement Jordan signed with Europe.

In conclusion, the Jordanian government plays an important role in fostering and facilitating the development agricultural and agro-industrial sectors. Direct support in cash and in kind has been provided. Importantly, the bi-lateral partnership agreement signed with the European Union poses new threats and challenges on agro-industrialists in Jordan, requiring them to develop market-oriented strategy, with strong managerial initiative to offer consistent quality produce that is packaged and labeled to meet consumer requirements and processed to meet internationally accepted standards.

2.6 Macro-economic Indicators

Inflation Rate, Monetary Policy, Capital and Finance, and Labor Force Economic activities in Jordan are, in general, State-controlled and operated with minimal role for the private sector. Since 1995, Government began to revise its laws and regulation, with a view to improve the macro-economic policy environment and promote private sector initiative and foreign direct investments. Fiscal reforms, de-regulation and privatization of state-owned companies are the main features of policy reforms. Measures aiming at facilitating integration into the world economy are also implemented. These factors combined are hoped to set the pace for an increased role and development of the private sector.

In Jordan, exchange rates are stable. Official credit facilities and loans are easily accessible. Capital is available for agro-industrialists, farmers and marketing people from official financial institutions. Loans and credit facilities are also provided by JVFC and State-owned banks.

Skilled labor is sparse and costly. They lack technical consultants specialized in improving technology in food production and food manufacturing technology and the development of quality and hygiene system. However, unskilled labor is relatively cheap and available in Jordan.

2.7 Conclusion

In conclusion, commercial integration of farmers into cooperatives, and exporters into export organization is indicative of well horizontal integration. This was made possible with direct support by the government, coupled with loans, credit facilities and institution building. However, vertical integration links between production and processing are weak. The implications are that the efficiency of the production and marketing systems of the agro-industrial sector are severely constrained.

Agro-industrial processing facilities and practices are not developed to meet internationally accepted standards. Products offered are inconsistent and lacking in terms of standardization of quality and

measures. Agro-industrialists follow production-oriented marketing strategy, with weak initiative to develop new products. Managerial policies lack long-term development motivation, exacerbated with lack of intra-sectoral competition. Under these conditions, the ability of the agro-industrialists to expand their product range, develop long-term commercial relationships, and offer high quality produce is severely hampered.

Government policies have succeeded in creating institutions which served as catalyst and supporter for the development of marketing institutions. However, lack of managerial initiative and competition amongst agro-industrialists hampered sectoral development, exacerbated with high government subsidy and protection policy. This, in turn, indicates inefficient allocation of production resources.

In brief, underpinning the failure of the agro-industrial sector in Jordan is a production and marketing system that failed to delivered consistency, quality and volume for consumers.

3. SYRIA

3.1 Basic Factor Conditions

Geography, Climate, Raw Materials: Syria has very limited cultivable land base, as the majority of land is arid and not suitable for agricultural purposes. Efforts are underway by the Syrian government to bring more land under cultivation through a national land reclamation project. Water for irrigation is scarce and annual precipitation is estimated at 500mm, unevenly distributed. The country has an arid climate, but the coastal strip enjoys subtropical climate suitable for growing a good variety of food crops.

Farmers and agro-industrialists benefit from the proximity of their country to the Gulf and European export markets. Agro-industrial exporters have developed trade relations with Sudan, Yemen, Egypt and Gulf markets. However, Syrian agro-industrial products have poor reputation and are perceived as low-quality-produce in international markets.

In brief, the basic natural resources do not allow the production of a wide variety of agricultural produce. Agro-industrial products lack international acceptability.

The Quality of Production Factors and Production Cost: Domestic agricultural supplies are of very low quality, seasonal, and not suitable for processing purposes. Domestic supplies of raw material for processing purposes fall short of demand and, thus, supplemented by imports.

Trade law does not allow agro-industrialists to import the required supplies from overseas markets. The only official institution responsible for procuring raw material for processing needs is the Ministry of Supplies (MOS). Agro-industrial firms are forced to procure their supplies at prices set by the MOS. Often, raw supplies imported by the MOS are of low quality and not suitable for processing, but agro-industrialists are forced to buy them lest their production operations stop. The Syrian Government imposes high custom duties on all agricultural and agro-industrial and agricultural imports, to protect these sectors from foreign competition. This, in turn, reduces domestic competition and restrains the ability of the agro-industrial sector to improve production and marketing practices.

In brief, the type and low quality of imported and domestic supplies of raw material are not suitable for agro-industrial purposes. However, firms have to use them. Although agro-industrialists can acquire the needed raw inputs at prices lower than those set by the MOS, but they are not allowed to do so. Syria is a low-cost producer, offering low prices for low-quality produce. The erratic supplies, poor quality of raw inputs and Government's protectionist policy reduce the ability of the agro-industrialists to utilize their full production capacity, and constrain its future development. This reflects miss-allocation of scarce production resources.

3.2 Demand Conditions

The demand for quality products is a function of income. Syria has a population of 14.2 million and low per capita income (less than US\$ 1,000/year).

The agro-industrial sector developed production and marketing strategies to serve the domestic market, where quality measures and standards are not necessary market requirements. Syrian consumers demand processed food with low prices, given their low income and limited purchasing

capacity. This reflects that low prices are the determining factor in sales of processed food products rather than quality. A very small amount of agro-industrial products are exported to the Sudan, Egypt and Gulf States, with which bi-lateral trade agreements exist.

In brief, agro-industrial sector is well protected by Government which favors a production oriented strategy to meet local demand. In line with Government policy, agro-industrial offer low-quality produce to meet domestic market demand. Little or no attention is given to developing export markets or meeting international quality requirements.

3.3. Related and Support Institutions

Degree of Vertical and Horizontal Integration: Production and marketing systems of the agro-industrial sector are characterized by low degree of vertical and horizontal integration.

Farmers are small-scale producers scattered all over the country. They are integrated into cooperatives that lack organization and proper management. This, in turn, weakens their bargaining position. Cooperatives offer large volume of supplies, but of low-quality. These cooperatives are production-oriented, reflecting general Government policy. Agro-industrialists are small to-medium size fragmented producers who lack export organization structure.

Vertical links or contractual agreements between farmer's cooperatives and agro-industrialists do not exist. Imports of agricultural produce and raw material for processing needs are confined to MOS. For procuring the needed supplies for processing, agro-industrialists deal directly with MOS which secures raw materials from overseas markets. Absence of direct links between farmers and agro-industrialists reduces the production efficiency of the latter and creates severe imbalances between agricultural production and processing sectors. Under these conditions, agro-industrial sector will continue to provide low quality and cheap products for Syria's lower income population. Sales in domestic markets are made to wholesaler and, through them, to retailers and ultimate consumers.

In brief, there is weak vertical and horizontal integration in both sectors, agricultural and agro-industrial. No contractual agreements exist between farmers and agro-industrialists, exacerbated with tight import control policy of raw material for processing needs. Given this ethos, the ability of the agro-industrial sector to develop long-term production and marketing strategies is severely constrained.

Market Information, Promotional Campaigns and Basic Infrastructure: In Syria, agro-industrialists are not provided with market information on consumers tastes and preferences, market condition and quality requirements. Very little information exists on export market requirements. Also, there are no official or private institutions that provides information on demand conditions, quantity needed, trade opportunities, prices, current market developments and quality requirements for agro-industrial exports. Agro-industrialists neither undertake market studies, nor develop marketing strategies to secure and develop export markets. The absence of information on export markets, quality regulations and, importantly, lack of skilled marketing staff constrain the ability of the agro-industrial sector to modernize and target wider international markets.

Promotional institutions to encourage exports do not exist. The quality of agro-industrial products in Syria is low and, therefore, agro-industrialists avoid participating in international exhibition. Also, there are no promotional campaigns in export markets, reflecting weak promotion and marketing

strategy. Very recently, agro-industrialists began brief promotional campaigns in the domestic market.

Major road-network is developed and conducive to successful production and marketing performance. Post-harvest marketing facilities, including storage, grading, packaging and handling are scant. Communication facilities are not well developed.

In brief, there is basic lack of market information, support institutions, promotional campaigns for agricultural and processed food. The agro-industrial sector is still in its infancy, not well developed to be competitive in international markets. The absence of market information hinders the sector's ability to develop new production and marketing strategies.

Research and Development, Innovation and Extension: Agro-industrialists and farmers are well protected and have little initiative to improve production and marketing operations. There are no innovation, research and development programs to develop new products, improve the quality of processed food, develop new processing and packaging technology, improve product packaging and presentation. Also, official institutions aiming at providing extension and advisory services are not readily available.

In brief, agro-industrial and agricultural production is tailored to meet domestic market demand, where there is no virtue in standardization of quality measures. Little or no attention was given to research and development programs, given the low-income of the majority of population. Official and private R&D programs do not exist, given the demand of low-quality produce by low-income consumers.

Quality Control Measures and Standards: Routine measures and standards for testing hygiene conditions are set forth and implemented by the Ministry of Health (MOH). However, there are no national institutions aiming at setting and updating national measures, standards, testing the quality of produce, and defining guidelines for agro-industrial firms related to measurements, standardization, quality testing, certification and accreditation.

The agro-industrial sector, also, lacks the required support institutions for testing hygiene conditions and providing certification for processed food stuff. Under these conditions, international recognition of the quality of agro-industrial products is severely constrained, exacerbated with basis lack of accredited institutions to provide quality certification (ISO 9000). Agro-industrialists wishing to modernize production and marketing methods, improve product design and labeling lack national and international expertise to help them do so.

In brief, quality control measures, viz., hygienic preparation of raw material and additives entering into processing, supervision of processing techniques to ensure that healthy processed food is offered in the market place, and guidelines related to standardization and accreditation are not available for agro-industrialists. There is lack of conformity to international standards (ISO 9000), indication low acceptability of Syrian agro-industrial products in international markets.

3.4 Firm Strategy and Rivalry

Ownership Structure and Barriers to Entry: More important to understanding the performance of the agro-industrial sector in Syria, is to examine its history and ownership structure.

In terms of history, ownership structure of agro-industrial companies confirms the prevalence of State ownership, with very little private ownership. In 1950, the Syrian Government nationalized these companies, which remained Government property until the beginning of the 1990.

The early 1990's witnessed gradual liberalization and privatization policies, giving greater role for the private sector. Government restrictions were relaxed, causing a change in ownership structure of agro-industrial firms. At present, small-size enterprises are family-owned and operated by private investors. Medium-size enterprises are characterized by private-public partnership. Large-size enterprises remain government owned and operated.

Entry of new firms into the agro-industrial sector requires meeting two conditions: licensing and capital. New entrants are required to submit a proposal for the government explaining the purpose of entry, the sub-sector they wish to invest in, and the amount capital invested and license fee. The proposal is carefully studied and a license is provided after approval from the Ministries of Supplies and Industries (MOS and MOI). It is important to mention that high restriction are put forth before a proposal is approved, including minimum investment capital of 1 million Syrian Lira.

New entrants have the advantage of benefiting from the following incentives:

- * imported machinery used for agro-industrial processing are tax-exempt;
- * buildings used by the agro-industrialists are exempt from property tax for five-year period;
- * profits and other capital generated during operations are not subject to tax for a five-year period.

Profits and other capital generated after this grace-period are subject to tax and not permitted to be transferred outside the country. Only the net value of the original investment is allowed to be transferred outside the country.

In brief, agro-industrial firms have, historically, been state-owned and operated until early 1990's. Small-size family-owned agro-business firms are pre-dominant in Syria. New entrants have the advantage of benefiting from tax incentives, whereas established firms have the advantage of being more experienced in trade and having well established suppliers and customers. Investment and trading capital, and sales experience are important barriers facing new entrants.

Firm Strategy and Rivalry and Export Orientation: The managerial practices have been reliant on direct protection from foreign competition through high import tariffs by Government. Little has been done to improve production efficiency and improve the quality of produce, as focus has been set on output expansion for satisfying domestic markets demand.

The production-oriented mentality by agro-industrialist is in direct conformity with Government policy, which encouraged output expansion strategy, with little attention to meet quality requirements. The strategy can be described as supply and inventory management with a large basket of low-quality products to offer in the market place, and little attention to developments revolutionizing food technology and packaging in the rest of the world.

Little attention is given to the competitive advantage or competitive situation and marketing strategies. This is explained by the fact that the agro-industrial sector is tailored to meet domestic market demand, where there is little virtue in standardization of quality measures. Lack of intra-sectoral competition and the limited domestic market to serve have not motivated the agro-industrial firms to apply product development to gain competitive edge. Another problem is the basic lack of export marketing skills by agro-industrialists, exacerbated with sporadic and disorganized exports.

In brief, agro-industrialists are production-oriented and lack export marketing strategies and policies. Syrian exports: lack international orientation; are carried out by agro-industrialists on individual, small scale and sporadic bases; are not in conformity with international standards; and are lacking in terms of quality, volume, and orientation. These are serious problems constraining the development of the agro-industrial sector in Syria. The managerial practices are no longer appropriate to facilitate adaptation to international developments that are revolutionizing the agro-industrial production and marketing practices worldwide. Efforts should, therefore, focus on meeting international standards and gaining accreditation in export markets. This requires focusing on export orientation, providing wider product range, and developing new production and marketing practices and starting research and development programs.

3.5 Government Role

The beginning of the 1990's witnessed changes in Syria's macro-economic policy. The Syrian Government began revising its laws and regulations to facilitate integration into the world economy. Gradual de-regulation, privatization of state-owned companies and trade liberalization are the main features of policy reforms. However, social considerations continue to set limits on economic reforms. For example, fear of high unemployment and, its subsequent social unrest, is reducing the government efforts to launch significant economic reforms.

Protection of agricultural and agro-industrial sectors is central to Syria's trade and commercial policies. Government bans imports of foreign agro-industrial products that compete with locally produced ones. Agricultural and agro-industrial items produced in Syria are mainly targeted to domestic markets. At present, Government policies are mainly concerned with:

- * expanding agro-industrial output, with little regard to quality;
- * encouraging agro-industrialists to following production-oriented strategy;
- * imposing high tariffs and other import barriers on agricultural and agro-industrial imports to protect domestic production from foreign competition;
- * permitting temporary tax-free entry of raw materials destined for manufacturing and re-exporting only;
- * importing the required raw materials for processing needs to meet domestic demand;
- * exploring new markets to expand exports and signing bilateral trade agreement with many countries, including Lebanon, Sudan, Egypt and Gulf States.

However, major policy reforms are still needed to foster the development of agricultural and agro-industrial sectors. This is particularly important as agro-industrialists face high corporate tax, reaching 65 percent on profits. Also, custom duties on raw materials for processing are high. These factors combined raise the production cost and reduce the competitiveness of the agro-industrial sector in the domestic and export markets.

In brief, government efforts have not been successful in establishing an environment conducive for sustainable development of the agro-industrial and agricultural sectors, and creating optimal conditions for private sector initiative. Little attention has been given to fostering vertical and horizontal integration. Also, innovation, research and development programs, and measures related to health and hygiene control and enforcement are not central to Government policies. Under these conditions, the agro-industrial sector will face considerable difficulties in promoting and sustaining rejuvenation.

3.6 Macro-economic Indicators

Inflation Rate, Monetary Policy, Finance and Labor Force: Credit facilities are not easily accessible for agro-industrialists from official sources. The interest rate on borrowing is said to be high, exacerbated with lack of access to foreign currency and inability to convert Syrian Lira currency easily.

Importantly, a great disadvantage remains, however, and is related to foreign- exchange regulations. Profits and capital generated during operations are not permitted to be transferred outside the country. Also, high taxes are imposed on the agro-industrial sector, including taxes on income, real estate, exports and imports of raw material. These policies reduce the ability of the agro-industrial sector to compete, raise production cost and discourage private sector initiatives and foreign direct investment.

Labor force is cheap, available and not highly specialized. In-house training has been carried out by agro-industrialists on small-scale.

3.7 Conclusions

Despite policy reforms, the investment environment is not conducive to private sector initiative. Foreign exchange regulations, procurement of raw materials, high taxes, and bureaucracy in control and of hygiene and health measures - are factors that reduce the capability of the agro-industrial sector to compete and modernize. The agro-industrial sector is poorly performing due to its infancy, sparse marketing experience by agro-industrialists, poorly developed support institutions and lack of intra-sectoral competition.

There is very low acceptability of Syrian agro-industrial products in international markets. Importantly, some countries refuse to import products from Syria because of their poor reputation and lack of conformity to international standards. Other factors undermining the future development of agro-industrial sector are:

- * lack of promotion campaigns and specialized institutions to promote exports;
- * sporadic and disorganized exports;
- * sparse market information on market conditions, competitors, export requirements;
- * high degree of protection that impede competition;
- * difficult entry conditions.

The ability of the agro-industrial sector of Syria to enter and compete in international markets is remote, given the high protectionist policy adopted by the Government. In few years Syria will become a member in the WTO and will sign the Partnership agreement with Europe. Globalization will bring about trade liberalization and, with it, high international standards. These developments will create new challenges and threats for the agro-industrial sector, requiring it to undertake structural adjustments in the production and marketing practices to adopt to these new realities. International developments will create high competitive environment for Syria's agro-industrial firms, requiring them to modernize their production and marketing practices to meet internationally accepted quality measures and standards. Direct threat is coming from neighboring countries who began taking measures to adapt to these new realities, including Egypt and Turkey.

4. EGYPT

4.1 Basic Factor Conditions

Geography, Climate, Raw Materials: The majority of land area in Egypt is desert. Arable land represents about 2.5 percent of the total land. Area devoted to agriculture is estimated at 2.6 million hectares. Agricultural production is concentrated along the Banks of Nil River and Delta Valley, where water for irrigation is accessible. The proximity of Egypt to the Gulf countries is an advantage. In particular, the Saudi and Kuwait markets are close to and familiar with Egyptian agro-industrial produce.

Raw material available in local markets are suitable for agro-industrial processing needs. However, domestic supplies of raw inputs fall short of agro-industrial demand, requiring firms to import the bulk of raw inputs from overseas markets

The Quality of Production Factors and Production Cost: Egypt is an arid country. Water for irrigation is scant, forcing growers to use sprinkler and drip irrigation techniques in agricultural production. Also, green-house technology is rampant and intensively adopted to satisfy domestic market demand. Soil structure does not allow the production of good quality food crops. Soil salinity is high. Farmer are, therefore, obliged to take necessary measures relating to soil management and preparation prior to land cultivation. Applying chemical and natural fertilizers are important measures aiming at reducing soil salinity and improving its quality.

In brief, basic natural resources - climate, soil, and irrigation water - do not allow the production of good quality food crops. Agricultural output is suitable for agro-industrial processing needs. Egypt is a low-cost producer, offering low prices for low-quality produce.

4.2 Demand Conditions

In Egypt, the agro-industrial sector has developed production and marketing grounds to serve local markets. This is particularly important because Egypt has a population of 60 million people, of which about 3 million are high income- earners with a potential to buy premium quality produce. Local markets in Egypt have an inherent potential to grow and develop, given the high population growth rate.

Agro-industrialists, also, developed export base to meet market requirements in the Gulf and Eastern European countries, where quality measures and standards are less demanding than those in Western Europe. As a result, production and marketing practices were modernized to keep pace with export market requirements.

In brief, agro-industrial sector is well protected by the Government which encourages producers to meet local demand. Domestic markets in Egypt are large enough to absorb the quantities produced and supplied by the agro-industrial firms. The sector has dynamic and intrinsic potential to grow and develop. Generally, agro-industrialists focused their production and marketing at local markets, offering low-quality products to meet the demand by low-income earners. Importantly, agro-industrial firms are equipped with the necessary means to meet consumer requirements and quality standards in the Gulf and Eastern European markets. Also, they have been able to develop a

relatively strong commercial position in these countries, where quality requirements are not very high. It can be concluded that there is a potential for the agro-industrial sector to develop long-term production and marketing strategies.

4.3 Related and Support Institutions

Degree of Vertical and Horizontal Integration: Vertical and horizontal links along production and marketing operations are weak. Farmers are small-scale fragmented and disorganized producers who offer a wide variety of low-quality produce for domestic consumption. Cooperatives integrating farmers of similar interests into a cohesive whole are poorly developed. As a result, the bargaining position of farmers is very weak.

Agro-industrialists are also small-to-medium scale fragmented producers who lack integration into a cohesive institution. Vertical links or contractual agreements between farmers and agro-industrialists do not exist. Domestic supplies fall short of agro-industrial demand. Therefore, agro-industrialists import the bulk of raw inputs for processing needs from overseas markets. Samples of these imports are tested in Government laboratories to ensure that they are in conformity with hygiene and quality measures set-forth by Ministry of Health (MOH).

Conversely, there is a group of large-size agro-industrial firms who have timely access to such information. This group has direct representation in export markets and undertakes research studies to monitor how consumer tastes and preferences are changing. Agro-industrialists with direct representation take on promotional campaigns and participate in international exhibitions. Under these conditions, they have strong ability to carry out long-term analysis of changing market conditions and adjust their production and marketing practices accordingly.

In brief, vertical and horizontal integration in both sectors is very weak. No contractual agreements exist between farmers and agro-industrialists, who import their raw material for processing for overseas markets. MOH tests samples of these imports to ensure that they meet Egyptian Phyto-sanitary rules and regulations.

Market Information, Promotional Campaigns and Basic Infrastructure: Market information on demand conditions, consumers tastes and preferences, quantities needed, prices and quality requirements are not readily available for agro-industrialists. Private and official institutions specialized in collecting information on consumer trends, changing market conditions and main competitors do not exist. The absence of timely market information severely constrains the future development of the agro-industrial sector.

Research and Development, Innovation and Extension: In Egypt, considerable attention is given to innovation, research and development programs by public and private sectors. Investment in research and development by Government is highly focused improving quality measures and standards of exported agricultural and agro-industrial products. Measures, including hygiene supervision, food labeling, pesticides residues control, direct control of food additives entering into processing and packaging are set-forth, enforced and supervised by the Ministry of Health (MOH). Research efforts are also focusing on developing new irrigation techniques to increase the efficiency of water usage and application.

Similar R&D programs are carried out by agro-industrialists to meet consumer's demands in export markets. Considerable attention is given to develop new processing and packaging technology, improve product presentation and packaging, and increase shelf-life for high value-added produce. Agro-industrialists built their own laboratories for testing and controlling hygienic preparation of raw material and food stuff entering into each processing stage, including hygiene in procurement,

production, handling, processing, packaging and labeling processes. At present, few agro-industrial firms have Quality Mark Certification that meets ISO 9000 standards. Importantly, more firms are willing to adjust their production and marketing practices to earn ISO 9000 qualifications. Farmer's education and training are central to Government's extension policy. Farmers education and training programs are carried-out by official agencies on continuous basis. Farmers are educated and trained to use new production technique to improve production efficiency.

In brief, research and development programs are focusing on developing new products destined for exports to Western Europe. This became particularly important for Egypt after joining the WTO and signing the partnership agreement with the European Union. High quality measures are, therefore, enforced to meet basic European market conditions and requirements.

4.4 Ownership Structure and Firm Strategy and Rivalry

Ownership Structure and Entry Conditions: ownership structure of the agro-industrial firms reveals the prevalence of private and public ownership. Family-ownership characterize the structure of agro-industrial firms in Egypt. Having realized the importance of exports, large-size firms adopted an export- oriented strategy which focused on penetrating Eastern European and Gulf markets that do not have high export quality requirements. Innovation, long-term perspective, and consumer-market orientation are priority in their marketing strategy. They developed international connections, strong knowledge of export market conditions and established their own distribution and storage facilities. Considerable attention is being paid to strengthen their vertical integration links. Having developed huge export potential, large-size firms are planning to offer a wider variety of food products to satisfy their consumers.

Small to-medium size firms are production oriented. Their production is focused on meeting domestic market demand, where quality measures and standards are not essential. The quality of produce offered is low, inconsistent and lacks international certification. Little attention is given to export market requirements and, as a result, these firms have not modernized their production and marketing practices.

Also, Government owns and operates agro-industrial firms that focus on meeting domestic market demand. The quality of produce offered is very low and targeted to low-income earners. Thus, their production strategy focuses on output expansion, with no initiative to improve quality. These firms receive direct support from the Government. In line with its privatization policy, Government is planning to sell these factories to the private sector.

Entry of new firms into the agro-industrial sector requires meeting Investment capital and a license. Investment and trading capital are important requisite for new entrants. A license can be obtained with no difficulties, given the privatization program. New entrants need to establish contacts and to have regular and reliable suppliers and trustworthy agents. Established firms have the advantage of being more experienced in trade and selling differentiated products.

Firm Strategy and Rivalry and Export Orientation: Having realized the absorption capacity of domestic markets, small and-medium firms adopted a production oriented strategy. Their managerial practices have been reliant on direct protection from foreign competition through high import tariff by Government. Little has been done to improve quality, as focus has been set on increasing total output. In domestic markets, agro-industrialists offer low-quality produce to meet domestic market requirements.

Large-size firms focused on penetrating new markets, with innovation, long-term perspective, and consumer-market orientation being priority in their marketing strategy. In export markets, agro-

industrialists offer produce that is processed in facilities and with practices that meet the export market standards, and packaged and labeled to meet consumer standards. They provide year-around supply of products and have developed good commercial strategy with key export markets. Also, importantly, they focus on changing their product mix to take advantage of evolving market opportunities and to satisfy consumer's demand. Their continual innovation, export-orientation strategy, and market knowledge have been pivotal in helping them offer good quality products.

The presence of strong rivalry is a powerful stimulus to the creation and persistence of competitive advantage. In Egypt, competition exists between domestic firms - with prices and not quality being the base for competition in domestic markets. Despite Government efforts to enforce high degree of supervision and quality control measured on exported produce, agro-industrial products do not have good reputation in export markets. In fact they are viewed as inferior in quality to their competitors.

In brief, agro-industrialists utilize full production capacity, given the high absorption potential of domestic markets. Importantly, the sheer size of domestic market - 60 million consumers - encouraged them to put long-term development plans to expand output. A small number of firms have ISO 9000 qualification - an important pre-requisite for exporting to EU market. Managerial practices of large-size firms are focused on developing export-oriented produces that meet market requirements. However, high transportation and insurance fees, and strict enforcement of Phyto-sanitary measures by Government, are important problems facing agro-industrial exports.

Egypt is in the process of joining the WTO and signing the partnership agreement with the EU. As a result, agro-industrialists will face stronger competition in domestic and export markets. This, in turn, requires them to deliver high quality produce that meet internationally accepted standards. There is ample opportunity to improve and increase and develop agro-industrial exports and, of course, Egypt has taken important steps to foster competition in domestic markets and relax its protectionist policy. Given this ethos, industrialists should even compete more to improve the efficiency of their individual business and operate on long-term basis to be able to take advantage of evolving market opportunities, develop new products and, importantly, adjust to changing conditions. Also, competition should trigger management to seek continuously for innovative ways to establish and maintain competitive edge.

4.5 Government Role

The beginning of 1995 witnessed structural changes in Egypt's macro-economic policy, with direct support from the World Bank and IMF. Government began revising its laws and regulations to facilitate integration into the world economy. Gradual de-regulation, privatization of state-owned companies and trade liberalization are the main features of policy reforms. De-regulation of trade laws included reductions in import tariffs, and gradual elimination of non-tariff barriers and import quotas. Also, State-owned and operated agricultural farms and processing industries are being sold to the private sector.

Government remains an important player in the economy as a regulator, legislator and facilitator of economic activity, particularly in the agricultural and Industrial sectors. Government role focused on taking policy measures to adapt to new global realities, including:

- * undertaking land-reclamation policy. Increase in production area is made possible by bringing forward more land under irrigation, courtesy of government irrigation projects;
- * creating an institution for financing agricultural projects;

- * enforcing hygienic conditions, measures and standards to increase international acceptability of the agro-industrial produce in export markets. This is carried-out in close collaboration between Ministry of Agriculture, Ministry of Economy and Trade, and Ministry of Health;
- * protecting agro-industrial sector. Protection of agricultural and agro-industrial sectors from foreign competition is central to Egypt's trade and commercial policies. Government imposes high barriers on imports of foreign agro-industrial products that compete with locally produced ones.
- * facilitating agro-industrial exports through concluding bi-lateral agreements;
- * undertaking, research and development programs, and providing extension services;
- * enforcing basic conditions and requirements for hygienic preparation of raw material and food stuff entering into processing, including aspects of hygiene in procurement, production, handling, processing, packaging and labeling processes. These measures are hoped to assist agro-industrialists meet basic export conditions required by major export markets;
- * supervising agro-industrial export to ensure that they are in conformity with export requirements, in terms of quality, and hygiene.

In brief, agro-industrial sector remains relatively well protected and, at present, barriers are being gradually lifted to promote domestic competition and assist agro-industrialists adapt international standards in production and marketing. To facilitate integration in the New Economic Order, policy measures are taken to reduce trade deficit in agriculture, foster the development of the agricultural sector, and promote agricultural and agro-industrial export expansion.

4.6 Macro-economic Indicators

Inflation Rate, Monetary Policy, Capital, Finance, and Labor Force: The macro-economic policy environment is characterized with direct government intervention and support to private sector initiative. Exchange rates are stable. Annual rate of inflation was relatively low - 7.2 percent in 1996 - and economic growth was relatively moderate (2.4 percent). Loans are readily available for large-size agro-industrial firms. However, small-scale producers face considerable difficulty in securing the required loan for their businesses. Interest rate on loans from commercial banks was about 13 percent in 1996. Skilled labor is available, but costly. Technicians and managers are skilled receive training on regular basis. Unskilled labor is available in local markets and is, relatively, cheap (US\$ 4/day).

III. International Changes And Developments

1. Introduction

Following the analysis of the competitiveness of the agro-food industry in Lebanon and in its neighboring countries: Egypt, Israel, Jordan, and Syria, this section reviews the international changes and development that is affecting the world trade, and production and marketing of the agro-food products.

The most important changes include the following:

- globalization;
- Uruguay Round of Trade Negotiations - The GATT Agreement;
- environmental concerns and issues;
- trends in global consumption; and
- trends in global agricultural marketing.

These developments, which are shaping agricultural trade, reveal new problems and pose new challenges on Lebanon, requiring the agricultural and agro-industrial sectors to adapt to these developments. Hence, there is a need to examine these developments and assess their implications on farmers, agro-industrialists, exporters and the Government.

2. Globalization

Globalization refers to the growing and the deepening interaction of countries in world trade, foreign direct investment, and capital markets. The globalization process is promoted by technological advances in transport and communication, and by rapid liberalization and deregulation of trade and capital flows, both at the national and international level. In effect, globalization is fostering greater interdependence and cross-border linkages between countries of the world, requiring them to liberalize their national markets in the belief that the international flows of trade, finance, and information will produce the best outcome for economic growth and human welfare (Woodward, 1996). Therefore, globalization is expected to facilitate and promote global trade growth through its effect on security of access to large international markets (LTNDP, 1997).

The implications of globalisation on the Lebanese economy, in general, and the agricultural and agro-industrial sectors, in particular, are subject to debate. This is particularly so because liberalization exposes domestic producers - vis., farmers, industrialists and traders - to volatile global market prices and capital flows that are large relative to the limited Lebanese economy and, thereby, increases their risk exposure;

Thus, to meet the challenges of globalization, the government must:

- identify policies that enable producers to participate in international markets on equitable basis and competitive terms;
- expand investments in people; and
- increase exposure to international markets to increase access to global opportunities.

3. Uruguay Round of Multilateral Trade Negotiations

The GATT Agreement, better known as the Uruguay Round of Multilateral Trade Agreement, is the most significant single package of changes to international trading regime in agriculture ever signed. The signatory countries have set the rules for the agriculture sector with the objective to reduce support and protection to the sector. Although the fundamental nature of these new - rules may hold much promise in the long-run, practical implementation of the GATT Agreement may not change the market situation very much in the immediate future (TanSermann, 1996).

The GATT Final Act was signed in Marrakesh in 1994 by 128 countries and came into effect in 1995. The Final Act comprised a set of Agreements and decision whose objective is to promote international trade via progressive liberalization. The agreement, among others things, include the following:

Agreement on Agriculture (AOA) – aims to promote the establishment of a fair and market-oriented agricultural trading system. It specifies binding commitments in the areas of market access, domestic support, and export competition. Accordingly, each country is not allowed to maintain, resort to, or convert to any measure synonymous to additional custom duties or provide domestic support or export subsidies in excess of the commitment specified in the Schedule of Commitments (SOC). Less certain, however, is the immediate impact which the Agreement on Agriculture may have on international markets for agricultural products in the years to come. This impact depends, to a large extent, on the precise nature of policy changes adopted by some of the big players, viz., the United States and the European Union.

Agreement on the Application of Sanitary and Phytosanitary Measures (AASPM) – aims to minimize the negative effect of trade. Specifically, the application of the sanitary and phytosanitary measures is restricted to the extent necessary to protect human health, animal, and plant life based on scientific evidence (ESCWA, 1996).

4. Environmental Concerns and Issues

The nineties witnessed growing concerns aiming at protecting the environment. Accordingly, Legislative decrees were issued and policy measures and programs were implemented, with a view to protect human health, animal, and plant life. The protective measures focused on reducing: the following:

- Reduce the mis-use of water resources;
- Reduce the mis-use of agro-chemicals;
- Reduce the degradation of terraces and soil erosion resulting from land abandonment and overgrazing (EC, 1989);
- Reduce the use of chemical fertilisers and regulate their use. This is important as the excessive use of some fertilisers - viz., (Nitrate) - damages the soil and contaminates ground water. This, in turn, brought about significant improvements in the management and regulation of chemical fertilisers, with a view to reduce health hazards and to protect human lives;
- Reduce the use of pesticides and herbicides as their use raises serious hazards for human health and damage to environment; and
- Reduce soil erosion resulting from land abandonment, deforestation and disused terraces, especially in Italy, Spain, Greece, Mexico, Peru, and Portugal. Thus, decrees were issued in order to reduce the risk of further soil erosion and degradation; land reclamation measures included repairing and rehabilitating existing terraces.

5. Trends in Global Consumption and Food Safety Measures

The decade witnessed a rise in consumers' health and environmental awareness which, in turn, brought about changes in consumer's demand for food products. Consumer Groups worldwide are mirroring increasing apprehension over the prevalence of food - borne insecticides, pesticides and chemical additives to the food products selling in the market place. These groups are exerting pressure on their governments to issue legislation for protection against the consequent implications and health hazards associated with the consumption of such food items (Henson, 1996). Also, they are questioning the efficacy of the prevailing government safety regulations and the activities of the agro-food industry. Viz response to these concerns, Governments all over the world, and particularly in the European Union, have taken several measures to improve consumers' protection and safety (EC, 1995). Some of the measures taken by the EU are reviewed below.

The European Union has issued advanced legislation and taken several measures for improving consumers' protection and for ensuring healthy and environmentally friendly foodstuffs for consumers (EC, 1983). These measures include, amongst other things, legislation concerning the following:

General Product Safety and Liability for Defective Products: Over the past years, the EU has taken several measures to enhance consumers protection, including legislation on general product safety and liability for defective products. For example, in the event of dissatisfaction with the product purchased, consumers are entitled to price-back guarantee; in the event of harm sustained, consumers are entitled to due compensation. It is enough for consumers to prove the defective nature of the product purchased and the causal link between the defect and the harm (EC, 1990).

For ensuring extra foods safety, the European Commission issued legislation and standards for harmonising food products upward rather than downward. That is, the mode of production should comply with the European Community standards governing agricultural farming and food processing, underpinned by inspections carried-out by professional from the European Commission. This measure is hoped to ensure the absence of food-borne insecticides, pesticides and chemical additives to the food products selling in the market place. The tight implementation of these regulations is hoped to enhance consumers' protection and promote their confidence in the products purchased (EC, 1990).

Additives: Policy makers in the European Union assert that consumers are entitled to sufficient information concerning the list of ingredients and all substances used in manufacturing or preparing of a product and which remain present in the product, including additives. These additives must be classified by their category - i.e., "coloring agent" or "preservative"- so that consumers can understand the purpose of their use in food manufacturing. In the EU, the "The Scientific Committee on Food" has drawn a list of 200 additives permitted in food processing in all member states. Each additive has the EU identification member to ensure that it has no potential to cause harm or poisoning (EC, 1990).

Food manufacturers are required by law to inform consumers about potential risks and health hazards associated with the consumption of their product (i.e. implications of smoking cigarettes). Manufacturers must also monitor their products and, in the event of problems, must take necessary measures for withdrawal of these products from the market place.

Labeling and Information: Labeling of consumer products is an indispensable aid in deciding what to buy and, thus, is one of the priority objectives of consumer protection policy in Europe. A label is in a way a products' identity card and, therefore, policy makers in the European Union have established common labeling rules for ensuring that clear, easily readable, complete, understandable and correct information are presented on all food products. For example, the information required on food products sold in the market include: name of the product; list of ingredients and additives used; net quantity; expiry date; particular instructions concerning its usage and preparation; nutritional information such as energy value, amounts of protein, sugar, carbohydrates and fat; provenance or place of origin; and trade mark.

Hygiene and Advertising: The European Union has established common hygiene and safety standards to ensure that healthy and environmentally friendly foodstuff be conveyed to consumers. The Hygiene Food Committee is policing the implementation of the safe standards to ensure that general hygiene rules are respected at all stages of production and food processing, and to prevent consumers from being harmed by foodstuffs which are not fit for consumption or which are dangerous to human health.

Rigorous rules have been established to protect consumers from potentially harmful advertising. With the plethora of products, consumers can be easily misled if they are inadequately and incorrectly informed. Hence, the EU has laid down legislation and rules for advertising, with a view to protect consumers against questionable advertising and strengthen: the consumers' right to have their interest protected; the consumers' right to correct information; and the obligation on the manufacturer to prove the truthfulness of the claims made in the advertising message (EC, 1995).

Trends in Food Consumption: Consumers worldwide are becoming quality minded and willing to pay higher prices for safer food, whilst avoiding the consequent implications and health hazards associated with the consumption of food-borne insecticides, pesticides and chemical additives to the food products selling in the market place (Henson, 1996). The rise in consumers' health awareness has lead to an increase in demand for fresh fruits and vegetables rather than processed food products. For example, over the past five years, there has been a sharp increase in demand for fresh fruits (20 percent), such as citrus, bananas, apples, pears, and grape tables (Rabobank, 1992). Also, recent statistics showed that about 50 percent of consumers in the UK have become vegetarians (Ritson, 1997). Most importantly, consumers are cost-conscious, and are prepared to pay high prices for good quality and environmentally friendly agricultural produce.

6. Trends in Global Agricultural Marketing Practices

Changes in agricultural marketing patterns were also in evidence. For example, agricultural marketing, worldwide, has shifted, in recent years, from the wholesale market channel to the sophisticated supermarkets and food chain stores. Statistics show that, in 1996, about 85 percent of food sales were achieved through sophisticated supermarkets and food chain stores, compared with less than 60 percent in the eighties (Ritson, 1997). Most importantly, these chain stores are setting high market standards and quality measures for fresh agricultural produce in light of the shift in consumers demand for higher food safety standards. This, in turn, reflects the growing importance and influence of supermarkets and food chain stores in agricultural production and marketing.

One can conclude that consumers, worldwide, are becoming quality minded, require high food safety standards, demand environmentally friendly food products, and have a preference for good quality fresh rather than processed fruits and vegetables. In addition, agricultural marketing is becoming

more organized, with large supermarkets and food chain stores dominating the market - viz., have the largest market share. The remaining market share is covered by few specialized importers who perform wholesale functions by distributing agricultural products to supermarkets and food chain stores. Thus, global consumption and marketing trends are changing from product-base to market-oriented strategic thinking. Most importantly, the increase in environmental and health awareness will, undoubtedly, influence the current production methods. Hence, understanding these changes is particularly important as they help market operators gain insight into the current and future trends, and enable them to react to opportunities and threats in good time.

7. Lessons Learned

Against this background and based on the GATT Agreements, the lessons learned are that Lebanon's agricultural sector will be confronted with a number of challenges including, inter alia, obtaining high quality food products, and operating in an increasingly complex and competitive environment. Globalization is fostering comparative advantage in production and marketing and is setting the impetus for increased competitiveness in international trade. Farmers and industrialists can not delink themselves from these developments, lest they may lose out and risk to become marginalized in the export markets.

Accordingly, Lebanon can not afford to be a passive bystander to these significant developments. New production, trade and marketing strategies ought to be explored, with a view to adjust to the global developments shaping the international trade arena. Successful and sustainable agricultural and agro- industrial development requires policy reforms, cooperation and commitment by the Government, industrialists and farmers.

CHAPTER III COMPARATIVE ADVANTAGE ANALYSIS

This chapter studies the comparative advantage of Lebanon's agro-food products. Following the qualitative approach of Porter, this chapter adopts a quantitative approach based on the work of Balassa (1965) which requires statistical data on exports and imports in general, particularly at the level of chapter and sub-chapter of agro-food products. The study examines the agro-food trade balance of Lebanon vis-a-vis Cyprus, Egypt, Israel, Jordan, Syria, and Turkey and identifies the products that Lebanon enjoys a comparative advantage in with respect to these countries.

There are two sections to this chapter. Section A analyzes the agro-food trade balance of Lebanon vis-a-vis Cyprus, Egypt, Israel, Jordan, Syria, and Turkey.

Section B identifies the products that Lebanon enjoys a comparative advantage in with respect to the countries mentioned above.

I. Analysis of the agro-food trade balance of Lebanon vis-a-vis the region

By examining the total imports and exports and the agro-food imports and exports of Lebanon, Cyprus, Egypt, Israel, Jordan, Syria, and Turkey, the following observations are made, see table 3.1.

On Total Trade Balance

- With respect to the total trade balance, Cyprus is the only country that has a positive trade balance, with Syria and Jordan having relatively small trade deficits.
- Despite its large trade deficits compared to the countries in table 3.1, Turkey's 1995 total exports were almost six fold of Syria and Egypt.

On Agro-Food Trade Balance

- Nevertheless, Turkey alone has a positive agro-food trade most probably due to the export of nut products including filberts and almonds. The worldwide increase in filbert prices in 1994 and 1995 was due in part to an important decline in Turkey's harvest of the crop.
- For Syria, Jordan, and Lebanon, the share of the agro-food exports and imports exceed 10% of the total exports and imports, making it an important factor in the trade balance. Egypt's deficit in the agro-food sector amounts to 27% of its total deficit, and Lebanon's deficit is in the range of 15% of its total deficit, an important figure compared to the size of the population.

Table 3.1 Basic Data (in Thousand USD, 1995)

| Country | Exports | Imports | Trade balance | Agro-food exports | | Share of total exports | Agro-food imports | | Share of total imports | Agro-food trade balance |
|---------|------------|------------|---------------|--------------------|-----------|------------------------|--------------------|-----------|------------------------|-------------------------|
| | | | | food, live animals | beverages | | food, live animals | beverages | | |
| Lebanon | 826 109 | 7 294 413 | -6 468 304 | 104 216 | 7 219 | 13,49% | 1 048 235 | 40 766 | 14,93% | -977 566 |
| Egypt | 3 444 140 | 11 738 964 | -8 294 824 | 320 907 | - | 9,32% | 2 611 772 | 1 238 | 22,26% | -2 292 103 |
| Syria* | 3 547 309 | 5 467 633 | -1 920 324 | 567 749 | 2 788 | 16,08% | 804 403 | 3 553 | 14,78% | -237 419 |
| Jordan | 1 768 853 | 3 696 391 | -1 927 538 | 169 480 | 7 575 | 10,01% | 598 072 | 2 497 | 16,25% | -423 514 |
| Israel* | 16 933 986 | 23 778 852 | -6 844 866 | 809 926 | - | 4,78% | 1 299 212 | 19 906 | 5,55% | -509 192 |
| Turkey | 21 598 657 | 35 707 461 | -14 108 804 | 3 414 854 | 85 930 | 16,21% | 1 480 181 | 13 353 | 4,18% | 2 007 250 |
| Cyprus | 3 712 257 | 1 237 403 | 2 474 854 | 206 195 | 43 472 | 6,73% | 313 034 | 31 514 | 27,84% | -94 881 |

Sources: Statistics Yearbook, UN, 1996, Conseil Supérieur des Douanes (Lebanon).

*: year 1994

- Lebanon, Egypt, and Syria experiencing trade deficit in the agro-food sector also suffer from a trade deficit in all the sub-sectors. Jordan would have suffered the same fate had it not been for the exception positive total trade in the Meat of bovine animals, fresh, chilled or frozen sub-sector (011). Israel's total agro-food balance, despite being negative, enjoys positive trade balance in two sub-sectors: Vegetables and Fruits (05) and Miscellaneous, margarine and shortening (09) sub-sectors. On the other hand, Turkey, the only country with a positive agro-food trade balance shows positive trades in the following sub-sectors: Fish, crustaceans, mollusks and aquatic invertebrates and preparations thereof (03), Vegetables and Fruits (05), Coffee, tea, cacao, spices and manufacturers thereof (07), and Beverages (011). Cyprus has only two sub-sectors showing positive balance: Vegetables and Fruits (05) and Beverages (011).

Table 3.2: Main Agro-food Categories (in Thousand USD, 1995)

| | Lebanon | | | Egypt | | | Syria* | | | Jordan | | | Israel | | | Turkey | | | Cyprus | | |
|----|---------|-----------|----------|---------|-----------|------------|---------|---------|----------|---------|---------|----------|---------|-----------|----------|-----------|-----------|-----------|---------|---------|----------|
| | exports | imports | balance | exports | imports | balance | exports | imports | balance | exports | imports | balance | exports | imports | balance | exports | imports | balance | exports | imports | balance |
| 0 | 104 216 | 1 048 235 | -944 019 | 320 907 | 2 611 772 | -2 290 865 | 567 749 | 804 403 | -236 654 | 169 480 | 598 072 | -428 592 | 809 926 | 1 299 212 | -489 286 | 3 414 854 | 1 480 181 | 1 934 673 | 206 195 | 313 034 | -106 839 |
| 00 | 97 | 81 639 | -81 542 | 436 | 150 164 | -149 728 | 76 434 | 95 450 | -19 016 | 22 055 | 42 407 | -20 352 | | | | 130 276 | 341 881 | -211 605 | | | |
| | 0,09% | 7,50% | | 0,14% | 5,75% | | 13,40% | 11,81% | | 12,46% | 7,06% | | | | | 3,72% | 22,89% | | | | |
| 01 | 1 908 | 68 590 | -66 682 | 3 756 | 214 189 | -210 433 | | | | 8 572 | 49 979 | -41 407 | 49 388 | 146 817 | -97 429 | | | | 3 208 | 22 740 | -19 532 |
| | 1,71% | 6,30% | | 1,17% | 8,20% | | | | | 4,84% | 8,32% | | 6,10% | 11,13% | | | | | 1,28% | 6,60% | |
| 02 | 1 622 | 214 251 | -212 629 | 168 947 | -168 947 | | 11 538 | 31 589 | -20 051 | 8 914 | 55 820 | -46 906 | | | | | | | 13 394 | 21 909 | -8 515 |
| | 1,46% | 19,68% | | 6,47% | | | 2,02% | 3,91% | | 5,03% | 9,29% | | | | | | | | 5,36% | 6,36% | |
| 03 | 119 | 16 840 | -16 721 | 74 523 | -74 523 | | | | | 23 766 | -23 766 | | 88 309 | -88 309 | | 84 742 | | 84 742 | 3 412 | 33 272 | -29 860 |
| | 0,11% | 1,55% | | 2,85% | | | | | | 3,96% | | | 6,69% | | | 2,42% | | | 1,37% | 9,66% | |
| 04 | 3 052 | 202 879 | -199 827 | 63 159 | 1 309 716 | -1 246 557 | 39 940 | 143 467 | -103 527 | 7 625 | 201 086 | -193 461 | 420 277 | -420 277 | | 450 247 | 470 539 | -20 292 | 3 095 | 100 645 | -97 550 |
| | 2,74% | 18,63% | | 19,68% | 50,12% | | 7,00% | 18,00% | | 4,31% | 33,48% | | 31,86% | | | 12,86% | 31,51% | | 1,24% | 29,21% | |
| 05 | 66 819 | 228 270 | -161 451 | 206 805 | 160 442 | 46 363 | 381 302 | 210 437 | 170 865 | 99 649 | 61 496 | 38 153 | 516 169 | 181 624 | 334 545 | 2 176 776 | 87 509 | 2 089 267 | 172 121 | 30 597 | 141 524 |
| | 59,96% | 20,96% | | 64,44% | 6,14% | | 66,83% | 26,05% | | 56,28% | 10,24% | | 63,73% | 13,77% | | 62,18% | 5,86% | | 68,94% | 8,88% | |
| 06 | 10 598 | 64 181 | -53 583 | 12 778 | 219 125 | -206 347 | 11 237 | 142 317 | -131 080 | | 49 163 | -49 163 | | | | 195 936 | 202 742 | -6 806 | 4 199 | 18 636 | -14 437 |
| | 9,51% | 5,89% | | 3,98% | 8,39% | | 1,97% | 17,61% | | 8,19% | | | | | | 5,60% | 13,57% | | 1,68% | 5,41% | |
| 07 | 6 291 | 94 322 | -88 031 | 10 936 | 153 493 | -142 557 | 46 274 | 88 992 | -42 718 | 9 495 | 34 986 | -25 491 | 51 903 | 125 206 | -73 303 | 125 351 | | 125 351 | 3 392 | 24 594 | -21 202 |
| | 5,65% | 8,66% | | 3,41% | 5,87% | | 8,11% | 11,01% | | 5,36% | 5,83% | | 6,41% | 9,49% | | 3,58% | | | 1,36% | 7,14% | |
| 08 | 574 | 26 885 | -26 311 | 10 154 | 65 031 | -54 877 | | 59 577 | -59 577 | 4 831 | 57 701 | -52 870 | | | | | | | | | |
| | 0,52% | 2,47% | | 3,16% | 2,49% | | | 7,37% | | 2,73% | 9,61% | | | | | | | | | | |
| 09 | 11 586 | 50 378 | -38 792 | 7 306 | 24 203 | -16 897 | | 15 841 | -15 841 | | 21 669 | -21 669 | 115 365 | 82 197 | 33 168 | | | | 3 602 | 26 915 | -23 313 |
| | 10,40% | 4,63% | | 2,28% | 0,93% | | | 1,96% | | | 3,61% | | 14,24% | 6,23% | | | | | 1,44% | 7,81% | |
| 11 | 7 219 | 40 662 | -33 443 | 1 238 | -1 238 | | 2 788 | 3 553 | -765 | 7 575 | 2 497 | 5 078 | | | | 85 930 | 13 353 | 72 577 | 43 473 | 31 519 | 11 954 |
| | 6,48% | 3,73% | | | 0,05% | | 0,49% | 0,44% | | 4,28% | 0,42% | | | | | 2,45% | 0,89% | | 17,41% | 9,15% | |
| nc | 1 550 | | | 5 577 | 70 701 | | | 11 180 | | 764 | | | 77 101 | 69 511 | | 165 596 | 263 084 | | | | |

Sources: Statistics Yearbook, UN, 1996; Conseil Supérieur des Douanes (Lebanon).

*: year 1994

It should be noted that detailed titles of chapters and sub-chapters of agro-food product classification are shown at the end.

When studying the main exported and imported products of each country, the following observations are made:

- Generally, all countries export fruits and vegetables and import cereals mainly wheat.
- Fruits and vegetables are Lebanon's main agricultural exports. The major markets are the Gulf countries as well as the neighboring Arab countries
- Neighboring Arab countries also procure Lebanon with fruits and vegetables showing a complementarity between Lebanon and its neighbors in agricultural production.
- Agro-food products are exported to Saudi Arabia (\$5 billion), Jordan (\$3 billion), USA (\$2.2 billion), Romania (\$1.3 billion) and France (\$1.1 billion). Regionally, Lebanon imports agro-food products mainly from Turkey (\$8 billion) and Syria (\$6.2 billion) respectively cereals food products and fruit and vegetables preparations. As for agricultural products, Lebanon import bill amounts to \$46 billion from Syria only.
- The majority of Arab countries have signed bilateral trade agreements. However, these are not applied effectively and most countries consider agriculture as a sensitive sector and hence protect its products from international competition by high tariffs and non tariff barriers.
- A greater regional specialization, according to the respective comparative advantages would allow a better resource allocation (as done by the EC's CAP). This will provide regional agro firms with more and cheaper inputs.
- Lebanon's exports consist mainly of fresh and refrigerated vegetables, seriously backed up fresh and dried fruits. Imports seem to be equally divided among all categories even if vegetables and wheat seem to have a slight advantage. Lebanon is a net exporter of a very limited number of products which include various kinds of oranges, apples, fresh grapes and wine.
- Egypt's main exports are potatoes leading by 31.82% of the original agro-food trade followed by rice. Imports are largely headed by wheat and wheat products followed by uncrushed corn.
- Syria's exports seem to anchor mostly on goats and sheep sub-sector and on certain kinds of vegetables. Its imports are rather focused on vegetables and fruits representing more than the quarter of imports, followed by refined sugars, goats and sheep species and coffee respectively.
- Jordan's main exports are vegetables and goats and sheep species. The imports seem to cover all sub-sectors.
- Israel has many exported products in various sub-sectors, namely fresh fruits and juices (28.48%) and fresh and frozen vegetables (10.56%). Its imports seems to be scattered in all sub-sectors.
- Turkey's nuts sub-sectors as mentioned earlier is primordial in its exports easily leading all other sub-sectors with 16.88% of the total exports of the agro-food sector. Major imports focus on goats and sheep species with 22.11% of imports.
- Cyprus is the only country with an important beverage sub-sector totaling 7.11% of its exports in the agro-food sector, only second to potatoes with 15.7%. Imports are varied, and include a 9.15% for the beverage sub-sector.

The following table synthesizes table 3.2. It shows the main products exported and imported for each of the reference area countries.

Table 3.3 Main agro-food traded products for reference area countries (1995)

| | Exports | | | | | | Imports | | | | | |
|---------|---------|-------|-------|-------------------------------------|---------|--------|---------|-------|-------|--------------------------------------|---------|--------|
| | SITC | % | SITC | products | amount | % | SITC | % | SITC | products | amount | % |
| Lebanon | 05 | 59,96 | 054 | légumes frais, réfrigérés, congelés | 30 370 | 27,25% | 02 | 16,17 | 001 | animaux vivants | 81 639 | 7,50% |
| | | | 0542 | légumes à cosse | 8 001 | 7,18% | 04 | 16,00 | 022 | lait et crème | 53 596 | 4,92% |
| | | | 056 | conserves | 5 946 | 5,34% | 05 | 24,18 | 024 | fromage | 81 392 | 7,47% |
| | | | 057 | fruits frais ou secs | 25 535 | 22,91% | | | 041 | blé | 99 037 | 9,10% |
| | | | 058 | conserves | 4 968 | 4,46% | | | 054 | légumes, frais, réfrigérés, congelés | 106 752 | 9,80% |
| | | | 062 | sucreries | 6 475 | 5,81% | | | 0577 | fruits à coques | 48 361 | 4,44% |
| | | | 09 | préparations alimentaires | 11 586 | 10,40% | | | 061 | sucres et miel | 53 325 | 4,90% |
| | | | | | | | | | 071 | café | 54 600 | 5,01% |
| Egypt | 04 | 19,68 | 042 | riz | 56 741 | 17,68% | | | 011 | viandes fraîches | 207 308 | 7,93% |
| | 05 | 64,44 | 0541 | pommes de terre | 102 115 | 31,82% | | | 041 | froment | 875 680 | 33,51% |
| | | | 05451 | oignons, échalottes | 18 466 | 5,75% | 04 | 50,12 | 044 | maïs non moulu | 349 271 | 13,37% |
| | | | | | | | | | 0611 | sucres bruts | 143 926 | 5,51% |
| | | | | | | | | | 0741 | thé | 136 969 | 5,24% |
| Syria | 00 | 13,4 | 00121 | espèce ovine | 62 823 | 11,01% | 04 | 18,00 | 00121 | espèce ovine | 82 127 | 10,16% |
| | 05 | 66,83 | 0542 | légumes à cosse secs | 66 400 | 11,64% | 05 | 26,05 | 043 | orge non mondé | 54 301 | 6,72% |
| | | | 0544 | tomates fraîches | 51 875 | 9,09% | 06 | 17,61 | 04601 | farine de froment | 48 650 | 6,02% |
| | | | | | | | | | 05 | fruits et légumes | 210 437 | 26,05% |
| | | | | | | | | | 0612 | sucres raffinés | 116 435 | 14,41% |
| | | | | | | | | | 07 | café, thé, cacao, épices | 88 992 | 11,01% |
| | | | | | | | | | 081 | préparations pour animaux | 59 577 | 7,37% |
| Jordan | 00 | 12,46 | 00121 | espèce ovine | 21 405 | 12,05% | 04 | 33,48 | 00121 | espèce ovine | 25 219 | 4,20% |
| | 05 | 56,28 | 0544 | tomates fraîches | 24 696 | 13,91% | | | 011 | viandes fraîches | 41 997 | 6,99% |
| | | | 0545 | autres légumes | 38 346 | 21,59% | | | 022 | lait, crème | 33 588 | 5,59% |
| | | | 0571 | oranges | 8 998 | 5,07% | | | 041 | froment | 56 869 | 9,47% |
| | | | | | | | | | 042 | riz | 30 997 | 5,16% |
| | | | | | | | | | 043 | orge non mondé | 53 407 | 8,89% |
| | | | | | | | | | 044 | maïs non moulu | 50 609 | 8,43% |
| | | | | | | | | | 0612 | sucres raffinés | 42 331 | 7,05% |
| | | | | | | | | | 0813 | tourteaux | 60 858 | 10,13% |
| Israel | 05 | 63,73 | 054 | légumes frais, congelés, secs | 85 501 | 10,56% | 04 | 31,86 | 011 | viandes fraîches | 146 609 | 11,11% |
| | 09 | 14,24 | 05711 | oranges fraîches | 69 156 | 8,54% | 05 | 13,77 | 034 | poissons frais, réfrigérés, congelés | 68 140 | 5,17% |
| | | | 05722 | pamplemousses | 54 487 | 6,73% | 06 | 12,54 | 041 | froment | 173 345 | 13,14% |
| | | | 0585 | jus de fruits | 107 016 | 13,21% | | | 043 | orge non mondé | 71 713 | 5,44% |
| | | | 09 | préparations alimentaires | 115 365 | 14,24% | | | 048 | préparations à base de céréales | 68 929 | 5,23% |
| | | | | | | | | | 0612 | sucres raffinés | 126 945 | 9,62% |
| Turkey | 04 | 12,86 | 046 | farine | 143 731 | 4,11% | 00 | 22,89 | 0011 | espèce bovine | 330 257 | 22,11% |
| | 05 | 62,18 | 0484 | produits de boulangerie | 171 813 | 4,91% | 04 | 31,51 | 041 | froment | 243 678 | 16,32% |
| | | | 0542 | légumes à cosse secs | 198 342 | 5,67% | 06 | 13,57 | 042 | riz | 109 431 | 7,33% |
| | | | 0546 | légumes congelés, conservés | 134 982 | 3,86% | | | 0612 | sucres raffinés | 189 089 | 12,66% |
| | | | 056 | conserves de légumes | 194 101 | 5,54% | | | | | | |
| | | | 05752 | raisins secs | 189 933 | 5,43% | | | | | | |
| | | | 05775 | noisettes | 590 792 | 16,88% | | | | | | |
| | | | 058 | conserves de fruits | 301 068 | 8,60% | | | | | | |
| | | | 062 | sucreries | 185 728 | 5,31% | | | | | | |
| Cyprus | 05 | 68,94 | 0541 | pommes de terre | 95 973 | 15,70% | 04 | 29,21 | 043 | orge non mondé | 32 350 | 9,39% |
| | 11 | 17,41 | 0572 | pamplemousses, citrons | 27 225 | 4,45% | | | 044 | maïs non moulu | 23 325 | 6,77% |
| | | | 058 | jus de fruits | 22 348 | 3,66% | | | 048 | préparations à base de céréales | 27 171 | 7,89% |
| | | | 11 | boissons | 43 472 | 7,11% | | | 081 | nouritures pour animaux | 32 185 | 9,34% |
| | | | | | | | | | 098 | préparations alimentaires | 23 589 | 6,85% |
| | | | | | | | | | 11 | boissons | 31 514 | 9,15% |

Source: Statistics Yearbook, UN 1996, Conseil Supérieur des douanes

II. Identification of products that Lebanon enjoys a comparative advantage

In order to calculate the Revealed Comparative Advantage (RCA) of products, the Balassa method was used. A brief theoretical review of the Balassa's method is presented in the annex. The data of the said formula include detailed import and export figures of the concerned countries, including all relevant figures pertaining to export of specific products as a percentage of the total import and export of the countries in question as well as total import and export figures of the countries and the studied region. In brief, the Balassa formula is:

$$\text{Where: } RCA = \frac{X_{ij} / X_{i.}}{X_{.j} / X_{..}}$$

RCA is the index

X_{ij} measures the exports of products i by the country j

$X_{.j}$ measures the total exports of the country j

$X_{i.}$ measures the total exports of products i in the reference area

$X_{..}$ measures the total exports of products in the concerning area

It must be noted that these indicators are calculated vis-a-vis a specific area of reference, and that the results are heavily dependent on the figures revealed by statistics from this area, which in our case comprises the following countries: Lebanon, Egypt, Syria, Jordan, Israel, Turkey, and Cyprus.

The results of the formula could be summarized in the following chart:

| RCA _x | RCA _m | Conclusion |
|----------------------|----------------------|--------------------------|
| RCA _x > 1 | RCA _m < 1 | Comparative advantage |
| RCA _x < 1 | RCA _m > 1 | Comparative disadvantage |
| RCA _x > 1 | RCA _m > 1 | No conclusion |
| RCA _x < 1 | RCA _m < 1 | No conclusion |

Where:

RCA_x is the Revealed Comparative Advantage from Export data calculated according to the Balassa formula, and

RCA_m is the Revealed Comparative Advantage from Import data also calculated according to the Balassa formula.

The analysis of the Revealed Comparative Advantage is presented into two parts, one dealing exclusively with exports and the other exclusively with imports.

1. Export Side

This part determines the Revealed Comparative Advantage of the exports by sub-sector. To this end, the *total export* is calculated by adding "food, live animals" and the "beverages" columns from

the table 3.1 and the *export* for each *sub-sector* of each country is recorded in table 3.4. Countries that do not export products related to that sub-sis represented by an empty space. With all the relevant data available, the Balassa calculations are made and presented in table 3.5.

Table 3.4 Export of agro-food products (in Thousand US\$, 1995)

| SITC | Lebanon | Egypt | Syria* | Jordan | Israel* | Turkey | Cyprus | Total |
|---------------|---------|---------|---------|---------|----------|----------|---------|----------|
| Total exports | 826109 | 3444140 | 3547309 | 1768853 | 16933986 | 21598657 | 3712257 | 51831311 |
| 0 | 104216 | 320907 | 567749 | 169480 | 809926 | 3414854 | 206195 | 5593327 |
| 00 | 97 | 436 | 76434 | 22055 | | 130276 | | 229298 |
| 01 | 1908 | 3756 | | 8572 | 49388 | | 3208 | 66832 |
| 02 | 1622 | | 11538 | 8914 | | | 13394 | 35468 |
| 03 | 119 | | | | | 84742 | 3412 | 88273 |
| 04 | 3052 | 63159 | 39940 | 7625 | | 450247 | 3095 | 567118 |
| 05 | 66819 | 206805 | 381302 | 99649 | 516169 | 2176776 | 172121 | 3619641 |
| 06 | 10598 | 12778 | 11237 | | | 195936 | 4199 | 234748 |
| 07 | 6291 | 10936 | 46274 | 9495 | 51903 | 125351 | 3392 | 253642 |
| 08 | 574 | 10154 | | 4831 | | | | 15559 |
| 09 | 11586 | 7306 | | | 115365 | | 3600 | 137859 |
| 11 | 7219 | | 2788 | 7575 | | 85930 | 43473 | 146985 |

Sources: Statistics Yearbook, UN, 1996, Conseil Supérieur des Douanes (Lebanon)

*: year 1994

Once the calculations have been done the RC_{Ax} values will be deduced. These results from table 3.5 can not be fully assessed until the Revealed Comparative Advantage for imports has been calculated. However, the figures, which are superior to 1, are bolded because they are a prelude to a *potential comparative advantage*.

Table 3.5 Revealed comparative advantage from exports data
(Area of reference: Lebanon, Egypt, Syria, Jordan, Turkey and Cyprus export data)

| SITC | Lebanon | Egypt | Syria* | Jordan | Israel* | Turkey | Cyprus |
|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 0 | 1,17 | 0,86 | 1,48 | 0,89 | 0,44 | 1,47 | 0,51 |
| 00 | 0,03 | 0,03 | 4,87 | 2,82 | | 1,36 | |
| 01 | 1,79 | 0,85 | | 3,76 | 2,26 | | 0,67 |
| 02 | 2,87 | | 4,75 | 7,36 | | | 5,27 |
| 03 | 0,08 | | | | | 2,30 | 0,54 |
| 04 | 0,34 | 1,68 | 1,03 | 0,39 | | 1,91 | 0,08 |
| 05 | 1,16 | 0,86 | 1,54 | 0,81 | 0,44 | 1,44 | 0,66 |
| 06 | 2,83 | 0,82 | 0,70 | | | 2,00 | 0,25 |
| 07 | 1,56 | 0,65 | 2,67 | 1,10 | 0,63 | 1,19 | 0,19 |
| 08 | 2,31 | 9,82 | | 9,10 | | | |
| 09 | 5,27 | 0,80 | | | 2,56 | | 0,36 |
| 11 | 3,08 | | 0,28 | 1,51 | | 1,40 | 4,13 |

Sources: Statistics Yearbook, UN, 1996, Conseil Supérieur des Douanes (Lebanon)

*: year 1994

2. Import Side

This section deals with the imports of agro-food. The comparative advantage of a product can only be determined when imports and exports are matched together. Hence, the same method of Balassa is replicated for imports. However, in this case, the figures which are superior to 1 are bolded because they are a prelude to a *potential comparative disadvantage*.

Table 3.6 Import of agro-food products (in Thousand US\$, 1995)

| SITC | Lebanon | Egypt | Syria* | Jordan | Israel* | Turkey | Cyprus | Total |
|---------------|---------|----------|---------|---------|----------|----------|---------|----------|
| Total exports | 7294413 | 11738964 | 5467633 | 3696391 | 23778852 | 35707461 | 1237403 | 88921117 |
| 0 | 1048235 | 2611772 | 804403 | 598072 | 1299212 | 1480181 | 313034 | 8154909 |
| 00 | 81639 | 150164 | 95450 | 42407 | | 341881 | | 711541 |
| 01 | 68590 | 214189 | | 49979 | 146817 | | 22740 | 502315 |
| 02 | 214251 | 168947 | 31589 | 55820 | | | 21909 | 492516 |
| 03 | 16840 | 74523 | | 23766 | 88309 | | 33272 | 236710 |
| 04 | 202879 | 1309716 | 145467 | 201086 | 420277 | 470539 | 100645 | 2850609 |
| 05 | 228270 | 160442 | 210437 | 61496 | 181624 | 87509 | 30597 | 960375 |
| 06 | 64181 | 219125 | 142317 | 49163 | 165365 | 202742 | 18636 | 861529 |
| 07 | 94322 | 153493 | 88992 | 34986 | 125206 | | 24594 | 521593 |
| 08 | 26885 | 65031 | 59577 | 57701 | | 101073 | 32185 | 342452 |
| 09 | 50378 | 24203 | 15841 | 21669 | 82197 | | 26915 | 221203 |
| 11 | 40662 | 1238 | 3553 | 2497 | 19906 | 13353 | 31519 | 112728 |

Sources: Statistics Yearbook, UN, 1996, Conseil Supérieur des Douanes (Lebanon)

*: year 1994

Table 3.7: Revealed comparative disadvantage from imports data
(Area of reference: Lebanon, Egypt, Syria, Jordan, Turkey and Cyprus import data)

| | Lebanon | Egypt | Syria* | Jordan | Israel | Turkey | Cyprus |
|----|---------|-------|--------|--------|--------|--------|--------|
| 0 | 1,57 | 2,43 | 1,60 | 1,76 | 0,60 | 0,45 | 2,76 |
| 00 | 1,40 | 1,60 | 2,18 | 1,43 | | 1,20 | |
| 01 | 1,66 | 3,23 | | 2,39 | 1,09 | | 3,25 |
| 02 | 5,30 | 2,60 | 1,04 | 2,73 | | | 3,20 |
| 03 | 0,87 | 2,38 | | 2,42 | 1,40 | | 10,10 |
| 04 | 0,87 | 3,48 | 0,83 | 1,70 | 0,55 | 0,41 | 2,54 |
| 05 | 2,90 | 1,27 | 3,56 | 1,54 | 0,71 | 0,23 | 2,29 |
| 06 | 0,91 | 1,93 | 2,69 | 1,37 | 0,72 | 0,59 | 1,55 |
| 07 | 2,20 | 2,23 | 2,77 | 1,61 | 0,90 | | 3,39 |
| 08 | 0,96 | 1,44 | 2,83 | 4,05 | | 0,73 | 6,75 |
| 09 | 2,78 | 0,83 | 1,16 | 2,36 | 1,39 | | 8,74 |
| 11 | 4,40 | 0,08 | 0,51 | 0,53 | 0,66 | 0,29 | 20,09 |

Sources: Statistics Yearbook, UN, 1996, Conseil Supérieur des Douanes (Lebanon)

*: year 1994

The "Revealed comparative advantage for exports" and the "Revealed comparative advantage for imports" have been consolidated yielding to an ambiguous chart with very few (+) signs, indicating comparative advantage, a certain amount of (-) signs, indicating comparative disadvantage, as well as numerous cells with question mark signs (???) indicating ambiguous results.

The results are as follows:

1. The first remark to be deduced from the "Revealed comparative advantage" is that for many sub-sectors we cannot present clear conclusions. This is because of the agglomeration of several sub-sectors under broad categories. The data was based on the United Nations statistics for the year 1995 (except for Israel and Syria where the data dates back to 1994). The data are classified according to the SITC (Standard International Trade Classification). Lebanon, up until 1995 was still using the harmonized classification. So the categories were recalculated for the categories to fit into the SITC standards.
2. For certain sub-sectors data is missing. An extrapolation of these sub-sectors starting from main headings was hazardous due to the potential omission of moderately important headings, which might have altered the final estimated result.
3. The results on Lebanese are ambiguous, it seems that the country has a comparative advantage in the "sugar and affiliated products" and "nutrition and animals" sectors, but has a comparative disadvantage in the livestock sub-sector.
4. Turkey has a global comparative advantage in the sector as a whole. The advantage Turkey has in certain areas (cereals, fruits and vegetables, sugars and others) is also a disadvantage that other countries in the reference area have like Jordan, Cyprus, and Egypt.

Table 3.8 Conclusions from calculation of RCA

| | Lebanon | Egypt | Syria* | Jordan | Israel* | Turkey | Cyprus |
|----|---------|-------|--------|--------|---------|--------|--------|
| 0 | ? | - | ? | - | - | + | - |
| 00 | - | - | ? | ? | | ? | |
| 01 | ? | - | | ? | ? | | - |
| 02 | ? | - | ? | ? | | | ? |
| 03 | ? | - | | - | - | | - |
| 04 | ? | ? | + | - | ? | + | - |
| 05 | ? | - | ? | - | ? | + | - |
| 06 | + | - | - | - | ? | + | - |
| 07 | ? | - | ? | ? | ? | | - |
| 08 | + | ? | - | ? | | - | - |
| 09 | ? | ? | - | - | ? | | - |
| 11 | ? | | ? | + | ? | - | ? |

Sources: Statistics Yearbook, UN, 1996, Conseil Supérieur des Douanes (Lebanon)

*: year 1994

The general inconclusiveness of the results led to a closer analysis of each sub-sector. Consequently, the Balassa method was applied for particular products shown on table 3.8.

Table 3.9: Detailed revealed comparative advantage

| | Lebanon | Egypt | Syria* | Jordan | Israel* | Turkey | Chypre |
|-------|---------|-------|--------|--------|---------|--------|--------|
| 0 | ? | - | | - | | + | - |
| 001 | - | - | | | | | |
| 0012 | na | | + | + | | + | |
| 00121 | na | | + | + | | + | |
| 01 | ? | - | | | | | - |
| 011 | ? | - | | | | | - |
| 02 | ? | - | | | | | |
| 022 | ? | - | | - | | | |
| 023 | ? | - | | + | | | + |
| 024 | ? | | | | | | |
| 025 | - | | | + | + | - | |
| 029 | + | | | | | | |
| 03 | ? | - | | - | - | + | - |
| 034 | + | - | | - | - | | |
| 036 | ? | | | | | | |
| 04 | ? | | + | - | | + | - |
| 041 | + | - | | | | + | |
| 042 | ? | + | - | - | | - | |
| 043 | na | | - | - | - | + | - |
| 044 | ? | - | - | - | | + | - |
| 045 | ? | + | | | | - | |
| 046 | na | - | - | | | + | |
| 048 | - | | | - | - | + | - |
| 05 | ? | - | | - | | + | - |
| 054 | ? | | + | | - | + | |
| 0541 | ? | | + | - | | - | |
| 0542 | ? | - | + | - | | + | |
| 0544 | - | | + | + | | | |
| 0545 | na | + | + | + | | - | - |
| 05451 | ? | + | + | | | | |
| 0546 | na | + | | + | | + | |
| 056 | ? | + | | | - | + | |
| 057 | - | | | - | | + | |
| 0571 | + | + | | | + | | |
| 0572 | na | | | | + | + | + |
| 0575 | - | | | | | + | |
| 0576 | na | | | | | + | |
| 0577 | - | | | | | | |
| 0579 | na | | + | - | | | |
| 058 | - | | | | | + | |
| 0585 | - | | | | + | | + |
| 06 | + | - | - | - | | + | - |
| 061 | + | | - | - | | + | - |
| 062 | ? | | | - | - | + | - |
| 07 | ? | - | | | | + | - |
| 071 | ? | | - | | | | - |
| 072 | + | | | | - | - | |
| 073 | ? | | | | - | + | |
| 074 | + | | - | - | | + | |
| 075 | - | | | - | - | | - |
| 081 | + | + | - | | | | - |
| 0813 | + | - | - | - | | | - |
| 0819 | - | | - | | - | | - |
| 09 | ? | - | - | - | | + | - |
| 091 | na | | | | | + | |
| 098 | na | | | | | + | |
| 1 | na | | | | | - | - |
| 11 | ? | | | + | | + | |
| 111 | ? | | | + | | + | - |
| 112 | ? | | | + | | | |
| 1121 | ? | | | + | | | |
| 1124 | ? | | | | | | |

Source: Calculated by the researchers

The results are as follows:

- Turkey has a positive comparative advantage on all the products with the exception of butter, rice, cocoa, beverages, onions, and potatoes.
- Cyprus has a comparative disadvantage on most of the products except for butter, oranges and canned fruits.
- Jordan has comparative advantages in the following sectors: Vegetables, goats and sheep, certain dairy products, and beverages. Comparative disadvantages include: Fish and fish based products, cereals, Fruits and vegetables (with the exception of tomatoes and onions), the "coffee, tea, cocoa and spices" sector, and animal nutrition sub-sector.
- Egypt has a comparative advantage in rice and for vegetables and their preparations. But suffers a comparative disadvantage in the following sub-sectors: Lianimals, meat and their preparations, dairy products, fish and their preparations, sugars and affiliated products.

Lebanon

Despite a larger degree of sub-sector detail, many uncertainties remain for the Lebanese agro-food sector.

There is no way of telling exactly if there is or is not a comparative advantage in fresh meat since the Balassa method is inconclusive, however for meat preparations a lot can be done if the products on the market can be diversified with special stress on the compatibility with international norms therefore targeting these products to both local and international markets.

Concerning the dairy products two points of views exist. The first, based purely on economical figures, suggests that there is a strong rivalry for the internal market and there is a big problem concerning the raw materials as well as a large deficiency in the supply of fresh milk versus the demand for that product. This point of view also stresses that there is no possibility for exporting these goods, since Lebanese dairy specialties - such as Labneh or other local cheeses - are not known internationally and may lack standard norms to conform to. Another view, with a more market directed feel, imply that despite the deficiency of fresh milk a very large company has just entered the field with perspectives of important daily production which could serve as an incentive - should this project work - for other companies to enter this market creating thus even more competition leading to price decrease and quality enhancement. Also, the latest effort by the American government to promote small scale dairy farming through introducing of a new breed of heavy producing cows and the proper training for farmers, might pay off with an organized dairy structure which assembles all these small farmers into a large unit provided the process is not influenced or interrupted by political, religious or sectarian factors. On the other hand, the world seems to be accepting more and more ethnical differences which sets the conditions favorable enough for marketing certain Lebanese dairy specialties. However, export should be oriented to non-Arab countries because these countries tend to produce the same products and have strong market protection rendering the infiltration of Lebanese products difficult.

The fresh, frozen or chilled fish category has a comparative advantage vis a vis other nations in the reference area. Other preparations of fish do not enjoy the same fate and need a lot of investment before bringing an actual market into shape. Export will only be an end of the day result after the

establishment of the said market and again, focusing on international standards will be a must to be able to challenge highly competitive markets.

Cereals and cereal based preparations show a marked comparative disadvantage except for wheat, which enjoys a comparative advantage mainly because other nations in the reference area are not producers. However, since the basis of the Balassa method rests on comparisons with specified countries and in a specific timely framework this result is not to be disregarded even if it rests on shaky grounds.

Concerning vegetables and fruits, even though the table only offers question marks mainly due to lack of comparative data, assumption is more towards a certain advantage. Comparison with the countries of the reference region shows a less-at-ease situation than the comparison with third world countries as a whole. It is important to mention that fruits and nuts, fresh or dried show a comparative advantage especially fresh apples and grapes. Lebanese farmers seem to have recovered from the bad reputation they suffered a few years back after the export of rotten apples to Libya, and seem to have understood that what's more important than shipping an important amount, is to keep on shipping that amount. Nuts are also an interesting export product, even when the raw materials are coming from other countries, however it is to point out that Lebanese nut producing companies failed to market their products in international markets despite a very decent level of quality for several reasons which include the fact that the major Lebanese companies lack a proper advertising and communication budget and that their packaging, labeling and naming (most companies bear the founder's family name) are only appropriate for certain specified markets. Another reason is the presence of very important lobbies already ruling over international market. Another important factor which hindered Lebanese nut products to become a larger industry is the family type business these firms are characterized by in order to pass on the profession's secret to a next of kin, knowing that behind every nut production factory in level a certain secret recipe exists. All these factors amounted that this particular industry was limited to the form of presents which Lebanese businessmen exchange with their partners while on business trips. However, a very important glimpse of hope lies behind these facts, which is the scattered Lebanese born or descendant citizens all around the world, and an effort should be done to market this product with this population. One of the most emerging markets of the leading Lebanese company in the field is Brazil. Preparations coming from the fruit and nut category are still at a disadvantage but potential exists for development, especially if the canning factories enhanced the research and development departments in order to adapt them to new market trends and ever changing consumer tastes noticing that the Lebanese demand for products is sophisticated.

Sugars, sugar preparations and honey present a comparative advantage however, it must be kept in mind that the government subsidizes sugar cane, and that this subsidy should be accounted for and most of all should be canceled if trade barriers were to fall. And just like the case of cereals the advantage mainly stems from the fact that other nations compared to are not producers. Carob trees production should be enhanced, not only because they are the producers of the raw materials for molasses but mainly because of the medicinal use of their oil, something which Lebanese farmers are unaware of.

The coffee, tea, cocoa, spices and manufactures thereof category shows that cocoa, tea, and mate show a comparative advantage whereas chocolate deserves to be developed.

Feeding stuff for animals show an advantage for Lebanon. Whether or not this advantage could be used for export is debatable.

Beverage and tobacco seem to present an ambiguity in the analysis of their data. However, since the most important aspect of a beer's taste is the freshness of the brew, then it is not odd to see the Lebanese consuming the local beer. However export seems to be out of the way, since Lebanon is surrounded by mostly Moslem societies and export towards European or American markets is obviously to be disregarded. The Lebanese wines seem to be establishing a strong reputation in international markets, with some products winning awards. However, since the industry's competitiveness is only limited to few companies, we can only hope that the situation will be - just like a good wine - "getting better with time". As not concerning tobacco would be that, even though it is a subsidized crop by the government, this operation aims mostly at keeping an interest in the agricultural sector, more than it aims at commercial or sustainable success.

Notes:

It is important to notice that comparative advantage and disadvantage are relative to specific reference areas, in this case, it includes the following countries: Lebanon, Egypt, Syria, Jordan, Israel, Turkey, and Cyprus, and specific to a certain time periods. Therefore countries which are beginning to grow will be misinterpreted. Moreover, the figures fail to take into consideration the government subsidies which are supporting and boosting the competitiveness of these products. Governments could choose to subsidize certain non profitable productions due to social (in order to avoid unrest resulting from rural urban migration), political (for food security, it is known that Japan produces wheat at six times the international price for that reason), or economic reasons.

Table 3.10 Detailed titles of chapters and sub-chapters of agro-food product classification

| Section | Division | Sub-division | Title |
|---------|----------|--------------|---|
| 0 | | | Food and live animals |
| 0 | 00 | | Live animals other than animals of division 03 |
| 0 | 00 | 001 | Live animals other than animals of division 03 |
| 0 | 01 | | Meat and meat preparations |
| 0 | 01 | 011 | Meat of bovine animals, fresh, chilled or frozen |
| 0 | 01 | 012 | Other meat and edible meat offal, fresh, chilled or frozen (except those unfit or unsuitable for human consumption) |
| 0 | 01 | 016 | Meat and edible meat offal, salted, in brine, dried or smoked, edible flours and meals of meat or meat offal |
| 0 | 01 | 017 | Meat and edible meat offal, prepared or preserved |
| 0 | 02 | | Dairy products and bird's eggs |
| 0 | 02 | 022 | Milk and cream and milk products other than butter or cheese |
| 0 | 02 | 023 | Butter and other fats and oils derived from milk |
| 0 | 02 | 024 | Cheese and curd |
| 0 | 02 | 025 | Eggs, bird's, egg yolks, fresh, dried or otherwise preserved, sweetened or not, egg albumin |
| 0 | 03 | | Fish, crustaceans, mollusks and aquatic invertebrates and preparations thereof |
| 0 | 03 | 034 | fish, fresh (live or dead), chilled or frozen |
| 0 | 03 | 035 | fish, dried, salted or in brine; smoked fish; flours, meals and pellets of fish for human consumption |
| 0 | 03 | 036 | crustaceans, mollusks and aquatic invertebrates, whether in shell or not, fresh (live or dead), chilled, frozen, dried, salted or in brine; crustaceans, in shell, cooked, whether or not chilled, frozen, dried, salted or in brine, flours, meals and pellets |
| 0 | 03 | 037 | fish, crustaceans, mollusks and other aquatic invertebrates, prepared or preserved, ness |
| 0 | 04 | | Cereals and cereal preparations |
| 0 | 04 | 041 | wheat (including spelt) and meslin, unmilled |
| 0 | 04 | 042 | rice |
| 0 | 04 | 043 | barley, unmilled |
| 0 | 04 | 044 | maize (not including sweet corn) unmilled |
| 0 | 04 | 045 | cereals unmilled (other than wheat, rice, barley and maize) |
| 0 | 04 | 046 | meal and flour of wheat and flour of meslin |
| 0 | 04 | 047 | other cereal meals and flours |
| 0 | 04 | 048 | cereal preparations and preparations of flour or starch of fruits or vegetables |
| 0 | 05 | | Vegetables and fruits |
| 0 | 05 | 054 | vegetables, fresh, chilled, frozen or simply preserved, roots, tubers and other edible vegetable products, ness, fresh or dried |
| 0 | 05 | 056 | vegetable, roots and tubers prepared or preserved, ness |
| 0 | 05 | 057 | fruit and nuts (not including oil nuts), fresh or dried |
| 0 | 05 | 058 | fruit, preserved and fruit preparations (excluding fruits juices) |
| 0 | 05 | 059 | fruit juices (including grape must) and vegetable juices, unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter |
| 0 | 06 | | Sugars, sugar preparations and honey |
| 0 | 06 | 061 | sugars, molasses and honey |
| 0 | 06 | 062 | sugar confectionery |
| 0 | 07 | | Coffee, tea, cocoa, spices and manufacturers thereof |
| 0 | 07 | 071 | coffee and coffee substitutes |
| 0 | 07 | 072 | cocoa |
| 0 | 07 | 073 | chocolate and other food preparations containing cocoa ness |
| 0 | 07 | 074 | tea and mate |
| 0 | 07 | 075 | spices |
| 0 | 08 | | Feeding stuff for animals (not including unmilled cereals) |
| 0 | 08 | 081 | feeding stuff for animals (not including unmilled cereals) |
| 0 | 09 | | Miscellaneous |
| 0 | 09 | 091 | margarine and shortening |
| 0 | 09 | 098 | edible products and preparations, ness |
| 1 | | | Beverages and tobacco |
| 1 | 11 | | Beverages |
| 1 | 11 | 111 | Non-alcoholic beverages |
| 1 | 11 | 112 | alcoholic beverages |
| 1 | 12 | | Tobacco and tobacco manufactures |
| 1 | 11 | 121 | tobacco, not manufactured, tobacco refuse |
| 1 | 11 | 122 | tobacco, manufactured |

Sources: Conseil Supérieur des Douanes

CHAPTER IV

PARTICIPATORY RAPID APPRAISAL IN THE REGION OF BAALBEK-HERMEL

The objective of the Participatory Rapid Appraisal (PRA) is to identify the problems facing the farmers and determine the willingness and the potential to cooperate with the industrialists. The report is based on informal interviews conducted with the following:

- Local Development Community Committees (LDCC) in the communities of Hermel, El-Qaa' (which includes three separate villages), Nabi Othman, Laboueh, Irsal and Baalbek in the region;
- Chief Technical Advisor and staff members of the United Nations Development Program "Support to the Regional Development Program in Baalbek-Hermel";
- Members of the Program who initiated Local Development and Credit Committees,
- Program Local Committee in the region.

I. General Characteristics

The family size in the Baalbek- Hermel region is high averaging 5 members per family versus 4.7 for the national averages. Families under the poverty line are larger in size than middle and upper income families. This is attributed to a higher number of family members including number of children.

The population of the region is young. It is estimated that 60% of the residents are below the age of 30 years, and more than 30% are below the age of 15 year, the average number of children per family amounts to around three.

Slightly more than half of the population and more than half of the people living under the poverty line are females. As a result of the high number of children, the dependency ratio of families in the region is high.

Although primary enrollment rates in the region are high, school drop-out rates after the elementary level is also high. Illiteracy in Baalbek- Hermel is higher than the national average and particularly for older people and women.

On average, each family has around two economically active family members. Economic activity starts to decline after the age of 35 years; after the peak years between 25-34 years of age. The major occupational categories in the region are artisanat and handicraft work, skilled employment in the agricultural sector, and the military.

The major sources of income in the region are agriculture, animal husbandry and employment in the public sector, especially in the military forces.

Agriculture in the Baalbek- Hermel is a "family business" where women and children contribute to the production process as unpaid laborers. Thus, the family income earned from selling agriculture produce is definitely substantive for the survival of the family.

A recent field survey carried out in the region revealed that expenses related to food and education consume the highest proportion of family expenditure structure and exert the highest burden on families.

II. Land Ownership and Agricultural Equipment

The majority of the farmers in the region are small-scale farmers who own fragmented areas of agricultural land.

| Size of land | Farms repatriation |
|-----------------------|--------------------|
| Less than 3 hectares | 50% |
| 3-7 hectares | 25% |
| 7-20 hectares | 20% |
| More than 20 hectares | 5% |

Around 50% of the farmers in the region own less than 3 hectares, 25% of them own between 3-7 hectares, and only 5% own more than 20 hectares. It is observed that the size of the farm depends on the typology of the land. In other words, larger farms are generally located in the mountains and in non-irrigated areas. Two other factors that affect the ownership of the land are the lack of adequate legislation that govern ownership rights and the fragmentation of the land as a result of inheritance laws.

Agricultural machinery, equipment, and cultivation practices used are still primitive. Although farmers in the region are aware of the importance of using modern cultivation techniques and improved machinery, they are not able to acquire such technology due to the lack of investment capital. Two other factors that discourage the adoption of technology are the lack of agricultural roads and the cheap labor cost used in agriculture.

III. Main Cropping Activities and Irrigation practices

The majority of cultivated land in the region is not irrigated. In fact, the total irrigated area of the cultivated land in the region is estimated at one third of total cultivated area in Baalbek-Hermel region.

The region which is generally arid and semi arid, with an average yearly rainfall of 200 sq. irrigation is primarily dependent on spring water. Only 10% of the irrigated cultivated areas use underground water.

The majority of non-irrigated cultivated land is planted with cereals and grains, the types of crops that are characterized by low returns. A lower proportion of cultivated land is planted with fruit trees, especially in the Eastern sides of the mountains. Vegetable plantation is limited because of the lack of irrigation water. In higher altitude however plantation of fruit trees (apples, pears, grapes) and vegetables exist.

Seasonal cultivation is predominant in most of the villages of the region, especially for the production of cereal and vegetable crops. The UNDP which supported Baalbek-Hermel Regional Development Program has been assisting in the introduction of new varieties of cereals and grains that yield higher output. The Program has also been trying to introduce, in cooperation with international and national agricultural research institutes, new high value agricultural crops (such as exotic fruit trees). However, the adaptation of these crops in the region is still in its early phases.

In general, farmers estimated the production patterns of the region as follows:

Table 4.1 Estimated production patterns of the Baalbek-Hermel region

| Type of Crop | Estimated % of cultivated land |
|--------------|--------------------------------|
| cereals | 28% |
| fruit trees | 23% |
| tobacco | 15% |
| potato | 14% |
| legumes | 10% |
| others | 10% |

Source: Participatory Rapid Appraisal (PRA) Survey Result

Moreover, the agricultural production pattern in the region is influenced by the typology of the land, availability of water resources, type of soil, and other factors. These factors have prevented the unification of production.

Concerning the irrigated cultivated area, the irrigation systems used are primitive and distribution is unfair. The Government has been planning to execute a major irrigation scheme, funded by the World Bank, for the region. The UNDP has also been executing several irrigation/ potable water network schemes.

IV. Crop Marketing

The major constraint facing farmers' in the region is the lack of a marketing policy for their agricultural produce which make them dependent on local intermediaries. A field survey carried out in 1996 revealed that 97% of the farmers in the region consider marketing a severe constraint to their agricultural production cycle.

In general, the marketing process lacks transparency hence resulting in the exploitation of the farmers.

The problem can be summarized as follows:

- 1- The intermediaries who take the agricultural produce from farmers do not pay until the goods are sold.
- 2- The intermediaries pay the farmers whatever they claim to have been the actual selling price.
- 3- Most of the time, the intermediaries who often pay in installments, do not pay back the full amount.
- 4- In the case the produce is not sold, the farmers have to bear the full costs.

V. Agricultural Extension Services

The main supplier for agricultural extension services in the Baalbek-Hermel region are the agricultural engineers employed by the sellers of agricultural inputs (seeds, fertilizers, etc.). The total lack of extension services by the specialized ministries has posed many problems for the farmers who have been sometimes compelled to buy and use unnecessary material.

VI. Constraints

There are seven constraints which affects the performance of the sector in Baalbek- Hermel:

- a) One of the main limitations facing agricultural production in the Baalbek- Hermel region is the *inadequacy and misuse of the irrigation infrastructure*. In fact, the distribution of irrigation water is unfair and monopolized by few farmers. Primitive earth canals used for irrigation purposes cause water leakage. Farmers have suggested the rehabilitation of existing canals, the construction of new ones, adoption of new irrigation schemes such as drip irrigation, and the construction of catchment pools.
- b) *Inadequate roads* used to transport agricultural outputs and machinery equipment have increased transportation costs and impeded the adoption of modern technology.
- c) The third constraint facing farmers is the *lack of access to proper marketing channels*. Farmers have suggested the following: one, to be able to sell directly to the agro-food industries or other end users, hence overriding the intermediaries; two, to have the government protect them from the exploitation of the intermediaries by enforcing contracts; and three, to be able to establish linkages between them and agro-food industries.
- d) The *limited access to modern agricultural equipment and machinery* has prevented farmers from lowering production costs and from producing standardized products.
- e) The fifth constraint is the *lack of capital/credit*. Farmers have no access to credit/ capital because they do not meet the conditions set by commercial banks. Although some credits were previously provided by the UNDP, the loans were not sufficient to satisfy the needs of all the farmers in the region, the size of the loans were small (equal to \$1,200), and the interest rates of 12% were considered high. Farmers believe that the Government should provide the appropriate funds to be used for modernizing the production methods. Although the Government is planning to establish an agricultural bank whose objective is to provide loans to small farmers, this has not materialized. The possibility of providing in-kind loans is a potential alternative.
- f) The sixth constraint is the *lack of agricultural extension programs* in the Baalbek-Hermel region. The diversified production methods in the region and the lack of expertise in the Ministry of Agriculture has hindered the availability of such services. Although the UNDP has been providing agricultural extension services and has been trying to reinforce the technical ministry units in the region, these efforts did not cover the whole region. The extension seminars sponsored by local and international NGO were conducted unsatisfactory. It should be noted that the diversification of production in the region, in addition to the lack of sufficient expertise within the Lebanese Ministry of Agriculture, has hindered the availability of such services in the past.
- g) The absence of strong and organized *agricultural associations and cooperatives* has reduced the role of the agricultural sector in the economy and the Lebanese society at large. Such associations and cooperatives are important for organizing and mobilizing the community. The UNDP, along with the government of Lebanon, plan to assist in the mobilization of the local farming communities with a particular focus on the formation of agricultural cooperatives. This

type of organization would then intervene with the private sector to establish a kind of "polyvalent industry" that will be able to take all the agricultural output of the region, industrialize it, and sell it in the local market.

VII. Possibility of Shifting to New Production Pattern

Farmers are willing to shift to other production patterns provided that the marketing channels are properly assessed and that the costs related to such shifts are affordable.

Moreover, farmers are in favor in dealing directly with the agro-food industrialists. Such cooperation would be based on explicit clear conditions favorably regulated by an external agency. Some farmers suggested that such cooperation should be beared on partial financing for production by the industrialist, commitment to a fixed price, and provision of agricultural extension services. Under certain conditions, farmers are willing to sign contracts with the industrialists.

VIII. Linking with Industrial units

Since most of the agricultural output produced by the farmers are not suitable for processing by the agro-food industries, there is an urgent need to establish a link between farmers and industrialist to overcome such a constraint. Hence local representative suggest that the following strategy to be adopted:

- upgrading irrigation schemes to enlarge the areas of irrigated land, hence increasing the size of production;
- encouraging investment through the provision of loans;
- introducing strategic crops, of high output value and which are marketable, to be included within the existing agricultural calendar;
- the organization of farmers within production units such as cooperatives, and assisting these units to take part in the marketing, extension services, and other initiatives that would upgrade the agricultural production of the farmers;
- the intervention of the government on issues related to administration, tax revenues, agricultural import and export, competitiveness in local output prices, and others.

IX. Conclusions

The lack of competitiveness of agricultural products in the Baalbek-Hermel region are due to the following:

- a) the lack or minimal existence of irrigation water;
- b) the lack or minimal existence of access to credit facilities;
- c) the lack of proper and effective marketing channels;
- d) the lack of organizations on the community level that would mobilize and organize farmers;
- e) the poor structure of existing cooperatives and other structures for cooperative work;
- f) the lack of an institutional regulatory mechanism that regulates the relationship between farmers and industrialists;
- g) the weak preparedness of industrialists to consume the total agricultural output produced by farmers;
- h) the lack of reinforcement of the agricultural credit and other policies set by the government.

There is a general preparedness among farmers to integrate and coordinate with industries. This preparedness, however, is subject to several preconditions that should be established both by the state, the farmers, and the industrialists.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

This chapter is composed of two sections:

- Section A presents a summary of the major findings of the research project.
- Section B discusses the policy recommendations for the government, agro-food industrialists, and the farmers.

I. Conclusions

In brief, the following observations and findings are made with respect to:

1. The economy and the agricultural sector
2. The agricultural production system
3. The agricultural marketing operations
4. The agro-industrial production operations
5. The agro-industrial export marketing operations
6. The government policies
7. The regional and international developments and changes

1. The Economy and The Agricultural Sector

- The service sector dominates both the agricultural and the industrial sector in terms of its contribution to GDP and employment.
- Agricultural trade performance, as revealed by the trade figures, has declined. Agricultural exports have decreased and imports have soared, reflecting not only the failure of the domestic production system to keep pace with local demand but, also, the lack of long-term agricultural strategy.
- The relatively high degree of openness in trade and the dependency on imports to secure food products for domestic consumption creates serious implications for Lebanon's agricultural sector; in other words, it creates risks for the country and makes it vulnerable to external factors - such as increases in prices of primary commodities, inflation rates, unstable political relationships, and fluctuating exchange rates.
- Although the balance of payments has generally shown a surplus through expatriate transfers, yet such income sources are vulnerable and should not be relied on. Hence the development of

productive sectors such as agricultural and agro-food is crucial to ensure long term growth, to provide foreign currency earnings, and to deal with socio-economic problems.

- Rather, by exerting more efforts on developing the agricultural and agro-industrial sectors, the major socio-economic problems facing the country can be reduced and, most importantly, adequate and sustainable economic growth can be achieved.

2. The Agricultural Production System

- The Production system is constrained by two major factors:
 1. Labor intensive technology in almost all stages of production which include: cultivation, pruning, weeding, fertilizers application, spraying, irrigation, and ploughing.
 2. Small-sized land, partly due to the division of the estate among all heirs, prevent economies of scale advantages.

The result of these traditional practices is that production resources are not allocated efficiently in the agricultural sector.

- Although the diversified resource base permits the production of good variety of food crops, yet this diversity has not been translated into good quality agricultural produce. Part of the explanation could be due to the lack of sound agricultural policies that did not allow such diversity to materialize. Hence, there is ample opportunity to increase productivity and profitability through the better management of production resources.
- The water management system is considered highly inefficient. In fact, the irrigation system based either on furrow and basin flooding or on digging wells is considered inefficient. Moreover, water theft is common practice along the borders of major rivers.
- Land tenancy and share cropping contracts are short term oriented leading to land abuses.
- Agricultural inputs such as pesticides sold to farmers are often of bad quality due to lack of effective regulations. Moreover, monopoly power is commonly exercised by the major importers.
- The lack of credit facilities for farmers is the most critical problem constraining the efficient operation of the sector. The implications are that low capital availability and accessibility limit farmers' adoption of new equipment and machinery that enhance production.
- Poor research and development, -extension services, and market information result in less than optimal production decisions hence, increasing risk and uncertainty in the production process.

3. Agricultural Marketing Operations

Concerning the marketing aspects of agricultural and agro-food products, the following observations were examined:

- There are five major operators involved in marketing agricultural and agro-food products: farmers, Dammans, commission agents, secondary wholesalers, and retailers.
- Three types of marketing channels have been frequently used by farmers:
 - (i) direct sales to Dammans;
 - (ii) sales to exporters; and
 - (iii) sales through commission agents and to exporters.
- Generally, sales to Dammans are on a cash basis, whereas sales to exporters and commission agents are on consignment basis. The major implication of widespread consignment selling is that farmers end up providing a significant part of the trade finance for domestic and international agricultural trade in Lebanon. Dammans, were found to play an important role in the marketing system, linking farmers otherwise isolated, providing cash through cash purchases, and representing a market outlet for farmers not wanting to undertake marketing operations. Also, commission agents were found to perform important marketing operations, including assembly, bulking, selling, and collecting market information.
- On the other hand, the lack of strong farmers' cooperatives relegate farmers to a secondary position in the bargaining chain. Since farmers are stuck between strong distributors of agricultural inputs and powerful wholesalers, they are often unable to get a fair price for their products.
- The lack of contract enforcement in terms of price and quality between the farmers and the intermediaries is increasing the costs of doing business.
- Rough harvesting, grading, packing, and handling result in product bruising and damage, hence reducing agricultural marketability, and leading to lower prices in the market.
- The lack of an adequate transportation network and telecommunication services, sparse market information on prices, demand, and supply result in farmers having an inadequate knowledge of the markets in which they operate. The implications are that the efficiency of the marketing system is severely constrained and risk and uncertainty associated with marketing are amplified.

4. Agro-Industrial Production Operations

- One of the most persistent problems is the lack of integration or even cooperation between the farmers and the industrialists. The result is that agricultural products are not compatible for processing by the agro-industries since they do not meet the required standards. A common example is sugar beets. Farmers irrigate the crop heavily in order to decrease its size thinking that it is a sure way to sell it to the industries. In fact, heavy irrigation leads to low concentration of sugar and that's precisely why the industrialists reject the crops.
- Another mean of receiving the raw materials is by importing it. A common problem is the high import tariffs on raw materials and the cumbersome bureaucratic procedure and persistent inefficiencies in the customs.

In general, the agro-industries is performing efficiently hence impeding its competitiveness. This is due to several factors which include the lack of the following:

- machine up-dating in the agro-industrial sector;
 - new production and marketing techniques;
 - innovation, Research and Development;
 - basic rural infra-structure; and
 - extension services and farmer's education.
- Most agro-food firms are production versus marketing oriented. In other words, there is more emphasis on production and less on meeting consumers' needs, creating new markets, and exporting. In fact, few possess ISO 9000 licenses.
 - A major challenge faced by industrialists is the lack of capital. More specifically, the cost of money is high ranging between 18 percent to 22 percent in Lebanese pounds and 12 percent and 14 percent in dollars and the loans are of short to medium term, not appropriate for undertaking long term capital investment.
 - With respect to infrastructure, the industry suffers from a high electricity bill, one of the highest in the region when measured per kw, weak transportation network, and expensive storage facilities.
 - There is weak scientific research and development program hence restricting innovations and improvements in the quality of agro-industrial products.

5. Agro-Industrial Export Marketing Operations

- The concentration of exports to few countries such as UAE, Saudi Arabia, Kuwait, Bahrain, and Syria exposes Lebanon's agricultural sector to risks and leaves it vulnerable to political and economic changes in the recipient markets.
- Agro-industrialists sell their products through commission agents in the recipient countries and hence they lack direct representation in the principal export markets. The implications are that market knowledge on changing market conditions, prices, and monitoring daily market activities are severely limited.
- There are no consumer or trade promotional campaigns aimed at developing export markets for Lebanese agricultural produce. In recent years, agricultural and agro-industrial exports have decreased, reflecting a decline in Lebanon's commercial position.
- Further, export marketing operations have been characterized by lack of organization and coordination between agro-industrialists, and by variation in the quality of Lebanese agro-industrial products reaching export markets. The lack of conformity in meeting international measures and standards is a fundamental export problem for the agro-food products.

- In an increasingly rigorous food safety and competitive environment, significant changes in market trends have been taking place in global markets, including: the conclusion of the GATT Agreement trade negotiations, the establishment of the World Trade Organisation (WTO), changes in consumers' consumption pattern due to an increase in health and environmental awareness, increase in the consumption of products grown by eco-friendly methods and through appropriate marketing channels. The implications are that agro-industrialists are required to make structural adjustments in their production and marketing practices to meet these international developments.

6. An Overview of the Government Policies

- The Government macro-economic policy has been favorable and provide the impetus for private sector initiative. For example, the stability of currency; the relatively low inflation rate, the relatively high economic growth, and the growing international confidence are, certainly, favorable and promising signs.
- However, government development policy has focused on promoting the service sector over the industrial and agricultural sectors. Such policy has resulted not only in diverting resources away from the agricultural and agro-industrial sectors but, also, in increasing the potential for imports.
- Government facilitatory policies and programs - such as research, development and extension services, and investments in infrastructural facilities - have been set without full regard to long-term development objectives. Extension services have been weak and stopped with the outbreak of political strife in 1975. On the other hand, extension services provided by private firms selling agricultural inputs to farmers have been entirely unregulated.

7. Regional and International Developments and Changes

- With the implementation of the GATT Agreement, protection and tariff barriers at the frontiers will have to be abolished. The implications are that imports will grow significantly. With the absence of clear agricultural policy and lack of competitiveness, Lebanon's agro-industrial sector, and through it the domestic market, will be seriously affected.
- The growth in health and environmental awareness will have implications on the agro-industrial sector. This will increase the demand for eco-friendly and fresh produce - which are increasingly regarded as essential food and not purely luxury. More intensive sales of agricultural and agro-industrial produce is made through chain stores which, in turn, are setting high quality standards for processed food produce.
- Also, globalization will foster greater interdependence and cross-border linkages between countries of the world, requiring these countries to liberalize their national markets, reduce trade barriers and custom duties in the belief that the international flows of trade, finance, and information will produce the best outcome for economic growth and human welfare. Hence this will, also, oblige countries with policies focusing on protecting and providing subsidies for their agricultural and agro-industrial sectors, to adopt liberalization policies that facilitate integration into new international economic realities on equitable basis and competitive terms.

II. Recommendations

This section presents the recommendations for the government, agro-industrialists, and the farmers.

1. Recommendations for the Government

In light of the problems facing the industry, the government is expected to act as a facilitator and promoter of an efficiently operating and competitive agro-industrial sector. Hence the government's functions should be limited to the following:

- (i) Provide the basic infrastructural needs such as water and electricity to farmers and agro-industrialists.
- (ii) Regulate both the agricultural and agro-food sectors to ensure that they meet certain quality standards.
- (iii) Provide institutional support in areas of credit, research and development, extension services, and market information.

A set of recommended policy measures include:

- 1. Upgrade the irrigation system which is based either furrow and basin flooding or on digging wells to more efficient and modern methods.
- 2. Manage the distribution of the existing water supplies to reduce theft and to guarantee equal access to water.
- 3. Implement irrigation plans previewed in the reconstruction plan in the Bekaa valley.
- 4. Reduce the price of electricity which is higher than most neighboring economies.
- 5. Eliminate the monopoly of imported agricultural inputs such as seeds, fertilizers, and equipment that is consequently increasing the costs of production.
- 6. Regulate the quality of agricultural inputs such as pesticides and agro-food products by setting minimum standards to avoid the distribution of bad/expired products.
- 7. Enforce quality control measures and standards on agro-industrial output destined for exports and ensure that these measures are respected. The objective here is to raise quality and reduce variation of the quality of agro-industrial exports.
- 8. Enforce the contracts between farmers and distributors and distributors and agro-industrialists hence decreasing the probabilities of cheating.
- 9. Consolidate, coordinate, and simplify product inspection functions currently undertaken by several ministries and agencies.

10. Create Government Export Credit Insurance. In other words, the government provides cover against political risk and facilitate and promote agro-industrial exports.
11. Ensure that agro-industrialists have secured access to competitively priced raw material for processing. This requires the government to revise its tax policy and reduce/eliminate import tariffs of raw materials needed for processing and machinery used by agro-industrialists, especially for those not available in the domestic market.
12. Simplify customs procedures and eliminate the inefficiencies and corruption in the customs.
13. Facilitate the bureaucratic requirement with respect to temporary entry procedure. This is concerned with claiming back the duties paid on imported raw materials used for producing exportable products.
14. Investigate the factors limiting the flow of funds to the sector. It may be well that a Government-backed loan guarantee program for agro-industrialist will encourage private banks to make finance available which, in turn, will improve the efficiency of the agro-industrialist production and marketing system.
15. Update and improve government research and development programs, whilst focusing on improving agricultural quality and developing new varieties that are consonant with the wants of agro-industrialists.
16. Provide incentives such as tax reduction or other incentives to firms investing a certain amount on Research and Development, acquiring advanced technologies, and/or obtaining technology licenses.
17. Re-establish the extension services to ensure that the research and development outcome is disseminated to the farmers with the objective to increase their productivity. The extension package may have the following functions component: development program to improve grading, packaging, and product presentation; educate farmers and show them how the new methods of proper quality grading and packing will increase their profits. This can be achieved by undertaking sorting, grading, and packing activities at the farm using portable equipment (as observed in some more advanced economies, e.g. USA, France, Netherlands, and the U.K.
18. Collect and publish information on the price, quality, and quantity of agricultural and agro-food products.
19. Encourage the creation of cooperatives by passing legislation that encourages membership.
20. Enhancing the competitive environment through updating and modernizing laws and regulations pertaining to the agro-industrial sector.

2. Recommendations for Agro-industrialists

Given the many challenges threatening the agro-food sector from high production costs, weak marketing networks, poor research and development, and lack of information, the sector best strategy is the following:

- (i) Focus on the premium end of the market
- (ii) Establish strong trade position in the export markets.
- (iii) Develop the potential of new markets for premium processed produce

Hence the industrialists must address aspects related to quality, price, range, volume, and distribution to strengthen their position. This, in turn, should be supplemented with choosing a suitable marketing approach, understanding better the changing market conditions and the marketing strategy of their competitors and, above all, identifying and satisfying consumers' tastes and preferences in the export markets.

A set of recommendations include the following:

1. Adopt a market leader strategy. Since the industry does not enjoy a large sectoral size neither a low cost structure to adopt a volume based strategy, the industry must adopt a market leader strategy to be able to compete. In other words, the strategy requires the firms to produce high quality and high premium goods to be able to differentiate its products and thus servicing the higher priced segments of the market.
2. Organize into an effective Association to strengthen their position in the domestic and export markets.
3. Increase export market development by enforcing standardized quality measures, grading, and packaging. This can be achieved through a national Exporters' Association.
4. Provide technical assistance and training to agro-industries to be able to meet international standards and requirements. This can be also achieved by the Exporters' Association which will undertake first hand visit to export markets to learn about the required quality standards and measures.
5. Enforce quality control measures and standards. In other words, enforce and apply Sanitary and Phytosanitary measures, and maintain good quality agro-industrial exports. Complying with international market quality measures and standards in processing, packaging, labeling, and continuity of supplies will assist not only in creating confidence in the Lebanese exports but, also, in setting the impetus for sustainable competitiveness in international markets.
6. Establish representation in the importing country. More direct and comprehensive representation in major markets allows agro-industrialists to follow the daily activities of the market, monitor the changing market conditions, promote consumer loyalty, launch promotion and publicity campaigns and oversee that the objectives therefrom are met. Also, such a presence may help agro-industrialists understand better the market requirements, variety prospects, their rivals' marketing strategies, and identify and capitalize on market opportunities. Agro-industrialists are required to collect timely information on market variables other than prices with a view to analyzing the market in a dynamic manner.
7. Create a national brand. Agro-industrialists must work on creating a national brand similar to those used by exporters from Cyprus (Cypria), Morocco (Maroc), and Israel (Jaffa, and Carmel). Creating a national brand should be supplemented with investment spending for advertising, labeling and packaging, focusing, inter alia, on promoting product quality, and increasing the consumer awareness of this quality. Creating a national brand is, therefore, important as it helps exporters build up brand image, and gives them the opportunity to stimulate and attract

consumers' loyalty. This, in turn, may help exporters plan for future marketing strategy based on differentiation, with quality being the basis of differentiation.

8. Continuously invest in human resources with the objective to increase productivity. Firms must set a long term strategy with respect to its workforce by investing in it. The key to the competitiveness of the firm is labor productivity.
9. Enhance training institutes specifically devoted to the agro-food sector. This is one of the means of increasing labor productivity.
10. Produce an environment in the factory that encourages workers and employees to participate and to suggest innovative methods of production. This is based on the fact that low level workers who have first hand experience in doing a job is able to come up with interesting and more efficient alternative in the production method.
11. Integrate backwards with the objective to produce agricultural inputs compatible for processing and to avoid the costs of the intermediaries, who sometimes tamper with the quality of the products, i.e. milk.
12. Set up in the Syndicate a list of distributors and suppliers who have cheated in order to warn other firms from using them and hence punish them indirectly.

3. Recommendations for farmers

1. Establish an operational structure or cooperatives whose objectives include the following:
 - (i) to strengthen the bargaining power of farmers. In many times, the farmers either do not get a fair price for their products due to weak bargaining power or because they are unable to check the final price sold by the intermediaries. Hence they take whatever the intermediaries gives them.
 - (ii) To set up a list in the cooperatives of suppliers and intermediaries who have cheated on one of the farmers in order to warn other farmers from using their services or goods and hence punish them indirectly.
2. Encourage the plantation of efficient plants in terms of yields and input consumption, especially genetically broad varieties which are drought resistant as well as varieties or plants which are efficient at energy conversion in the photosynthetic process.
3. Alternatively, encourage the plantation of strategic plants which are easily marketable like cereals, vegetables, and various livestock feeds
4. Another alternative is the plantation of exotic fruits, hence remedying the loss incurred by farmers due to price fluctuations.
5. Encourage the plantation of new varieties of grapes which can be processed in the wine industry.
6. Similarly, encourage the plantation of new types of potatoes that have higher yields rather than the old Spunta variety. This could be compatible with the potato chips market.

7. Encourage the plantation of cash crops, crops harvested prior to the main crop. These kinds of crops provide more money and have multi-farming practices.

4. Recommendations for the agro-industrialists, farmers, and the government.

A recommendation is proposed for all three parties simultaneously. However, two very close alternatives are suggested.

Alternative A:

1. Establish a partnership between the industrialists and the farmers with the objective to increase cooperation and integration hence making domestic agricultural inputs compatible for processing.
2. This partnership can take the form of a contract where the farmers produce the quantity, quality, and price that is acceptable to the industrialists.
3. On the other hand, the industrialists provide a guaranteed market for farmers' produce upon meeting the above agreed specifications.
4. The government's role is confined to supervise this partnership and intervene only when dispute emerge which could be due to the failure of meeting the quality agreed upon etc..
5. The partnership may entice the financial institutions in financing due to its synergy produced through cooperation which will reduce costs tremendously hence making the product more competitive.

Alternative B

A very close alternative is to create a Trade Advisory Council made up of *the Government, agro-industrialists, and farmers.*

1. The Council would be responsible for the following:
 - (i) setting common goals and creating better understanding of the problem facing its members, whilst focusing on expanding agro-industrial exports and optimizing foreign earnings potential;
 - (ii) it should have the authority and power to govern relations amongst its members, and to develop mutual conventions, payment terms, disputes, and quality control measures, etc..
2. Within the Council, committees including those on export management, logistics and promotion, etc. may be necessary to facilitate export market developments.

Annexes

ANNEX 1 METHODOLOGY

I- GENERAL METHODOLOGY, ENTERPRISE AND PRODUCT SELECTION CRITERION

A. Introduction

The study of the Lebanese agro-food industry necessitated a field survey among the enterprises operating in this sector. This survey was conducted in the context of a comparative study of this sector in Lebanon and the Middle East region (Syria, Jordan, Egypt, Israel and Palestine).

This part details the methodology of selecting the enterprises to be investigated, together with the criteria that were taken into consideration. This selection was undertaken in a rational way in order to obtain significant results and to reduce the margin of error. It should be noted that this selection was not based on a statistical sampling method, due to time and budget constraints.

B. Selection Criteria

Foreign Trade

The field survey among the Lebanese agro-food industries is the first step in the study of comparative advantages of this sector. Hence, it is evident that one of the criteria to be considered is the foreign trade statistics. In fact, the customs statistics revealed that the exports of the agro-food sector amounted to US\$ 64 million in 1995, representing around 9.68% of total exports. Meanwhile, the agro-food imports reached US\$ 572 millions, i.e., around 10% of total imports. Given these figures, it seems of great interest to analyze the exports structure in order to pinpoint at the leading products, and hence the agro-food sub-sectors that are already export-oriented.

Customs classification codes for agro-food products

| Chapter | Chapter Title |
|---------|---|
| 04 | Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included. |
| 07 | Edible vegetables and certain roots and tubers. |
| 08 | Edible fruit and nuts; peel of citrus fruit or melons. |
| 11 | Products of the milling industry; malt; starches; inulin; wheat gluten. |
| 15 | Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes. |
| 16 | Preparations of meat, fish, shellfish, and mollusk. |
| 17 | Sugar and sweet. |
| 18 | Cacao and preparation. |
| 19 | Preparation based on cereals, flour or starch. |
| 20 | Preparation of vegetables, fruit, nuts or other parts of plants. |
| 21 | Foodstuff preparation. |
| 22 | Beverages, alcohol and vinegar. |
| 23 | Residue and waste of food industries. |

The above table shows the 13 chapters of the customs classification codes of the agro-food products. The export of these products is not homogeneous. The following table shows the evolution of exports in US dollar, by chapter during the period 1993-1995, in addition to the share of each chapter as a percentage of total agro-food exports. The data pertaining to the year 1996 were not included due to the structural modifications adopted in the codification of customs classification, and consequently comparison with previous years would not be accurate. As to the data of 1997, the related statistics were not released yet when the survey was launched.

Distribution of agro-food products exports by chapter (1993-1995)

| Chapter | 1993 | Exports (%) | 1994 | Exports (%) | 1995 | Exports (%) |
|---------|--------------|-------------|--------------|-------------|--------------|-------------|
| | Exports (\$) | | Exports (\$) | | Exports (\$) | |
| 04 | 1,197,186 | 2.16 | 1,433,167 | 2.77 | 1,289,367 | 1.99 |
| 07 | 1,696,140 | 3.06 | 479,211 | 0.93 | 401,896 | 0.62 |
| 08 | 55,177 | 0.10 | 11,866 | 0.02 | 22,474 | 0.03 |
| 11 | 1,534,581 | 2.76 | 539,408 | 1.04 | 6,960,333 | 10.75 |
| 15 | 4,920,283 | 8.86 | 5,633,502 | 10.90 | 9,227,245 | 14.25 |
| 16 | 0 | 0.00 | 1,374,223 | 2.66 | 830,084 | 1.28 |
| 17 | 7,878,029 | 14.19 | 7,674,266 | 14.85 | 10,580,936 | 16.34 |
| 18 | 3,553,672 | 6.40 | 3,358,516 | 6.50 | 3,216,118 | 4.97 |
| 19 | 2,520,496 | 4.54 | 2,507,817 | 4.85 | 1,738,068 | 2.68 |
| 20 | 11,556,029 | 20.82 | 13,144,059 | 25.44 | 10,914,020 | 16.85 |
| 21 | 12,875,238 | 23.19 | 9,040,496 | 17.50 | 11,886,357 | 18.35 |
| 22 | 7,072,863 | 12.74 | 6,172,525 | 11.95 | 7,120,687 | 11.00 |
| 23 | 657,159 | 1.18 | 302,071 | 0.59 | 574,377 | 0.89 |
| Total | 55,516,853 | 100 | 51,671,127 | 100 | 64,761,962 | 100 |

The Lebanese exports of agro-food sector are concentrated in limited number of products. However, the share of these products as a percentage of total agro-food exports was relatively stable during 1993-1995.

Based on the results obtained through the analysis of the above table, it was suggested to focus on the study of the products included in the chapters 11, 15, 17, 18, 19, 20, 21 and 22. These chapters represent 95.19% of total agro-food exports, while the remaining chapters do not represent more than 3%.

Moreover, comparing the products included within the same chapters, some differences were noticed. In fact, it is more significant to select, among these products, those who are more export oriented. Annex A 1 shows the subdivisions of selected chapters into sub-chapters and then into products. This approach permits the identification of the leading products having export potentials in each chapter. The following table shows the results of the analysis developed in annexes:

Product Selection

| Code | Share of chapter / Total agro-food exports (%) | Code | Agro-food products | Share of product/ Chapter exports (%) |
|------|--|-------|--|---------------------------------------|
| 11 | 10.75% | 11.01 | Wheat or meslin flour | 87% |
| 15 | 14.25% | 15.07 | Soya-bean oil and its fractions | 90% |
| 17 | 16.34% | 17.00 | Suceries sans cacao | 90% |
| 18 | 4.97% | 18.00 | Cacao et ses préparations | 90% |
| 19 | 2.68% | 19.08 | Biscuits, viennoiseries | 80% |
| 20 | 16.85% | 20.00 | Preparation of vegetables, fruits, nuts or other parts of plants | 100% |
| 21 | 18.35% | 21.00 | Foodstuff preparation | 100% |
| 22 | 11% | 22.00 | Beverages, alcohol and vinegar | 100% |

The selected products in the different chapters (shown above) represent around 95% of total agro-food exports. Based on these products, the sub-sectors comprising the enterprises having higher priority to be selected, were determined.

Market share and size of enterprises

The second criteria was considered to refine the results of the selection based on the foreign trade statistics. In fact, according to the Industrial Census, the Lebanese agro-food exports represent merely 6% of total production recorded in this sector. Thus, the domestic market should be more stressed when analyzing the market share. However, due to the scarcity of reliable data concerning the domestic market, the study assumed that the size of enterprises would be considered as an indicator in determining its market share. The size of the enterprise and its market share were assumed to be positively correlated.

This assumption is based on two different sources:

An exhaustive list of enterprises registered in the Agro-Food Industry Syndicate permits of conducting a preliminary field survey. The questionnaire was sent by fax to around 70 enterprises, of which 25 were cooperative. The analysis of this preliminary survey showed that few big players control the market, e.g., 2 or 3 enterprises in the same sub-sector are controlling 70-90% of the market. Consequently, these big enterprises in each sub-sector have the highest priority in the selection process. These same enterprises were found to have the greatest export potentials and the highest number of employees.

Based on meetings with the Syndicate members, it was found that the largest enterprises in terms of number of employees have the highest market share and are more likely to be export-oriented. This has been further confirmed by the results of the industrial census, which shows that 7% of agro-food enterprises (largest) have 55% of total production of the agro-food sector.

C- Annex to the Selection Criteria

The following tables show the detailed steps in developing the selection criteria based on the foreign trade statistics.

These tables indicate the share of each product in total chapter export:

Chapter 11

| Code | Name | 1993 % des Export. | 1994 % des Export. | 1995 % des Export. |
|----------|--|--------------------------|--------------------------|--------------------------|
| 11-01-11 | Farine de blé dur et tendre | | | 52.11 |
| 11-01-12 | Farine (autre) | 77.91 | 46.36 | 26.6 |
| 11-01-31 | Farine de riz | 9.99 | | 8.4 |
| 11-01-41 | Farine de seigle, orge, avoine, maïs, millet et sarrasin | 7.95 | | |
| 11-02-31 | Blé concassé | | 42.49 | |

This subdivision shows clearly that three products constitute about 88% of total exports of the chapter. Hence, the enterprises that produce Farine & Blé Concassé will be selected.

Chapter 15

| Code | Name | 1993 % des Export. | 1994 % des Export. | 1995 % des Export. |
|----------|-----------------------------|--------------------------|--------------------------|--------------------------|
| 15-07-21 | Huile | | | 53.27 |
| 15-07-23 | Huile de tournesol | 4.18 | | |
| 15-07-25 | Huile de soja | 49.11 | 21.42 | 7.72 |
| 15-07-29 | Huile d'olive | 14.38 | 15.17 | |
| 15-07-41 | Autres huiles | 12.45 | 50.68 | 29.60 |
| 15-10-12 | Acides gras à base d'olives | 8.76 | 4.96 | |

The above table indicates that two sub-chapters (15-07 and 15-10) constitute around 91% of the chapter total exports. Hence enterprises manufacturing these products are selected:

Chapter 17

| Code | Name | 1993 % des Export. | 1994 % des Export. | 1995 % des Export. |
|----------|--------------------------------------|--------------------------|--------------------------|--------------------------|
| 17-01-29 | Sucres bruts et sucres roux (autres) | | | 17.66 |
| 17-01-39 | Autres sucres | | 5.65 | 11.72 |
| 17-04-00 | Sucreries sans cacao | 96.77 | 87.57 | 60.24 |

The two sub-chapters (17-01 and 17-04) represent 90% of total chapter exports. Hence, enterprises manufacturing these products are selected:

Chapter18

| Code | Name | 1993 | 1994 | 1995 |
|----------|--|---------------|---------------|---------------|
| | | % des Export. | % des Export. | % des Export. |
| 18-06-21 | Chocolat en blocs ou en plaques de 500 gr. et plus | | | 49.26 |
| 18-06-22 | Chocolat | 12.05 | 14.47 | 8.19 |
| 18-06-23 | Chocolat | 6.01 | 4.36 | |
| 18-06-31 | Sucreries avec cacao ne dépassant pas 3% en poids | 16.15 | | |
| 18-06-42 | Sucrerie avec cacao | 57.40 | 59.92 | 30.31 |
| 18-06-44 | Sucrerie avec cacao | 4.26 | 10.36 | 5.43 |

Only one sub-chapter (18-06) constitutes 94% of total chapter exports. Hence enterprises manufacturing these products are selected.

Chapter19

| Code | Name | 1993 | 1994 | 1995 |
|----------|--------------------|---------------|---------------|---------------|
| | | % des Export. | % des Export. | % des Export. |
| 19-03-00 | Pâtes alimentaires | 4.78 | 6.59 | 12.52 |
| 19-08-00 | Biscuits | | | 36.34 |
| 19-08-12 | | 30.73 | 75.27 | 30.94 |
| 19-08-14 | | | 4.36 | |
| 19-08-22 | | 52.72 | 5.91 | 6.58 |
| 19-08-24 | Autres | 4.94 | 5.83 | 7.57 |

Two sub-chapters represent 94% of total chapter exports. Hence, enterprises manufacturing related products are selected

Chapter 20

| Code | Name | 1993 | 1994 | 1995 |
|----------|---|---------------|---------------|---------------|
| | | % des Export. | % des Export. | % des Export. |
| 20-01-31 | Légumes et fruits conservés au vinaigre | | | 9.36 |
| 20-01-41 | Autres (Légumes et fruits conservés au vinaigre) | 7.46 | 13.55 | 7.15 |
| 20-02-21 | Légumes et fruits conservés sans vinaigre | 6.17 | 4.71 | 5.34 |
| 20-02-31 | Autres (Légumes et fruits conservés sans vinaigre) | 42.5 | 34.48 | 28.56 |
| 20-05-00 | Purées et pâtes de fruits, confiture ou gelées | | | 10.12 |
| 20-05-21 | Autres (Purées et pâtes de fruits, confitures ou gelées) | | 9.1 | 6.68 |
| 20-06-00 | Fruits autrement préparés ou conservés | | | 6.46 |
| 20-06-21 | Autres (Fruits autrement préparés ou conservés) | | 4.47 | |
| 20-07-29 | Jus de fruits ou de légumes non fermentés sans addition d'alcool (autres que pommes, oranges) | 7.28 | 7.64 | |
| 20-07-31 | Jus de fruits ou de légumes non fermentés sans addition d'alcool (avec sucre) | 11.13 | 14.04 | |

This chapter was taken as a whole as one under the name "canned food".

Chapter 21

| Code | Nomenclature | 1993 | 1994 | 1995 |
|----------|---|---------------|---------------|---------------|
| | | % des Export. | % des Export. | % des Export. |
| 21-04-12 | Sauces-condiments et assaisonnements composés | | 5.1 | |
| 21-05-14 | préparations alimentaires composites homogénéisées à base de légumes, plantes potagères et de fruits (soupes, potages, bouillons) | 7.57 | | |
| 21-07-51 | 07.51 | | | 50.67 |
| 21-07-52 | 07.52 | 6.93 | 9.12 | |
| 21-07-54 | 07.54 | 75.82 | 77.88 | 32.40 |

This chapter was taken as a whole as one under the name «sauces et potages».

Chapter 22

| Code | Nomenclature | 1993 | 1994 | 1995 |
|----------|--|---------------|---------------|---------------|
| | | % des Export. | % des Exports | % des exports |
| 22-01-11 | Eaux minérales | 10.21 | 15.14 | 12.42 |
| 22-02-11 | Limonades, eaux gazeuses aromatisées et autres boissons non alcoolisées | 10.97 | 9.59 | 16.76 |
| 22-02-21 | Autres (Limonades, eaux gazeuses aromatisées et autres boissons non alcoolisées) | 6.94 | | |
| 22-05-00 | Vins de raisins frais, moûts de raisins frais mutés à l'alcool | | | 20.33 |
| 22-05-21 | Vins de liqueurs et vins titrant plus de 15 degrés | | 5.03 | |
| 22-05-31 | Autres vins | 21.89 | 29.84 | 14.01 |
| 22-07-00 | Cidre, poiré, hydromel et autres boissons fermentées | | | 4.64 |
| 22-09-21 | Arak | 19.04 | 20.25 | |
| 22-09-31 | 09.31 | | | 15.07 |
| 22-09-32 | 09.32 | 16.93 | | |

This chapter was divided into two subchapters: "Alcoholic drinks" and "Soft Drinks". Hence all enterprises manufacturing related products will be taken into consideration.

Finally, the analysis of the above tables permits the selection of the preliminary list of sub-sectors that have the highest export potentials.

II. PORTER'S MODEL

The competitive advantage model of Porter attempts to explain why some nations are more prosperous than others. According to Porter, prosperity of a nation is dependent on the level and growth rate of productivity, which in turn is contingent on the capacity of the industries' to innovate. The act of innovation generally involves, among other things the creation of new production methods, the discovery of new technologies, and the penetration of new markets. A firm that is able to innovate and upgrade itself gains a competitive advantage against its competitors.

What determines the competitiveness of an industry? More specifically, what makes some firms capable of consistent innovation? Porter identifies 4 elements which individually and as a system determine the competitiveness of an industry. They are as follows: Factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry.

A. The Determinants of National Advantage

1. Factor Conditions:

These are the inputs necessary to compete in an industry such as labor, land, capital, natural resources, and infrastructure. The most important categories of factors of production are:

- a. *Human resources* - quantity, skills, and cost of personnel.
- b. *Physical resources* - abundance, quality, accessibility, and cost of nation's land, water, mineral, etc. Climate, geographical size, and location also play an important role.
- c. *Knowledge resources* - stock of scientific, technical, and market knowledge which reside in universities, government research institutes, private research facilities, and government statistical agencies.
- d. *Capital resources* - amount and cost of capital available to finance industry.
- e. *Infrastructure* - type and quality of transportation system, communication system, and mail and parcel delivery.

There are two sets of distinctions among factors of productions:

I. First set

- a. *Basic factors* - these are generally inherited. They include natural resources, climate, location, unskilled and semiskilled labor.
- b. *Advanced factors* - these are created. They include modern communication infrastructure, highly educated personnel, and university research institutes.

II. Second set

- a. *Generalized factors* - These can be deployed in a wide range of industries. They include the highway system, abundance of capital, educated workforce.
- b. *Specialized factors* - These serve specific industries. They include narrowly skilled personnel, infrastructure with specific properties

For competitive advantage to be realized, the factors of production must be highly specialized to industries' particular needs and firms must effectively and efficiently use these factors. Generally, many of these factors of production are inherited, but many can be created.

2. Demand Conditions

The second important determinant of national competitive advantage is the home demand conditions. This element shapes the rate and character of improvement and innovation in three ways:

- a. *Composition of the Home Demand* - the mix and character of home demand shapes how firms perceive, interpret, and respond to buyer needs. In fact, nations gain competitive advantage if home demand gives local firms a clearer or earlier picture of buyer needs than foreign rivals or if it pressures local firms to innovate faster and achieve more sophisticated competitive advantages compared to foreign rivals. Three characteristics of the composition of home demand are significant to achieve competitive advantage:

- i. *Segment Structure of Demand* - A nation's firms are likely to gain competitive advantage in global segments that represent a large or highly visible share of home demand but account for a less significant share in other nations. The segment structure at home shape the attention and priorities of a nation's firms at an early stage.
- ii. *Sophisticated and Demanding Buyers* - nature of home buyers. A nation's firms gain competitive advantage if domestic buyers are among the world's most sophisticated and demanding buyers for the product or service. Such buyers provide a window into the most advanced buyer needs.
- iii. *Anticipatory Buyer Needs* - A nation's firms gain advantages if the needs of home buyers anticipate those of other nations. This means that home buyers provide an early warning indicator of buyer needs that will become widespread.

b. *Demand Size and Pattern of Growth* - affect the nation's competitiveness in five ways:

- i. *Size of the Home Demand* - Large domestic market can lead to competitive advantage where there are economies of scale or learning by encouraging firms to invest aggressively in large scale facilities, technology development. On the other hand, large markets can undermine competitiveness because of ample opportunities at home.
- ii. *Number of Independent Buyers* - an increase in the number of buyers expands the pool of information creating a better environment for innovation.
- iii. *Rates of Growth of Home Demand* - a higher growth rate leads a nation's firms to adopt new technologies at a faster rate.
- iv. *Early Home Demand* - If home demand anticipates buyer needs in other nations, early local demand for a product in a nation helps local firms to move sooner than foreign rivals to become established in an industry.
- v. *Early Saturation* - A saturated home market forces firms to innovate, cut costs, penetrate new markets.

c. *Internationalization of Domestic Demand* - this also contributes to competitive advantage as nation's domestic demand internationalizes and pulls a nation's products and services abroad. This can be due either to demand of the mobile local buyer or demand of home products by foreigners influenced by the taste and values of the home country.

3. Related and Supporting Industries

The third determinant of national advantage is the presence of internationally competitive related and supporting industries. Its effects on competitive advantage are as follows:

- a. *Competitive Advantage in Supplier Industries* - the presence of competitive suppliers create advantages to downstream industries in several ways:
 - i. The competitive suppliers provide downstream industries with efficient, early, rapid access to cost-effective inputs.
 - ii. An ongoing coordination between competitive suppliers and industries add value to the value chain, hence contributing to competitive advantage.
 - iii. Competitive suppliers help and encourage industries to innovate, perceive new methods of production, apply new technologies.
- b. *Competitive Advantage in Related Industries* - Related industries share and coordinate activities in technology, development, etc. They contribute to competitive advantage by providing opportunities for information flow and technology innovation due to the proximity of the industries.

4. Firm Strategy, Structure, and Rivalry

The fourth element that determines the competitive advantage is the context in which firms are created, organized, and managed. There are three components to this:

- a. *Strategy and Structure* - The way firms are managed and compete is generally affected by national circumstances. Nations tend to be successful in industries where management practices and modes of organization favored by national environment are suited to industries' sources of competitive advantage. The management practices are influenced by training, background and orientation of leaders, group versus hierarchical style, strength of individual initiative tools of decision making, nature of the relationship with customers, relationship with labor, and ability to coordinate across functions.
- b. *Goals* - Nations will succeed in industries where company goals and employees' motivation are aligned with the source of competitive advantage.
 - i. *Company Goals* - this is concerned with the company's objectives and strategy adopted in the relevant industry.
 - ii. *Goals of Individuals* - the motivations of the individuals who manage and work in firms can influence the success of particular industries. The main issue is whether they are motivated to develop their skills as well as expend the effort necessary for creating and sustaining competitive advantage.
 - iii. *The Influence of National Prestige/Priority on Goals* - Because of prestige, sometimes there is a concerted effort towards an industry which often results in competitive advantage.
 - iv. *The Importance of Sustained Commitment* - sustained commitment due to long history or tradition in the industry can positively affect the competitive advantage.
- c. *Domestic Rivalry* - domestic competition is considered to be one of the most important ingredients in the creation and persistence of competitive advantage. This is because domestic rivalry creates pressure to innovate and upgrade, decreases cost, increase quality, create new production methods, and creates pressure for constant upgrading of sources of competitive advantage. An indicator of the intensity of competition is the entrants of new competitors into the industry.

In addition to these four elements, two other factors that affect the national competitive environment but are not part of the diamond are chance and government.

Chance

These are occurrences which are beyond the control of the nation and nation's firms. These include wars, political decisions by foreign government, increase in world demand, shifts in world financial markets. In brief, these can alter the conditions in diamond and hence the competitive advantage of an industry or a nation.

Government

Although the government is not part of the diamond, it affects the four determinants of competitive advantage positively or negatively depending on the policies adopted. It is worth noting that government can increase the odds of gaining competitive advantage but generally lacks the power to create advantage itself. Some of the policies that government can adopt to positively increase competitive advantage include:

- a. Creation of specialized factors of production.
- b. Avoid intervening in macroeconomic variables such as exchange rates.
- c. Enforce strict product, safety, and environmental standards which stimulate and upgrade domestic demand.
- d. Limit direct cooperation among industry rivals.
- e. Promote goals that lead to sustained investment in human skills, in innovation, and in physical assets.
- f. Deregulate competition by breaking monopolies and entry barriers.
- g. Enforce strong domestic antitrust policies.
- h. Reject managed trade.

Each of the first four elements constitute the diamond of national advantage. Porter identifies two factors: domestic rivalry and geographic concentration, which transform the diamond into a system. *Domestic rivalry* encourages improvement and innovation in all the determinants. In other words, domestic rivalry stimulates the development of certain factors of production, upgrades domestic demand, promotes the formation of related and supporting industries. The effect of the system is the creation and promotion of clusters of competitive industries. On the other hand, *geographic concentration* intensifies the interaction of the four elements. Geographical concentration which could occur because of the influence of the individual determinants, promotes efficiencies and specialization, and innovation.

III- COMPARATIVE ADVANTAGES: BALASSA'S METHOD

A. The concept of comparative advantage

The concept of comparative advantage is the centerpoint of the analysis of international exchanges. The difference which yields the exchange can result from the supply conditions, the demand, research or technological advances in the fields of production, post-production handling, marketing, packaging, or any other step of the agriculture output process.

A country will have a comparative advantage for a certain product and will therefore be able to export it if the production conditions (productivity, prices of inputs, environmental conditions, institutional settings, prices of competitive and complementary goods, currency rates) are relatively favorable. Comparative advantage is also a factor of the availability and quality of the production factors, which is prone to change with time (capital accumulation, labor specialization, increase in management efficiency).

Factors affecting the advantages from the supply side are:

- The specialization of labor
- Physical accumulation of capital
- The economies of scale which increase the comparative advantage of a country. When the size of the internal market allows it's firms to reach an optimal size for a large number of countries. Large nations are obviously at an advantage since they can diversify their production without having to deal with the increases in the costs of production, nor with the opportunity costs foregone due to the decision making procedure. Smaller nations could specialize in the production of goods conforming to international standards.

From the demand side:

- Income elasticity and demand elasticity (Mill): If the foreign demand for the national product is characterized by a low income elasticity and a high price elasticity, or if the demand is regressing, the country will suffer a deterioration in exchange of the product.

Example: The increase of the production of a raw material when prices are decreasing.

- The representative internal demand (Linder): A important demand leads to an economy of scale and enhances the creation of a new more efficient technique.
- Per capita income: Countries with high per capita income demand similar yet differentiated goods. Differentiation allows a producer to create a monopolistic situation.

Research and development effects and the production cycle theory (Posner)

The dynamic of a country's commerce could be measured by the innovation rate which is the number of new products introduced on the market of that country. After a certain period where the country enjoys a monopoly situation, it loses its absolute advantage with the coming of other productive nations proving to be more efficient. The country can reclaim it's comparative advantage through the development of a new product.

Conclusion: The existence of a low salary rate (or of minimum social costs) is not enough to guarantee the export of a product. These factors can be compensated with a high labour productivity or through monetary policies. The exchange rate allows to go from the comparative costs to comparative advantage and can therefore have the effect of compensating for the differences in the input productivity as well as for the difference in factor prices.

B. A comparative advantage indicator

An indicator of the comparative advantages is that set by Balassa (1965): The revealed comparative advantage, which is an indirect measure of the comparative advantage of a country because it is very difficult to assess it directly. In order to calculate the comparative advantages of a country many statistical parameters are required which are rarely at hand (some of the parameters include the labour cost per hour for similar products in two countries...) as well as considering qualitative factors.

Balassa's method consists of a comparison between the structure of exports of a country to the structure of export of a certain reference area which can be composed of other competing nations, or nations producing the same product and which have the same environmental conditions or constraints, or perhaps nations targeting the same niche markets with similar products.

For every product i , we are looking to find out if the share of the exports of i in the total exports of the country j is significantly different of the mean share of export of i in countries of the reference area.

We therefore obtain the following indicator:

{Insert formula here}

where:

X_{ij} : the exports of product i by country j

X_j : total exports of country j

X_i : total exports of product i of the reference area countries

$X_{..}$: Total exports of the reference area countries

This indicator therefore compares the structure of the exports of a country to that of reference area considered as a standard of analogy. If a country has a higher share of exports for a particular product than the other reference area countries ($I > 1$) then the country reveals a comparative advantage in the production and export of the product.

However the indicator is relative and is by no means absolute: It is time and area specific.

However, it is also important to account for the import side of the country. Considering imports is an answer to criticisms to the revealed comparative advantage which claimed that it did not take into account the country's trade balance in that particular product especially that the country could be at the same time exporting and importing similar range of products.

Using the same method, we can therefore calculate:

$$rca = \frac{X_{ij}}{X_j} / \frac{X_i}{X_{..}}$$

Using this index simultaneously with the other one allows us to avoid interpretation errors due to the cross exchange characteristic of the inter-product or inter-branch exchange.

Conclusion

A country has a comparative advantage if and only if $I_{BX} > 1$ et $I_{BM} < 1$.

A country has a comparative disadvantage if and only if $I_{BX} < 1$ et $I_{BM} > 1$

In the two remaining cases [$(I_{BX} > 1$ et $I_{BM} > 1)$ et $(I_{BX} < 1$ et $I_{BM} < 1)$], we cannot conclude from the Balassa formula and we have to use other parameters.

ANNEX 2

REVIEW OF LITERATURE AND THE INTERNATIONAL CHANGES AND DEVELOPMENTS

A review of previous studies revealed that no comprehensive studies have been carried out to examine the efficiency and competitiveness of the agricultural sectors in Lebanon. The only recent related work was a study by Jaber (1997), who carried out comprehensive analysis of the agricultural production and marketing system. The contribution of other researchers has been more descriptive than analytical and, of course, it will be presented hereafter. This section reviews the literature relating to the agricultural and agro-food sectors in Lebanon.

1. LITERATURE ON THE AGRICULTURAL SECTOR

In Lebanon, the agricultural sector is charged with being traditional, unresponsive, and disorganised. At the same time, wholesalers and exporters are criticised and, often, accused of cheating farmers and consumers. One popular prospective solution to these perceived problems is government intervention in the production and marketing portions of the food industry. This part looks into these criticisms and presents major findings.

Traditionalism

It is argued that market operators are rational, and respond positively to incentives and rewarding economic opportunities by adopting new marketing practices. Saade (1993) takes a contrary view and maintains that: "In Lebanon, farmers and traders have maintained their traditional production and marketing practices rather than identified the changing market conditions and potentials, promoted production, and developed new marketing methods to respond to these changes and potentials and, as a result, sectoral development was severely constrained." Also, Baalbaki (1985a) pointed out that it is not the lack of incentives and economic opportunities that impedes sectoral development, but it is the lack of motivation by market operators to adapt new production and marketing methods to respond to these changes. He indicated that: "the growth in the demand for agricultural products from the overseas markets stimulated production and export expansion; this expansion was, in turn, expected to call forth similar developments in the marketing practices, but this did not materialize. In fact, handling, transportation, and selling are still performed in a traditional way, and the marketing system can be described as being inefficient with high marketing costs."

Relating to the same theme, Saade (1992) indicated that agricultural production methods that are passed down from previous generations are traditional and will not lead to significant increases in output. Also, the methods of harvesting, packing, transportation, handling, and storage are traditional and costly. Unfortunately, none of the technical developments that are revolutionising production and marketing practices in major regional exporting countries (e.g. Turkey, Spain, Egypt, etc.) have been adopted by the market operators. In fact, market operators have maintained their status quo of marketing practices rather than adopted new ones. Sectoral development can only be fostered by adopting new production and marketing practices and giving up the traditional ones (Baalbaki, 1985b). In observing the marketing practices, Jaber (1997) indicated that these are carried out in a traditional way. He pointed out that: "the marketing system is lacking organization in carrying out the marketing activities, and is inducing high marketing costs, especially that the product is changing hands several times before reaching the ultimate consumer."

Agricultural Farming and Competition

Agricultural farming is an important activity in the socio-economic life of farming families. Over one-third of the farms are small-scale (<2 ha), run by farmers who lack experience in trade, and suffer from a competitive disadvantage when marketing their produce (Baalbaki, 1985b). One of the effects of having weak bargaining power, and being inexperienced in trade, is that farmers are taken advantage of by better-informed and experienced middlemen.

In studying the farmers' bargaining position and exploitation by traders, Jaber (1997) indicated that: "In addition to being small in size with small tradable output, growers suffer from inadequate information, lack of finance and extension services and, thus, have to search for market intermediaries to market their produce since they are unable to sell it themselves." He added: "Being aware of the farmers' weak bargaining position, these intermediaries (i.e. exporters, Dammans and wholesalers) are able to set the conditions of purchase and prices to suit their interest; farmers have no choice but to accept since they lack the necessary facilities and funds to finance the post-harvest operations."

According to Shible (1992): "the transition from traditional production and marketing methods - thus, fostering competitiveness - requires collecting and disseminating market information, extending loans to farmers, and providing post-harvest facilities and extension services". Also, incentives need to be created to assimilate farmers into cooperatives on the assumption that they will not come together unless they are encouraged to do so. This, in turn, will lead to higher efficiency in the marketing system, improve the farmers socio-economic circumstances, and make them less prone to exploitation by the middlemen. Relating to this notion, Jaber (1997) indicated that providing farmers with finance, and market information, should be supplemented with creating incentives to foster the development of cooperatives to enhance their trading position through benefiting from the advantages of economies of scale in transportation, sale, and storage, to ensure the smooth operation of the marketing system, and to stimulate sectoral development". The establishment of farmers' cooperatives is hoped to provide growers with a larger share of the consumer's price and, thus, to improve production and marketing efficiency.

Market Structure and Imperfections

It is believed that several imperfections characterize agricultural production and marketing in Lebanon. The physical structure of the wholesale market, the lack of post-harvest facilities, and the absence of quality measures and standards are contributing to inefficient marketing practices.

Relating to the notion of infrastructural facilities and wholesale markets, Jaber (1997) pointed out that deficiencies in the means of transportation, handling, storage facilities, and marketing expertise are reducing the quality of the produce and, consequently, depressing prices. So, investments need to be directed toward the storage, transportation, and handling domain. Also, new wholesale markets need to replace the existing ones as they are small and lack adequate storage facilities.

Jaber (1997) indicated that: "the efficiency of the marketing system depends, amongst other things, on getting the product from the producer to the consumer- at low cost; a cursory analysis of the marketing margins for some agricultural products showed that producers received 38 percent of the consumer's paid price, reflecting inefficiencies in the marketing system and a scope for high profits for traders. He identified the lack of standardization of weights and measures, grading and packing and farmers cooperatives as problems affecting the domestic marketing system. Also, he pointed out that the lack of export organisation and marketing expertise is limiting export expansion. Higher efficiency in the marketing system can, therefore, be achieved by improving the existing marketing techniques.

In examining the legal and institutional framework serving the agricultural sector, Saade (1982) indicated that the marketing rules and regulations are not promoting competition. Further, the absence of extension services to farmers leads to inefficient allocation of scarce productive resources and, as a result, agricultural and marketing operations are severely constrained. This view was supported by Jaber (1997) who saw that strengthening and modernising the legal and institutional framework serving the agricultural sector represent the leading driving force in achieving sustainable agricultural development.

2. LITERATURE ON THE AGRO-INDUSTRIAL SECTOR

This section reviews the studies focusing on the Agro-industrial sector and presents major findings. This review is particularly important as the agro-industrial sector is facing many problems in sustaining rejuvenation.

Sarrouf (1992) studied Lebanon's food and beverages industry and pointed that production and marketing practices need to be updated to meet the changing internal and external market conditions. She concluded that the industry is profitable.

In examining the industrial confrontation between Lebanon and Israel, El-Rifai (1994) conceded that the agro-industrial production and marketing system is inefficient. He explained that the technical developments revolutionising the agro-industrial production and marketing practices, and the new export market requirements have created challenges for Lebanon's agro-food sector to adapt to these changes - adaptations that have not been easy to accommodate within the period of political strife in the country. He concluded that the agro-food sector will be negatively affected if there will be confrontation between Lebanon and Israel. Saaddidine (1990) studied the prospects of Lebanon's food industry. He argued that the future development of the agro-industrial sector is severely constrained by the structure of family ownership. This, in turn, is exacerbated with lack of investment in R&D in modern production and marketing techniques to meet export market specifications.

Yaman (1996) presented a comparative analysis between Lebanese and Israeli industrial sectors and concluded that the Israeli industrial sector is more competitive than Lebanon's industrial sector. He argued that several factors contribute to this competitiveness, including: continuous government support; advanced legal and institutional framework; considerable investments in R&D; market knowledge; and production and marketing flexibility to meet the continuously changing market conditions.

3. CONCLUSIONS, CRITIQUE AND LESSONS LEARNED

In all the foregoing literature surveyed, it can be concluded that the available studies provided useful information about some aspects of the agricultural and agro-industrial sectors. The conclusions and recommendations put forward by these studies seem to be consonant. Most of them concluded that agricultural production and marketing system is characterized as being traditional, exploitative, and unresponsive. Also, the structure of family ownership and lack of investment in R&D to modernize production and marketing techniques to meet export market specifications are severely constraining the future development of the agro-industrial sector. Government intervention is recommended as a prospective solution to solve the problems the agricultural and agro-industrial sectors are facing.

The studies cited above have adopted methodologies that focused, largely, on observational techniques and small-scale random sampling. A major criticism of these studies is that none of them has attempted to provide an economic analysis of the agricultural and agro-industrial production and marketing system based on scientific methods, nor is it possible to derive such an analysis from them. Specifically, an economic analysis of the agricultural and agro-industrial production and marketing system requires an analysis of the pricing system. This is particularly important because prices play an important role: in directing resources between their alternative uses; in being the chief medium for transmitting consumer demand to producers; and in allocating the distribution of goods over time, space and form. Thus, lack of effective communication of prices to farmers and consumers reflects inefficient production and marketing system which, in turn, leads to poor communication of consumer preferences, high production costs, and lack of incentives to increase output through adopting innovative production techniques, and, high marketing inefficiency.

The lessons learned are that the legal, institutional and organizational framework serving the agricultural sector, the structure of ownership and lack of investment in R&D to modernize production and marketing techniques have not been successful either in promoting the farmers' and industrialists' interests or in creating incentives to increase production. Therefore, a more contemporary form of arrangement is required to encourage collaborative production and marketing by farmers and to improve linkages between farmers and their marketing participants. In particular, fostering agricultural and agro-industrial development requires developing an efficient and responsive production and marketing system which is determined, inter alia, by the pricing system; specifically, by the ability of industrialists to offer growers prices high enough to increase agricultural output, and to offer importers of Lebanese products prices low enough to stimulate export expansion. Thus, more information is needed about: the appropriate legal and institutional framework; the extent of flexibility in production and marketing practices to meet the changes in domestic and export market requirements; and the extent to which the agricultural and agro-industrial sector can reciprocate mutual support. That is, the type, quantity and quality of food products the agriculture sector can provide for the industrial sector. This research work hopes, inter alia, to fill this knowledge gap.

ANNEX 3 COUNTRY REPORTS

JORDANIAN AGRI-FOOD SECTOR

1. Government regulations and policies governing the performance of Jordan's agri-food sector

For the agri-food sector in Jordan, there are no particular conditions or requirements for entry into the market or entry barriers such as licensing or capital requirements. In general, the government of Jordan is revising business laws and regulations affecting investment, export and trade. Main facets of the new trade and investment measures include deregulation, privatization of state owned companies and the increase of the role of the private sector in industry, institutional improvement, integration into the world economy, fiscal reform, as well as the encouragement of local and foreign investment in various sectors of the Jordanian economy. This should have a positive impact on the economy in general, including the agri-food sector which however is not specifically targeted by any reform measures.

Until recently, high tariffs were imposed on practically all foodstuff products imported into Jordan. These tariffs acted as a form of protection for the local food processing industry. Jordanian food product manufacturers have generally come to rely on imported foodstuffs being higher priced than those locally produced in the marketing of their products in the local market. This has given the local agri-food industry a chance to grow during the past decade or so. However, the government has realized that this protection may have a negative effect on the improvement of the competitiveness of Jordanian food products against foreign made products and has started lowering tariff rates. On the other hand, as mentioned, this reform has been across the board and not specifically targeting the agri-food industry. The import of agri-food raw materials is subject to minimal tariffs. The following items may be imported free of tariff duties: meat (except chicken), fish, dairy products including powdered milk and butter, beans, lentils, wheat, barley, corn, rice, sugar, and crushed wheat (burghol) among others.

There are certain restrictions on the import of raw materials used in the food processing industry, and the import of rice, flour, sugar, wheat, barley, and corn is subject to prior permission from the Ministry of Supply (MOS). The import of milk for the agri-food industry is subject to MOS licensing, in coordination with the Ministry of Industry and Trade.

The Ministry of Agriculture licenses the import of meat, and the Agriculture Marketing Organization does the same for potatoes, onions, and garlic.

Local production of red meat, dairy products and some vegetables (especially tomatoes) has been boosted by Jordanian government producer subsidies. Jordanian subsidies to local wheat producers, on the other hand, seem not to have led to any significant increase in production.

On the level of individual firms, several of those covered in the accompanying survey reported that government inspectors were difficult and sometimes unreasonable in applying health and other regulations to agri-food production facilities.

2. Trade agreements concluded by the Jordanian government

The main trade agreement which will have an impact on Jordan into the next decade is the EC-Jordanian Association Agreement, signed in November 1997. Under this accord, a free trade area will be gradually established over a transitional period lasting a maximum of twelve years starting from the entry into force of the Agreement, in accordance with World Trade Organization (WTO) provisions. (Jordan has applied for WTO membership.)

In the case of industrial products and arrangements for import into the Community, products originating in Jordan will be admitted without customs duties or taxes having equivalent effect, or quantitative restrictions and measures having equivalent effect upon entry into force of this Agreement. Quantitative restrictions and measures having equivalent effect will be abolished on the entry into force of the Agreement.

The Community and Jordan will gradually implement greater liberalization of their reciprocal trade in agricultural products. As regards imports of Jordanian agricultural products into the EC, the Community has granted to Jordan

some preferences which add to those carried over from the previous Agreement. Reciprocally, Jordan has committed to maintain the present level of duties for Community agricultural exports into Jordan.

After 1 January 2002 the Community and Jordan will assess the situation with a view to adopting measures aimed at greater liberalization of the reciprocal trade in agricultural products to be applied by the Community and Jordan with effect from 1 January 2003. The Agreement provides for certain accompanying clauses and measures designed to facilitate the process of establishing a free trade area. These are the traditional safeguard clause, anti-dumping clause and the clause authorizing restrictions on trade on the grounds of public policy and protection of health. The concept of "originating products" for the application of the provisions of the Title concerning free movement of goods and the methods of administrative cooperation related to them are similar to those agreed with the Eastern European countries and with the Palestinian National Authority (PNA). With the exception of tomato paste, which is in any case a semi-finished product and not really part of the agri-food sector, agri-food products will not be particularly restricted by the agreement, the main impact of which will be on agricultural output per se. Individual countries currently linked with Jordan by agreements and trade protocols are: Syria, Lebanon, Saudi Arabia, Iraq, Yemen, Bahrain, Libya, Morocco, Sudan, Tunisia, Kuwait, the PNA, Oman, Egypt, the UAE, and Israel.

Given that the among the main export markets of Jordan are Iraq, Saudi Arabia, the UAE, Lebanon, Sudan, Libya, Egypt and Tunisia, trade agreements currently play an important role in Jordanian trade. Some of these countries are also important sources of Jordanian imports. Many of these imports and exports are agricultural raw materials (e.g. sesame imports from the Sudan and fruits from Lebanon, or vegetables to Saudi Arabia and the UAE) or agri-food products (e.g. ketchup from Lebanon and potato chips from Saudi Arabia). So in general, trade conducted under bilateral agreements is important for agri-food and the raw materials going into agri-food products.

The Jordan Export Development and Commercial Centers Corporation (JEDCO) is the principal semi-governmental agency in Jordan concerned with such trade protocols. These are supposed to facilitate trade and secure duty exemptions for Jordanian products. In fact, it is official government policy to reduce reliance on these agreements, and the tendency of the past decade has been for these agreements to diminish and lose importance.

Jordan as a developing country is included on most developed countries lists' of beneficiaries subject to preferential treatment. This preferential treatment is mainly given in the form of reduced or zero duty rates. However, other special tariffs for processed agricultural goods, VAT, etc. are usually still applicable. Another important factor in trade with foreign countries is the imposition of import quotas. For several countries which are markets for Jordanian products, no imports are allowed above a certain value or quantity of imports. (In other countries and for some specific items, especially in Eastern Europe and the CIS countries, import licenses must also be obtained.)

3. Support institutions

Although the government of Jordan has recently initiated a series of reforms in an attempt to encourage foreign investment and increase exports, the lack of developed industrial support services has helped to stunt the growth of industry. For the food processing industry as a whole, in view of the prevalence of small and medium sized industries (SMIs), it is often not feasible to invest large sums in developing a factory whose capacity, and subsequently revenues, are limited; the only other alternative is to depend on a support infrastructure to provide the necessary services to aid development. Unfortunately, such services are deficient in Jordan. Consequently, these factories are incapable of meeting export requirements and instead focus on a limited local market relatively protected from competition by tariffs.

The main industrial support services which are lacking in Jordan are:

- Accredited food product testing laboratories
- Food product development services
- Food packaging development and design services
- Technical consulting services specialized in food manufacturing and technology
- Technical consulting services specialized in the development of quality and hygiene systems for the food industry
- Accredited quality system certification services (ISO certification, etc.)
- Accredited calibration services with internationally traceable physical standards and measuring and testing equipment

Formal R&D is practically nonexistent in the Jordanian food processing industry. This is mainly due to the lack of incentive for Jordanian food manufacturers to conduct such activity. Low competition and the general lack of discernment of the average Jordanian consumer have not forced Jordanian food manufacturers to apply product development to gain a competitive edge. On the other hand, even companies which attempt to conduct such activity

lack the skill and expertise to do so. With the absence of institutions and firms which are capable of providing R&D services to the local industry, it is difficult for a local food manufacturing company to attempt to initiate such activity.

JEDCO is the principal semi-governmental agency in Jordan concerned with identifying opportunities for the development of Jordanian exports and providing assistance in this regard. JEDCO offers a wide range of services: directly to exporters and indirectly through the country's various private sector organization. These include:

- The identification of business opportunities by providing relevant and accurate information essential to exporters in order to tap into international markets
- The commissioning of market and country studies and analysis to meet the needs of exporters
- Product promotion through inward and outward missions, participation at trade fairs and publications
- The identification and acquisition of technical expertise needed to improve Jordanian products and to capitalize on export sales opportunities
- Assistance to overseas buyers in locating the products and services they need.

JEDCO operates trade centers in a number of countries to promote Jordanian exports and provide assistance to visiting businesspersons. The centers also provide JEDCO and exporters with information on current developments and trade opportunities and facilitate the kingdom's participation at major exhibitions. Centers are presently located in Egypt, Iraq, Libya, Morocco, Russia, Sudan, Tunisia, Yemen, Oman and the US. Through these services and activities JEDCO fulfills its role of encouraging and promoting exports.

JEDCO is currently targeting the Jordanian food processing sector as a potential source for increasing Jordan's exports, looking in particular at the export potential of the following:

- Frozen meat products
- Canned vegetables
- Fresh juices and concentrates
- Dried herbs and medicinal plants
- Chocolate bars
- Candy, toffee and chewing gum
- Snack foods
- Baby food
- Vegetable and olive oils
- Biscuits
- Ethnic products such as halawah and tahina

4. Quality control measures and their application

Jordanian general food regulations include measures covering hygiene, food additives, food packaging, pesticide residues, food labeling. There are several specific regulations, which are imposed on the food processing industry. These regulations are issued and enforced by the Jordan Institute of Standardization and Measurements (JISM), the country's official body for the preparation and publication of Jordanian Standards. Established in 1995 by virtue of the Standards and Metrology Law No. 15/1994, JISM grants Quality Marks and is an important promoter of ISO 9000 Quality Management and Quality Assurance Standards in Jordan. JISM maintains updated data on Standards of the Codex Alimentarius Commission. In addition, some aspects of regulations relating to health and hygiene are issued and enforced by the Ministry of Health (MOH).

JISM issued the Jordanian Standard JS/493/1987, General Principles of Food Hygiene in 1987. These general principles put forth the basic requirements for the hygienic preparation of foodstuffs including aspects of hygiene in procurement, production, handling, facilities, utilities and services, equipment and personnel. The enforcement of this regulation is the responsibility of the MOH. Although the HACCP (Hazard Analysis Critical Control Point system), a hygiene measure aimed at controlling potential health hazards in food manufacturing, is not implemented in Jordan and is not a requirement of any Jordanian regulation, the MOH is seriously considering the introducing of this requirement to improve the overall level of hygiene and safety of Jordanian food products.

In March 1993, Directive No. 1 of the Ministry of Industry and Trade was issued which stated that the Codex Alimentarius Commission standards for additives published in Codex Alimentarius Volume XIV - Food Additives (CAC/Vol. XIV-ED-1) and any amendments thereof will be adopted as Jordanian Standards for food additives. The FAO/WHO Additives Data System 30/Rev 1 1985 was also quoted as a reference. The food additive regulations are also enforced by the MOH.

JISM has issued only three standards to control packaging; these standards are related only to tin cans and aluminum foil. Other types of packaging materials and the contaminants that may arise from their contact with food are not addressed. Standard requirements for prepackaged foods in terms of standard fill of container, etc. are included in some of the specific food product standards.

In June 1993 Directive No. 2 of the Ministry of Industry and Trade was issued which stated that the standards on pesticide residues in food and any amendments thereof issued by the Joint FAO/WHO Food Standards Program and the Codex Alimentarius Commission will be adopted as Jordanian Standards. The enforcement of this directive is the responsibility of the MOA, which carries out tests on agricultural raw materials and products imported into Jordan and also on Jordanian agriculture raw materials.

The Jordanian Standard JS/9/92, Labeling of Packaged Food, sets out the Jordanian standards for labeling of prepackaged foodstuffs. (Labeling requirements are also specified in individual product Jordanian standards.) The standard lists the compulsory and voluntary labeling information and some general requirements on the layout and method of labeling. The compulsory labeling information includes: food name, list of ingredients, net contents, manufacturers name and address, country of origin, manufacturing and expiry dates.

JISM has developed national standards for large number of food products. These standards are enforced by JISM, and MOH enforces the requirements of the Jordanian food standards related to hygiene and additives. Jordanian food manufacturers rely on these inspections as evidence of their compliance with the Jordanian Standards. However, these inspections are only carried out randomly from time to time; due to the lack of internal inspections and tests carried out by some factories and the lack of internal quality standards for their products, consistent quality of the food products is not necessarily assured.

The survey of the local food processing companies showed that some companies were found to have interest in the ISO 9000 quality assurance standards but none of the companies interviewed have actually implemented this system. However at the time of this survey, several companies had initiated projects for the implementation of the ISO 9000 quality assurance standards in their companies.

Comparing Jordanian food standards against those of Codex, EC, and FDA has shown that there are some discrepancies. These are in the essential composition of the product as well as in labeling, additives and other aspects of the standard.

5. Incentives provided by the government to facilitate the production and marketing of Jordan's agri-food products.

There are no incentives provided by directly the Jordanian government to facilitate the production and marketing of the country's agri-food products, other than those measures, which have an impact on industry as a whole. Thus, for example, all profits from Jordanian exports are free of income tax, but this measure is across the board and has no specific impact on the agri-food industry. In a similar manner, incentives are provided by the government to new industrial investment under the Investment Promotion Law of 1995 as modified by recent changes in regulations, but this does not target agri-food or any other sector. The Investment Promotion Corporation is directly involved in the application of this law which provides an increased range of incentives. The customs exemptions under this law are potentially significant, as are the law's provisions for tax holidays.

At the same time, the country's agricultural sector enjoys certain incentives. Most important, it is fully exempt from taxes on income and certain other duties. In addition, the law on investment promotion gives the highest level of exemptions and incentives to agricultural production. Therefore, that part of the agri-food industry, which depends on local agricultural raw materials may profit from these measures.

6. Market structure

Jordan's agri-food sector is characterized by a small local market and erratic regional exports, consequently the size of investment in local industries is limited. This has resulted in SMIs mainly dominating the sector. Thus, Jordanian food processing is mainly undertaken by SMIs producing on a relatively small batch size basis, and employing less than 100 people. On the other hand, some agri-food sector businesses have grown from small family firms to larger industries. This has been notable in beverage production, as well as in processing and preserving fruits and vegetables. It should also be noted that MOS has the largest flourmill in the country.

| | % concentration ratio of output of the three largest enterprises |
|---|--|
| Manufacture of all food products and beverages | 28 |
| Production, processing and preserving of meat and meat products | 70 |
| Processing and preserving of fruits and vegetables | 97 |
| Manufacture of vegetable and animal oils and fats | 68 |
| Manufacture of dairy products | 51 |
| Manufacture of milled grain products | 58 |
| Manufacture of bakery products | 19 |
| Manufacture of cocoa, chocolate and sugar confectionery | 50 |
| Manufacture of other food products | 46 |
| Spirits and wine | 100 |
| Manufacture of malt liquors | 100 |
| Manufacture of soft drinks | 94 |

Source: latest official *Industrial Survey* (1995)

7. Demand

Jordan's food consumption pattern in the 1990s compared with the 1980s indicates an increase in the intake of cereals, pulses, fruits, meats, oils and sugar. The consumption of fish, eggs and vegetables in the 1990s is lower than in the 1980s. It has been estimated that in the year 2000 Jordan will continue to depend on imports of cereals, red meat, fish and oils, while it will show a surplus in the production of eggs, vegetables and fruits.

Ready meals, new and different kinds of sweets and soft drinks, imported and processed foods, nuts, and beverages are becoming more important components of food consumption patterns. There is an increase of consumption of particular food items such as bread, cereal products, imported fresh and frozen meats, fish, yogurt and cheese, eggs, processed chickpeas (falafel), ice cream and beverages. On the other hand, less is directly consumed by households of wheat flour (replaced by increased consumption of bread), fresh dairy products (replaced by processed dairy products) and local olive oil.

Owing to changes in food prices and incomes well as to subsidy policies, the share of cereals, fats, fruits and sugar as a proportion of total expenditure on food have decreased in the 1990s, while expenditure on meat and vegetables has increased. Per capita daily intake of calories and nutrients is about 2,700 calories, 80 grams of protein, 70 grams of fats and 460 grams of carbohydrates. The nutritional value of wheat products covered about 49% of the intake of energy, 40% of the intake of protein, 54% of carbohydrates, 74% of phosphorus, and 48% of niacin, while animal products provided 13% of the intake of energy, 44% of protein, 28% of fat, 38% of vitamin A and 29% of niacin. The daily per capita consumption of most food items decreased in the 1990s compared with the 1980s.

| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|--|-------|-------|-------|-------|-------|-------|-------|
| Population (000s) | 3,468 | 3,701 | 3,844 | 3,993 | 4,139 | 4,291 | 4,441 |
| GDP at constant prices (in millions of JD) | 1,908 | 1,943 | 2,255 | 2,575 | 2,381 | 2,754 | 2,898 |

Source: Central Bank of Jordan

Jordanian Agro-Food Industry

1. The total number of enterprises in the agro-food sector in Jordan is around 2,000.
2. Specialization include concentrated tomato paste, processed meats, biscuits, soups, fruit juices, ice cream, alcoholic beverages, chips, olive oil, sesame products (e.g. tahina), canned vegetables, and cooking oil.
3. The average size of these firms in terms of number of employees is about ten per firm
4. The most competitive firms include: Agricultural Marketing & Processing, Arab Vegetable Oil Industry, Danish Food Industries, Eagle Distilleries, Food Improvers, General Investment Ltd, Haddad Distilleries, Halawani, Hammoudèh & Saad, Jabri & Sons, Kawthar Investments, Haddad & Sons, Nabil, Raslan El Kasih & Sons, Sa'd Abu Jaber & Sons, ICA, UMIC, Petra, and Zoumot Distilleries.
5. A-F in Jordan is generally characterized by extensive competition, except for alcoholic beverage production. The latter is an oligopoly of six firms with market entry restricted by regulations governing the production of

alcohol. (The latter firms are larger than the average for A-F as a whole with a mean of around 46 employees each.)

6. The competitiveness of A-F in Jordan is limited. Its potential as a whole is poor, except for some products based on indigenous raw materials such as tomatoes. The main strength of many businesses in Jordan's A-F sector is management flexibility in adapting to crisis. This was particularly brought out in the 1990-1 Gulf crisis, since Iraq and the GCC economies were Jordan's largest A-F customer and drastic changes took place in those markets' orientation towards Jordan. However, many Jordanian A-F firms managed to successfully adapt, partly by diversifying to nontraditional export markets but also by changes in the product mix. A main weakness of Jordanian A-F is the lack of help from either the state or industrial syndicates and similar umbrella organizations. The impact of JEDCO, Jordanian chambers, A-F syndicates etc. has been limited and remains so. The peace with Israel in particular and regional peace in general is seen as the major opportunity for Jordanian A-F. Even before a full regional peace, Jordanian A-F products could presumably continue to expand into Israel, but this is still a very limited process. The impact of a future WTO agreement and of the current Euro-Jordan Partnership accord is seen as a main threat. Whether it will actually have a negative impact on the A-F sector depends on how much productivity can be raised and how much streamlining takes place.
7. Agri-food (A-F) industry production as a percentage of total industrial production is around sixteen percent, which is also the share of labor in the A-F sector as a percentage of the total industrial labor force.
8. A-F subsector output shares in the Jordanian A-F sector are approximately as follows:
 - Production, processing and preserving of meat and meat products 3%
 - Processing and preserving of fruit and vegetables 3%
 - Manufacture of vegetable and animal oil and fats 36%
 - Manufacture of dairy products 8%
 - Manufacture of grain mill products 8%
 - Manufacture of prepared animal feeds 3%
 - Manufacture of bakery products 15%
 - Manufacture of cocoa, chocolate and sugar confectionery 1%
 - Manufacture of other food products 6%
 - Distilling, rectifying and blending of spirits, and ethyl alcohol production from fermented materials 1% - Manufacture of malt liquors and malt 1%
 - Manufacture of soft drinks etc. 14%.
9. Statistics on consumption of A-F products in Jordan are not available.
10. Investment in the A-F sector is about eleven percent of gross fixed capital formation in the industrial sector.
11. Agriculture's share of GDP is about seven percent and that of industry about twenty percent.
12. Local sales/exports for industry in general or A-F in particular is not available.
13. Information on inputs (local vs. imported) is not available

SYRIAN AGRO-FOOD

1. State regulations and policies governing the performance of the agri-food (A-F) sector

Recent Syrian industrial policy has generally been characterized by gradual liberalization in order to try to avoid problems of structural adjustment. However, though A-F industry firms surveyed consider this method to be basically correct, they see it as too slow and demand some speeding up of the process.

Larger A-F businesses were nationalized in the late 1950s or in the 1960s. Private-sector involvement in A-F industry was thus limited until the 1990s, when some restrictions were relaxed. Total capital investment in the private A-F industrial sector has grown from 1991, and most of the employment in A-F is now in the private and mixed sectors. However, even where private companies are allowed to operate, state control over pricing, marketing, storage etc. can be significant.

There are no special conditions for entry into the Syrian A-F manufacturing sector, and barriers such as licensing and capital requirements are mainly those applied to other industries as well. The Ministry of Supply (MOS) imposes certain restrictions on the import of raw materials used in the A-F industry. This forces some A-F factories to use products, which may not be of the required type and quality needed for the industry. In addition, these are purchased at standard MOS prices whereas the A-F industry might be able to acquire these materials themselves at lower prices. Along with the general laws and regulations controlling business and trade in Syria, there are several specific regulations, which are imposed on the A-F industry. Aspects of these regulations related to health and hygiene are issued and enforced by the Ministry of Health (MOH). Some of these have become bureaucratic formalities, which can have a negative impact on production, and the private A-F sector generally complains of the spread of different kinds of routine. This, delays work, adds to the cost of products, and consequently weakens the ability to compete.

Syrian A-F industrialists also complain of the high income tax on profits (up to 65%) and other duties. Customs on raw materials are also an issue. These duties raise cost and restrict the ability to compete, though the government has taken some steps to allow for the temporary entry and customs-exemption of raw materials which are meant for manufacturing and re-export.

The state is becoming more willing to discuss customs policy and complicated export and import procedures, and has taken steps towards their facilitation, but private A-F industrialists are demanding more change.

The passing in 1991 of Law No.10 for the encouragement of investment has also helped. Under its provisions, Syrian and foreign investors alike are offered incentives such as exemption from customs duties and foreign-exchange regulations, and tax holidays of up to seven years. An estimated one-fifth of investments under law number ten are in A-F. However, even this law does not distinguish between a high value added A-F manufacturing activity and a company that imports ready-made materials and simply packages them. In any case, unless the investment environment changes, it will continue to be difficult to translate proposals into functioning plants: out of the private-sector industrial proposals approved by the government in the past few years, only about one-sixth come to fruition during the following year.

This law requires that before a project can qualify for exemptions, production means imported to be used in it exclusively must not be less than ten million Syrian pounds (SP=\$0.02). Imports for the project are then exempted from all taxes and fiscal stamp, local and customs duties etc. Joint-stock companies approved according to the rules of this law, together with their shares, funds, profits and dividends, are exempted from all taxes levied on income and assets owned by the companies for seven years from the date of actual production or investment according to the nature of the project. Individual or non-joint-stock companies, together with profits, shall be exempted from all taxes on income and from the real-estate taxes on the buildings owned for the project for five years from the launch of actual production or investment, according to the nature of the project. In case the time spent on establishing the project approved according to the rules of this law exceeds three years, then this period will be deducted from that of tax exemption. An additional period of two years may be added to the exemption, should the total revenues in foreign currencies actually transferred into Syria exceed fifty percent of the original projections for the project during the original period of exemption. Joint-stock companies set up by the rules of this law are also exempted from the stamp tax levied on the share issuance. Investors are allowed, five years after the original investment, to transfer abroad the net value of their share in foreign currencies on the basis of the actual value of the project, provided that the transfer should not exceed the capital brought in by them in foreign currencies. At the same time as Law No 10 has provided private business with investment incentives, the public sector is being modernized and gradually restructured.

Before Syria seriously considers joining the WTO, the country first wants to strengthen its position by being a member of an Arab trade group. Recent reforms, including moves towards unifying the exchange rate and the payment of loan arrears to the World Bank, appear to confirm the view that Syria is moving ahead in easing external restrictions to prepare for a broad Arab common market. (In 1997 Syria, Egypt and the six states of the Gulf Co-operation Council approved the idea of setting up a common market among themselves to form the nucleus of a common Arab market.) There is growing awareness in the country that economies belonging to trade groups have a better chance of negotiating tariffs, protection measures and other terms with the WTO. Syria thus feels that Arab countries should not add customs duties on to each others' trade when exports to Europe are tariff-free.

Economic integration with Lebanon in particular is important and will be reinforced by recent agreements on gradual liberalization of trade in agricultural and industrial commodities. The two countries are to oversee a study on coordinating and unifying customs duties. Syria and Jordan have also been moving to exempt goods from customs duties under the terms of a 1975 trade agreement. Preliminary steps involve drawing up a short list of goods with the measures going into effect in 1998. In 1996 Syria signed economic agreements with Tunisia and revived trade committees with Algeria and Egypt. It also has economic and trade committees with Saudi Arabia and Kuwait respectively which meet periodically.

The A-F industry is relatively protected from competition by the high tariff levels which made import substitution attractive to local investors. On the other hand, the traditional markets in the region, i.e. neighboring Arab countries, have been made accessible to A-F manufacturers through bilateral agreements.

Opening new markets for Syrian products was a demand to the government by the A-F producers interviewed. They called on the state to assist the industry through trade agreements with other countries in order to open new markets. Meanwhile, Syria is -- illogically -- under no pressure to reduce tariffs and other import duties which are generally high.

3. Support institutions

Syrian government support institutions such as marketing organizations, export centers, information networks, extension and advisory services, standardization centers, design, and research and development (R&D) support are viewed by firms as non-existent or weak. R&D support is nearly absent whether from the government or the private sector. Expenditure on R&D is severely limited. Industrialists complain of the lack of research centers on A-F. Syria also lacks design and other offices specialized in this industry.

A-F industry in Syria has often operated under a protected environment with little motivation to improve product quality. Some A-F companies have gone into business with feasibility studies that emphasized technical aspects without accurately assessing the competitive situation and marketing strategies. A-F manufactures especially rely heavily on the local and traditional regional markets, and one of the main problems facing private A-F sector industry is the lack of marketing and promotional skills. Thus, even businesses producing a good quality product with competitive prices have difficulty in finding export markets due to the lack of marketing capabilities.

Due to the relatively small size of most A-F industries, operations management systems such as production planning and control, inventory management, maintenance management, product costing and other related systems can be simplistic. The existence of appropriate quality management systems is notably deficient. Many companies rely on the routine testing carried out by the MOH and other government authorities.

Formal R&D activities are practically nonexistent in the A-F industry. This is mainly due to the lack of incentive for food manufacturers to conduct R&D. Low competition and the general lack of discernment of the average consumer have not motivated A-F manufacturers to apply product development to gain a competitive edge. On the other hand, even companies, which do attempt to conduct such activities lack skill and expertise. With the lack of institutions and firms, which are capable of providing R&D services to the local A-F industry, it is difficult for firms to attempt to initiate such activities.

Export marketing activities have been mainly limited to traditional export markets in Arab countries facilitated by bilateral trade; few A-F manufacturers have penetrated nontraditional export markets. The poor export performance of the food industry to nontraditional markets is mainly due to the lack of export marketing strategy and policies. Through the interviews carried out during the survey, it was found that few A-F manufacturers undertake market studies or develop marketing strategies to secure export markets.

Syrian A-F manufacturing has emerged as one of the most dynamic sectors of the economy. A range of goods that were previously imported legally or smuggled into the country are now produced in Syria. Joint-ventures between the two sectors have also become more common. However, social considerations continue to set limits to reforms. Due to fears of more unemployment, a serious rationalization of state industry is not expected in the near future. In the short-term, Syria's state A-F industry will continue to play a dual role: as a provider of inferior but cheaper products for Syria's lower income groups, and a supplier of certain raw materials.

Trade with Syria is complicated by a number of barriers, including an import license system. Private sector imports require a license from the Ministry of the Economy and Foreign Trade according to an official list of items eligible for import. This outlines the goods for which import licenses are available, but does not imply an automatic granting of such a license. Priority is awarded to industrial and agricultural raw materials and inputs. The import of many basic commodities, such as wheat, is restricted to state trading establishments or specifically licensed private traders.

The number of products contained in the list has expanded greatly and new ones are constantly being added. However, others are occasionally withdrawn at short notice. Even when a certain product is on the list, its import is often restricted to a specific purpose and a certain type of company. Reliable information, including restrictions, is often difficult to obtain. (Firms established under Law No 10 are exempted from prevailing import restrictions and are able to obtain licenses for products not referred to in the list.) As the protection of local production is the centerpiece of Syria's commercial policy, a number of foreign A-F goods remain officially banned. With local A-F manufacturing expanding, the number of products affected by this policy may rise.

2. Syrian government international trade agreements

The collapse of the Soviet bloc has meant the pattern of Syria's foreign trade has changed dramatically. From over forty percent in the 1980s, mainly conducted under bilateral agreements, the former COMECON economies now account for about five percent of Syrian exports. At the same time trade with the EU -- conducted freely and not bilaterally -- has grown from thirty percent in the 1980s to around sixty percent. This pattern is likely to continue, particularly with the prospect of an association agreement with the EU which would give Syrian exporters improved access to European markets.

The EU signed a co-operation agreement with Syria in 1977. The development of relations between the EU and Syria was slow after that, though many expect that this will now change with the declaration by the Syrian government in late 1997 that it was ready to begin looking at a Euro-Med. Partnership accord. As agreed in Barcelona in 1995, Syria has to meet other political and economic conditions to be part of a free trade area by the year 2010. The Syrian government is aware that the country's primary export market is the EU, but remains wary of making major concessions.

There are fears among the A-F firms interviewed of recession at the beginning of a future European partnership, but most feel that the situation will improve afterwards. Some also expect that introducing advanced technology through joint ventures and incoming investments in A-F will improve competitiveness on both the local and export levels. Dr. Rateb Shallah, head of the Damascus Chamber of Commerce, is on record as saying that Syria's "ability to enter and compete in the EU markets will determine our exporting future." It was also mentioned by some interviewees that Syrians tend to prefer European to locally produced goods; thus, with the Euro-Med. agreement, lower standard European products will enter Syria's market more easily and harm the A-F industry by competing with it sharply.

In the next few years Syria will be called on to harness the opportunities introduced by its eventual adhesion (along with other regional economies) to the World Trade Organization (WTO) as well as the Euro-Med. Partnership agreement, and which comprehensive regional peace could enhance. Views on the impact of the WTO on Syria's A-F sector vary but tended to be apprehensive. In the long term it was felt that the WTO could be beneficial, but in the short run it will harm A-F business because of tariff cuts. Short-term pessimism was voiced in particular as some of Syria's neighbors are adapting to the WTO progressively. Important producers and exporters who could compete with Syrian A-F under impending WTO rules include the countries of South Asia, as well as Egypt and Turkey. Many think accession to the WTO will necessitate more state support to industry and cooperation between businesses and the government.

The lack of information in Syria on export markets and regulations and the lack of skilled marketing staff, which is in extremely short supply in the country, also constrain the ability of A-F manufacturers from targeting wider foreign markets. With respect to promotional activities, food manufacturers have increased these locally, but export activities are still limited.

One of the most widespread problems in Syrian A-F products is the low grade and quality of packaging. To be better aware of these issues, a few firms make a point of participating in specialized world exhibitions. Another problem related to marketing is the lack of export marketing skills and expertise in A-F companies. Although some marketing firms have attempted to provide such services, they have not been entirely successful. However, if support were given to such companies and to A-F manufacturers in accessing export markets, firms with exportable products would greatly benefit from the opportunities, which would be created through these efforts.

Whether in R&D or marketing, there is generally a lack of skilled and qualified personnel who are capable of developing and maintaining systems in these areas. The lack of skills and expertise poses a major obstacle to improving the export potential of the A-F sector since whatever solutions, systems or projects are implemented, these will not be sustainable unless there are skilled personnel within the companies who will be able to maintain these systems and develop them.

Increased production in the industrial sector as a whole is among the priorities of the government, but due to the limits of internal demand this can only be sustained by an expansion of exports and the diversification of markets. However, there is no specialized institution or organization in Syria dealing seriously with export promotion. The Ministry of Economy and International Trade is responsible for overall trade policy, and other ministries, including the Ministry of Finance, carry out functions, which have a bearing on trade. On the whole, firms complained that there were no serious attempt to create or support institutions aimed at supporting this industry.

On the private side, A-F firms are well represented in chambers of commerce and industry exist in Syria. Services of marketing organizations, export centers, and information networks, as well as advisory, design and R&D support, are provided by private organizations such as these chambers. Some efforts have been undertaken by them but the results are still modest and do not involve effective strategic decisions and actions to promote and sustain the whole industry. The general feeling among firms regarding such support institutions was negative, though it was admitted that the chambers were trying to improve the situation by organizing or supporting trade missions, and by informing the industry about fairs and exhibition held abroad. However, the impact of such efforts was seen as limited. It was also felt that there was still no serious attempt to inform firms about trade agreements and other aspects of international relations which might impinge on Syria's A-F business.

The Official General Establishment, for Consumption distributes some state-produced A-F products. The marketing of the private sector's products is usually made directly by the manufacturer itself to wholesale merchants and retailers in Syria. There are normally no contracts for marketing between the industrial companies and commercial firms. This is particularly true for small workshops which tend to produce for a merchant according to his specifications.

International marketing of Syrian A-F is similar to local marketing. The sole difference is that the role of the government is very limited. More is being said about encouraging state companies to export, but this is not having any tangible effect. Private sector companies set up direct external relations with their clients in the exporting countries. The individual export merchants are more active than the manufacturing companies, but still lack the support of specialized national export centers.

The absence of special companies for exports of A-F that can take care of marketing products outside the Arab world is a problem. The industrialist himself ends up marketing his production both inside and outside the region, sometimes doing badly in places with which he is not familiar.

An example of the current state of Syria's marketing is provided by one of the country's most successful export trading houses. It does not specialize in a particular kind of production, selling such totally unrelated goods as clothes along with A-F products. It still mainly exports to a number of East European countries, though its experience in exports is still insufficient in comparison with foreign competitors in these markets. Syrian trade firms do not depend on promotional institutions and state export agencies. These companies only rely on their own skills, and do not have enough knowledge about the A-F industry in the world. They often do not even have enough knowledge about nearby external market or the activities of competitors.

Exhibition activities have started to increase as merchants and manufacturers realize the importance of promotion. The annual Damascus International Fair still provides an important venue for Syrian A-F, but the private sector has also been increasingly active in this regard over the past five years. Private Syrian participation in other Arab fairs abroad is as well as in European ones also rising, both reflecting and inducing more concern with international markets tastes, as well as packaging and promotion. But despite these activities, the promotion of Syrian A-F goods is still weak.

Though more attention is currently given to business information in Syria, the country's commercial data system and networks are still limited. There is no single government institution or a consultancy office that can easily and cheaply provide the investor or the industrial company with the needed data on A-F with any accuracy. Consequently the new investor finds himself incapable of collecting the necessary data in order to make a feasibility study for his project and has to depend on himself. Limited available information comes from chambers of commerce and industry, the state, and some embassies. The EU business center set up recently is also supposed to provide Syrians with information on markets in Europe.

Businesses demand more transparency in getting information from different state offices. However it is ironic that state companies themselves generally do not have the right information on international markets or sales managers who have contacts with foreign markets. Instead they wait for buyers to approach them.

4. Quality control measures and their application

Syrian safety and quality measures, the extent of conformity with international norms (ISO 9000), and norms and standards for A-F products are weak. In this context, A-F industry services lacking in Syria include accredited quality system certification (ISO), calibration with international physical standards and measuring and testing equipment, and A-F product testing laboratories

MOS imposes certain restrictions on the import of raw materials used in the A-F industry. This forces A-F factories to utilize materials which may not be of the required quality. Many specific regulations imposed on the A-F industry and related to health and hygiene are issued and enforced by the MOH. Otherwise, Syria is generally characterized by lack of a national measurement, standards, testing and quality system to set a framework for industry in areas related to measurement, standardization, calibration, testing, certification, accreditation, etc. Most industry in Syria has operated under a protected environment with little motivation to improve product quality. This has resulted in Syria's A-F industry facing a number of problems related to technology, product quality, etc. In the local market, A-F products are generally considered to be of a lower grade and quality than imported products; the relatively low purchasing power of the Syrian consumer makes low price the determining factor in the sale of A-F products rather than high quality. This orientation towards the production of low quality-low price A-F products as handicapped local industry.

Syrian hygiene practice is lower than that generally required by international standards. In the A-F industry, the existence of appropriate quality management systems is deficient. The survey of the local A-F companies showed that few have sophisticated in-house equality control activities in the form of inspection and test of products. Most companies rely on the routine testing carried out by the MOH and other government authorities. The management in some companies seemed to think that the checks carried out by the MOH were sufficient to ensure the quality of their products and that expensive internal inspection and test of raw materials, in process and finished product was unnecessary. Even where inspection and test activities were found to exist, these were usually limited.

Aside from the issue of the product specifications, the A-F industry also faces problems in quality. In light of the increasing quality-consciousness of the consumer in export markets, this forms a major obstacle towards increasing Syria's exports of A-F products. Though standards for A-F packaging and labeling exist, they are not entirely compliant with international ones. Some products suffer from the quality of packing. To be better aware of these issues, a few firms make a point of participating in major world exhibitions.

Whether in hygiene, quality control, or other areas, there is generally a lack of qualified personnel who are capable of developing and maintaining systems in these fields. The lack of expertise poses an obstacle to improving the export potential of the A-F sector since whatever projects are implemented, these will not be sustainable unless there are skilled personnel within the companies who will be able to maintain them.

Syrian A-F manufacturers' awareness of the standards and specifications (S&S) issue is limited. This is a reflection of the negative situation prevailing for S&S in Syrian industry as a whole. The main state body for S&S in Syria is the Ministry of Industry's Syrian Arab Organization for Standardization and Metrology. This sets the Syrian National Standard for individual products, although some of these go back to the 1970s or 80s. In doing so it relies on the

Codex Alimentarius Commission standards, those of the FAO/WHO, and the standards of countries including Egypt, India, Iraq, Jordan, Kuwait, Lebanon and others, as well as miscellaneous standards for specific items (e.g. beer). Private sector S&S must be approved by the above body and authorized by the MOS. However, S&S control is weak, and due to failing to abide by S&S, external markets are being lost by Syria. Lessons have been learned by some Syrian manufacturers from this and they have started to manufacture to European S&S. In every government firm there is a technical administration that supposedly sets specifications, but it has no efficient staff to implement them effectively.

The difficulties Syrian products face are often concerned with quality. Sometimes good quality raw materials are unavailable; otherwise quality may be missing in manufacture and finishing. The difficulty in getting good intermediate products is illustrated by the lack of Syrian A-F of higher quality. Some importers also look for cheap A-F, which is sometimes of poor quality. So some companies are now considering the possibility of establishing their own factories for intermediate goods. For firms whose equipment is new, product defects tend to be within the accepted international limits. These firms also have a special section for quality control at different stages of production, and their products comply with the international standards.

The Syrian Chamber of Industry reported in 1997 that at ten Syrian firms have received ISO 9000 certification and around fifty others are about to do so. It added that more than 100 other establishments are working to get the ISO. Although such systems are not mandatory for exporting, the lack of ISO has become an informal obstacle to penetrating nontraditional markets, as most importers expect the existence of these systems to provide assurance of consistent quality. For exporters, some qualitative restrictions imposed by foreign countries on Syrian goods are a problem. ISO 9000 is increasingly hampering some export activities; it and other factors impinging on quality were seen as problematic by some exporters. They demand the development of the activities of the present state S&S body to help develop ISO certification. S&S are still not a subject of serious attention in the A-F sector in Syria. The country still suffers from inadequacy and lack harmony in this area. This will become a major problem as standards such as ISO 9000 are being applied in other countries of the region, particularly Israel. Yet some in the Syrian A-F sector actually complain about this instead of rushing to adopt ISO.

Standards for A-F packaging and labeling exist, but they are not entirely consistent with international norms. Without information on the regulations and standards which their products must meet to enter the markets and the general environment of the market, A-F manufacturers will not be able to enter nontraditional markets even if they do have the capability to meet these requirements.

The management in many companies feels that the checks carried out by the MOH were sufficient to ensure the quality of their products and that internal inspection and test of raw materials, in process and finished product was unnecessary. Even where inspection and test activities were found to exist, these were usually limited.

Aside from the issue of S&S, the A-F industry also faces some problems in the quality of their products. In light of the increasing quality-consciousness of the consumer in export markets, this forms a major obstacle towards increasing Syria's exports of A-F products. Sometimes good quality raw materials are unavailable; otherwise quality may be missing in manufacture and finishing. The difficulty in getting good intermediate products is also important. Some importers also look for cheap A-F, which is sometimes of poor quality. So some companies are now considering the possibility of establishing their own factories for intermediate goods. For firms whose equipment is new, product defects tend to be within the accepted international limits. These firms also have a special section for quality control at every stage of the production, and their products comply with the international standards.

Despite some common points, problems of the state A-F sector generally differ from those of private business. Poor maintenance and lack of professional technical staff have also led to a low quality of A-F production. There is a shortage of sufficient numbers of technical staff such as engineers specialized in A-F; A-F plants also lack of skilled labor with experience. This obstructs the possibilities of achieving quality control in the production process.

They demand the development of the activities of the present state S&S body to help develop ISO certification. For exporters, some qualitative restrictions imposed by foreign countries on Syrian goods were a problem. ISO 9000 is increasingly hampering some export activities; it and other factors impinging on quality were seen as problematic by some exporters. For private sector users of imported raw materials, the state's tight hold on importation was considered to be a major irritant.

5. Incentives

Incentives directly provided by the government to facilitate the production and marketing of Syria's A-F products are practically non-existent. Indirectly, some government policies and regulations act as incentives for the A-F industry in general, though they do not target it in particular. The most important of these is Law No. 10 which provides tax and other exemptions as discussed above.

Tariffs imposed on practically all imported A-F products have acted as a form of incentive through protection of the local A-F industry. Local food product manufacturers have generally come to rely on the fact that imported foodstuffs are higher priced than those locally produced in the marketing of their products in the local market. This has given the local A-F industry a chance to grow. However, the A-F industry in Syria has thus operated under a protected environment with little motivation to improve product quality or reduce costs. On the other hand, the traditional markets in the region, i.e. neighboring Arab countries, have been made accessible to food manufacturers through bilateral agreements. This cocooning of the local A-F industry, although providing protection, has resulted in the lack of competitiveness of products both in regards to quality and cost.

The response by interviewees to questions on whether there were any incentives provided by the government to the A-F industry was mainly negative. Some companies even said that the state was hurting business and complained about general difficulties in dealing with government departments. Asked to comment in particular on specific topics such as subsidies, tax breaks, financial incentives, and help with export promotion, most companies complained that they were not receiving any state assistance. No large-scale technical assistance to the A-F sector is being provided by the state. In order to improve production, some firms have undertaken in-house training at their own expense.

The state distributes some A-F products. Marketing through the government is characterized by bureaucracy but a lower profit rate compared to private sector merchants. More is being said about encouraging state companies to export, but this is not having any tangible effect. The annual Damascus International Fair still provides an important venue for Syrian A-F.

Financial services provided by the public sector are poor, and talk about a reform of the banking sector and the establishment of mixed public-private banks has been stalled, as has the debate about opening a stock exchange. In this difficult situation, the plight of the manufacturer -- including producers of A-F -- is even worse, with only about ten percent of bank loans going to industry, and at high interest rates. The SP cannot be converted freely. Public authorities are permitted to keep all income from exports, while the private sector can only keep 75% of export value, being forced to sell the rest to the state. This is clearly a disincentive for the private sector.

Syrian A-F industrialists complain of the high income tax on profits. Added to that is machinery tax, real estate tax, stamp duty, export tax, and others. Industrialists also complain of the high customs on raw materials. These duties raise cost and restrict the ability to compete. The government has taken some steps to allow for the temporary entry of raw materials which are meant for manufacturing and re-export; these materials are exempt from customs. The government is becoming more willing to discuss customs policy and complicated export and import procedures, and has taken steps towards their facilitation. But private industrialists are demanding more change.

With little in the way of incentive-rich free zones and other services being extended to industrialists, they complain of poor utilities. For instance the cutting of the electric current forces them to buy costly generators. They are also obliged to install electric and drain lines on their own expense, and dig wells for water. They have repeatedly asked the government to establish industrial zones which have all such installations and services (electricity, water, drainage, roads, phones etc.).

Since the early 1980s, the government has encouraged the production of wheat, sugar beet to meet the growing domestic consumption. The state has also established A-F industries that employ inexpensive raw materials. The policies of the government have also aimed at reducing dependency on imports of wheat and sugar. Production of wheat and sugar beet has been expanded to larger areas in both irrigated and rain-fed regions. The government's price and exchange rate policies include subsidization of the output prices of the selected crops, of input prices, and of factor costs. This has acted as an incentive to some A-F producers. Increasingly, local private sector A-F plants are using state establishments for the supply of basic raw materials. It thus appears that Syria's state industry will continue to play a dual role as a provider of: inferior, cheaper products for the country's lower income groups, and, for some local industry, a supplier of some raw materials.

6. Market structure

The size of A-F firms in Syria is related to the traditional division in the economy between public and private sector industrial activity. This industry has continued in spite of the challenge of modern technology, with thousands of private workshops still producing various kinds of A-F. The larger A-F businesses were nationalized in the late 1950s or in the 1960s. A-F production in the private sector today still involves mainly small and medium industries (SMIs), though this has started to change after 1991. In the private A-F industry in Syria, numerous businesses have grown from small family firms to larger industries but have retained the family business atmosphere in many respects. The most widespread type of private A-F factory is producing on a relatively small batch size basis, and employs less than 100 people each. In many companies, inappropriate technology is selected and the result is excess capacity. A-F manufacturers also suffer from the inability to match new developments in food technology and packaging in the rest of the world. Some of the larger companies have been able to keep up with international standards of technology and product quality. However, even these companies face problems in manufacturing and in packaging.

Due to the relatively small size of most A-F industries, operations management systems such as production planning and control, inventory management, maintenance management, product costing and other related systems are usually simplistic. However, problems have started to arise with companies which have expanded from small factories to become medium sized or even large industries with a wider variety of products. The previous simple operations management systems are no longer appropriate for a larger capacity, wider product range undertaking. As most companies lack the skill and expertise necessary to develop these systems, this results in problems. For most A-F private SMIs with limited capacity and revenue, the cost of development of these systems is not justifiable.

Despite some common points, problems of the state sector generally differ from those of private business. Products of the Syrian public A-F industry sector are sugar, flour, dehydrated onions, beer, miscellaneous canned foods, biscuits, chocolate, macaroni, arak, vegetable oil, margarine, milk, and wine. Sugar in particular is receiving considerable attention from the state. The government is planning to build a new sugar factory in Homs to use local production of sugar beet and meet rising demand. Domestic consumption in 1996 was 550,000 tons, of which under half was met locally by six government factories. The new factory, which is to process around 6,000 tons/day of sugar beet, will produce around 225,000 tons/year (t/y) of white sugar, taking total Syrian output in the year 2000 to some 425,000 t/y.

Joint ventures between the two sectors have also become more common. Particularly in areas traditionally controlled by state industry, the government has been eager to promote such links. Law No 10 has provided private business with a range of investment incentives, and the public sector is being modernized and gradually restructured. Until now, the position of Western firms towards Syria's industrial sector has been one of caution. Whilst many have been willing to sign franchise agreements requiring little capital commitment, direct investment projects by international companies remain rare. Firms are conscious of restrictive currency rules and unsure of market developments. A handful of firms from European countries including Switzerland and Austria have, however, recently committed capital to local joint venture projects. Notable joint ventures involving regional partners include a recently formed Syrian-Lebanese company for vegetable oil production, with a capital of \$5.6 million.

The following Syrian public sector firms dominate their respective lines of production: Syrian Industry Co. for Oils (vegetable oil, margarine), Modern Co. for Food and Agriculture Industries (tomato paste, peas and other vegetables, juice), Syrian Canned Food Co. (apricot jam), Syrian Co. for Manufacturing Biscuits and Chocolate (biscuits chocolate, other sweets), Al Sharq Food Production Co. and Barada for Beer Manufacturing (beer), Arabian Dairy Co. (butter, yogurt), Syrian Arab Co. for Grape Manufacturing (arak, wine, brandy), Al Yarmouk Macaroni Manufacturing (macaroni), Syrian Peanut Marketing and Manufacturing Co. for (nuts), and Dehydrated Onion and Vegetable Co. (dehydrated onions).

7. Demand

| | 1992 | 1993 | 1994 | 1995 | 1996 |
|------------------------------|-------|-------|-------|-------|-------|
| Population(million) | 12.96 | 13.39 | 13.84 | 14.19 | 14.62 |
| Annual population growth (%) | 3.4 | 3.3 | 3.4 | 2.5 | 3.0 |

GDP (at constant prices, 1985)

| | 1992 | 1993 | 1994 | 1995 | 1996 |
|---------------------|------|------|------|------|------|
| GDP (SP billion) | 106 | 112 | 120 | 128 | 131 |
| Per capita GDP (SP) | 8183 | 8388 | 8676 | 9016 | 8945 |

CPI (1990=100)

| | 1992 | 1993 | 1994 | 1995 | 1996 |
|-----------------|-------|-------|-------|-------|-------|
| Index | 121.0 | 137.0 | 158.0 | 170.6 | 184.7 |
| % annual change | 11.0 | 13.2 | 15.3 | 8.0 | 8.3 |

Index number for selected retail prices (1990 = 100)

| | 1992 | 1993 | 1994 | 1995 | 1996 |
|-------------------------|------|------|------|------|------|
| Oils | 115 | 129 | 130 | 136 | 181 |
| Sugar and sweets | 121 | 126 | 190 | 216 | 222 |
| Milk and dairy products | 115 | 116 | 122 | 135 | 148 |
| Other food | 121 | 124 | 135 | 147 | 169 |
| Non-alcoholic drinks | 111 | 111 | 157 | 191 | 170 |
| Alcoholic drinks | 136 | 146 | 173 | 189 | 196 |

Tariffs are imposed on practically all imported A-F products which are thus generally higher priced than those locally produced. At the same time, Syria state A-F industry has become a provider of inferior, but cheaper, products for Syria's lower income groups, with the local private sector selling intermediately priced products. Administered prices prevail in the country's public sector, but reforming pricing methods have been the particular focus of government attention in recent years. Although efforts have been made to bring prices in line with actual production costs, social considerations continue to set limits to reforms.

EGYPT AGRO-FOOD SECTOR

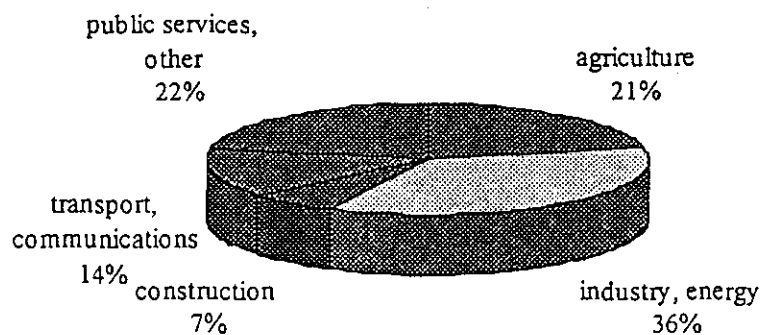
1. General data on the Egyptian economy

A- Macro-economic indicators

GDP: 1995 \$66.1 Billion or \$1115 per capita (1995 population: 60 Millions)

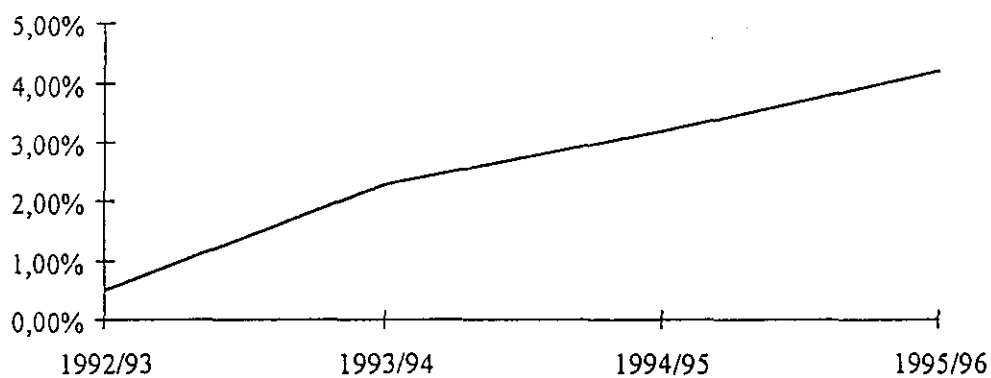
GNP Division according to sectors

GNP division (1994)



Source : IMF

GNP growth at constant prices

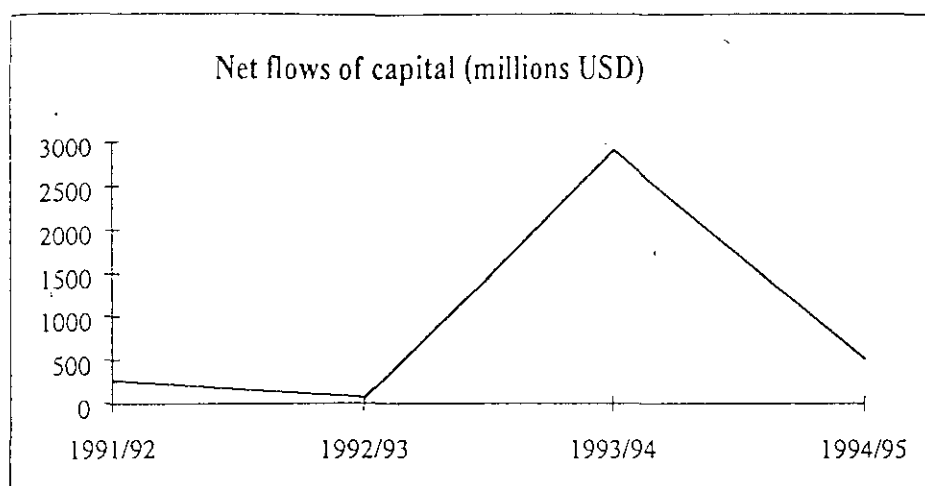


Source : CAPMAS

FDI: Variability due to political situation

| Year | FDI (millions USD) |
|---------|--------------------|
| 1991/92 | 359 |
| 1992/93 | 453 |
| 1993/94 | 1 285 |
| 1994/95 | 677 |
| 1995/96 | 140,9 |
| 1996/97 | 139,5 |

sources : CAPMAS



Source: CAMPAS

i) Debt:

Total exterior debt: \$ 31.1 Billion

Ratio of exterior debt / GDP: 47.1%

Debt service (external + internal): \$2 Billion, or 10.7% of the export revenues

Change reserves: \$ 18.9 Billion (end 1996) or 12.1 months of imports

ii) Egyptian Lira currency stability versus USD:

December 1992: \$1 = 3.34 EL

December 1997: \$1 = 3.4 EL

Large stability of the exchange rate during the period

iii) Debt interest rate:

A decrease of the rate: From around 16% in 1992 to 13% in 1996

iv) Average inflation:

A decrease in the rate: The rate of inflation was 12.1% in 1993 a fell to 7.2% in 1996

Since the beginning of the 90's Egypt has undergone a structural adjustment (IMF package, world bank). The program, classically, contains two phases: The first being to stabilize demand and the second pertaining to supply. This program allowed the process of liberalization and privatization. The privatization of the public companies already started around 1995 and concerns certain Agro-food industries.

In view of the EUROMED agreements and under the conditions of the GATT, Egypt also started a liberalization process (decrease in custom charges, elimination of the quantitative restrictions, elimination of the non tariff barriers). There has been a decrease of tariffs but that concerning the rest of the effects are more uncertain (restriction of the non tariff barriers in particular with the manipulation of the expiry dates and the frequent changes in rules and regulation). External trade

Commercial balance (\$US million)

| | 1989/90 | 1990/91 | 1991/92 | 1992/93 | 1993/94 | 1994/95 |
|---|---------|---------|---------|---------|---------|---------|
| Exports | 3 144 | 3 887 | 3 636 | 3 416 | 3 065 | 4 447 |
| including agriculture products | 407 | 226 | 246 | 296 | 326 | 615 |
| Imports | 11 441 | 11 425 | 10 040 | 10 732 | 10 714 | 11 280 |
| including food | 3 108 | 2 864 | 2 868 | 1 876 | 1 940 | 2 760 |
| % | 27,17% | 25,07% | 28,57% | 17,48% | 18,11% | 24,47% |
| Commercial balance | -8 297 | -7 538 | -6 404 | -7 316 | -7 649 | -6 833 |
| Production in the agro-food (millions EL) | 7 736 | 9 392 | 10 599 | 14 720 | 15 086 | |

Foreign trade in 1995
(in thousand LE)

| Regions | Imports | Exports | Balance of trade |
|-------------------|------------|------------|------------------|
| All regions | 39 890 930 | 11 953 906 | -27 937 024 |
| Arab countries | 1 525 320 | 1 688 392 | 163 072 |
| Eastern Europe | 3 952 606 | 1 242 188 | -2 710 418 |
| Western Europe | 16 584 393 | 5 035 390 | -11 549 003 |
| Asian countries | 5 751 382 | 1 765 435 | -3 985 947 |
| African countries | 548 346 | 97 585 | -450 761 |
| North America | 7 800 687 | 1 868 739 | -5 931 948 |
| South America | 141 275 | 3 514 | -137 761 |
| Central America | 1 092 152 | 40 576 | -1 051 576 |
| Oceania | 517 619 | 5 469 | -512 150 |
| Other regions | 1 977 150 | 206 618 | -1 770 532 |

Source : CAPMAS

Egypt is deficient in all exchanges except those with the Arab countries, the principal partners are the countries of Western Europe and North America.

Importance of service revenues (1994-95): Tourism \$2299 Million

Suez canal \$2058 Million

Banking reserves transfers \$3279 Million

Conclusion:

There's a great vulnerability in the Egyptian economy which makes the political and macro-economical stability primordial. The state has a large bearing in the economy at the level of both, the productive sectors and the services sector (more particularly banking and insurance)

B- Brief outlook on the sectoral structure of the economy

i) Agriculture

Raw data:

20% pf the GDP, 34% of the labor force

20% of the exports excluding petroleum

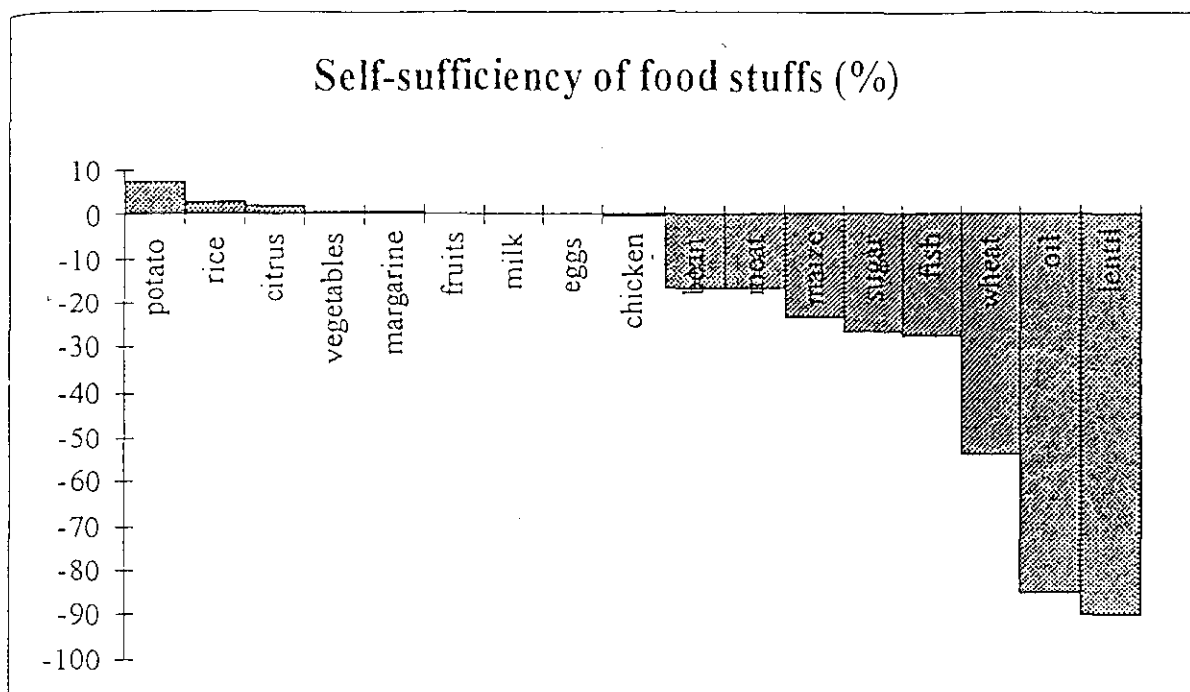
2.6 Million Hectares: Delta of the Nile valley, certain desert plots which are very expensive. These land produce mainly fruits and vegetables.

State of the arts technology use: Drip irrigation or through bubblers, greenhouse planting.

Main agricultural products (Thousands of tones)

| | 1992 | 1993 | 1994 | 1995 | 1996 |
|------------|--------|--------|--------|--------|--------|
| Vegetables | 9 784 | 10 041 | 13 795 | 14 060 | 15 225 |
| Sugar cane | 11 708 | 11 705 | 12 411 | 13 822 | 11 648 |
| Fruits | 5 344 | 5 117 | 5 146 | 5 480 | 6 170 |
| Corn | 4 431 | 4 943 | 5 821 | 6 300 | 5 879 |
| Wheat | 4 648 | 4 785 | 4 437 | 5 722 | 5 813 |
| Rice | 3 908 | 4 159 | 4 162 | 4 585 | 4 888 |

source : Ministry of agriculture



Until 1970, Egypt was self sufficient and was even a net exporter of agricultural products. However, and due to various constraints, it is now a net importer of agricultural crops. This dependency is even increasing (estimate: 50% of the population's needs or the equivalent of \$ 3.1 Billion worth of imports). Egypt is self sufficient in fruits and vegetables, but remains under large shortages for other agricultural sectors.

Research is now focusing on products with a potential to be adapted to the European market.

Constraints:

- Water resource limitation: 90% of the cultivated lands are irrigated, but there are problems with the traditional methods (submersion, drainage network), with soil salinity and with the increase of the level of the underground water. Resources are limited to that of the Nile and are at a risk of becoming insufficient if there is no improvement in the management of the drainage network.
- Demographic increase: 2.1% per year.
- Reduction of the agricultural area: Agricultural lands only represent 2.5% of the land. The gains in terms of area increase gained by the desert are in part compensated by the urbanization which is developing on the rich lands of the delta.
- Average land area: 64% of the total surface is occupied with 2 Ha parcels.
- Pollution risks: To enhance productivity, there has been a large subsidization program which lead to an increase in the fertilizer rate.

Political reform and restructuring measurements:

1986: Reform of national agricultural policy in order to

- halt the progression of a chronic deficiency
- Insure the rural development of the country and promote export.

The step by step liberalization which leads to the investment of the private sector in new techniques will ultimately result in better use of the agricultural resources (water, labor, energy)

Adopted measures:

- Suppression of the controls executed by the government on the agricultural crops (but a maintaining of a support price), on agricultural rotations, on fallow lands, and on the minimal quotas of the harvest delivery by the producers
- Increase in the prices of sugar cane and cotton to get them closer to the international prices
- Suppression of subsidies on agricultural inputs (fertilizers, seeds, herbicides...)
- Suppression of PBDAC on the distribution, import and export of agricultural crops. Now that it is in competition with the private sector, the PBDAC is heading exclusively towards the financing of agricultural projects
- A decrease in the number of state farms and sale of reformed agricultural lands to the private sector
- Reclamation of arid lands and modernization of the irrigation systems
- Modernization of the property law and that of the farming system

All these measures yielded positive effects but serious constraints remain.

Exchange barriers:

Most of the import bans On agricultural products have been suppressed (with the exception of poultry) and a decrease at the level of tariffs (maximum of 50%).

Four difficulties remain:

- Complexity of the process of getting the agricultural products out of the customs (5 different organisms)
- Delays in the process of getting the products out of the customs
- Implementation of new unpredictable procedures
- Non conformity of the Egyptian procedures to those used in other places

Barriers:

- Egyptian standards with criteria specific to the land
- Special labeling and packaging
- Reduced shelf life of the products
- Delays in sample analysis in port and airport areas
- Restrictions on certain ingredients and additives commonly used

A guide is however available to point out the process.

ii) Services

Services include transport, distribution, insurance, banks, telecommunication, information services,...

Services: 51.5% of the GNP in 1985, and 61% in 1994.

Many services are of poor quality and are costly like insurance, telecommunication, ports and transport due to the monopoly of the state and the oligopolic structure of these markets. Public monopolies are protected by artificial barriers based on non-economic criteria (national security, strategic interests,...). Lack of competition is another reason. Users of these services have therefore a comparative disadvantage due to the high levels of the transaction costs.

Egypt began a process of liberalization by the liberalization of the capital account before reforming the real economy due to the loss of capitals during the repression.

iii) Industry

The costs of production are high when compared to the domestic prices and that of the export. Prices barely cover the total costs of the products.

Labor market:

Working code: It is forbidden to lay off employees for economical reasons. Therefore the working code can only be applied to the public sector and to the small part of the private sector which is structured.

2. Governmental policy to encourage investment*A- Government's general strategy*

The government issued a series of measurements in order to promote local investment (because many Egyptian capitals are invested abroad) or foreign which goes under the frame of economy liberalization.

Egypt's main assets vis à vis the foreign investors are the size of the market (60 million consumers of which 2 to 3 million can afford credit) and the geographical position (midway between Europe, the Middle East and Africa).

i) Activity zones

Duty free areas: There are 7 duty free areas (Alexendria, Port Said, Cairo, Suez (2), Ismailia, Damiette), and other projects are being studied: El Ariche and Sinai.

Given advantages:

Profits are exempted from revenue tax. The equipment and machinery used within the establishment and the renovation of firms are exempted from custom taxes. Service charges on temporary entered assets is suppressed. Suppression of charges paid to the GAFI for the initial acceptance of investment projects. Only 20% of the price of a land situated in a new site has to be paid within a period of 2 years with 5 annuity payments.

Price of land: 7 \$/m² for a space with commercial use and 3.5 \$/m² for an industrial project.

3 types of principal activities in duty free areas
 Stocking of products set for re-export or for the Egyptian market
 Handling for the purposes of re-export (Agro-food, packaging)
 Engineering services

For the moment however, there are no agro-food industries in the duty free areas. Foreign investors are only investing in activities which yield fast money and which allows them to recover their original capital in a short period of time. The agro-food food does not belong to such a category of investments even if large companies are having large profits which can exceed 30%.

Fiscal encouragement to attract Foreign Direct Investors (FDI):
 Exemption from taxes on profits for 10 years
 Exemption of custom charges on imported assets
 Import an export are not submitted to the Egyptian law
 Free transfer of royalties
 Free distribution of benefits

Egypt's assets to attract investors:

Exchange rate stability
 Cheap labor (1.3 EL/day which is slightly less than \$4/day) even if productivity is more important than wages
 Fiscal advantages: No taxes, cheap lands
 Market protection
 Opening to the Arab world

New industrial cities:

Three cities are principally concerned: Sadat city, 6th of October, 10th of Ramadan

These cities have been designed to relief Cairo and its suburbs. They are supposed to harbor industrial cities and housing complexes and the prepared infrastructure should be able to handle both.

In practice however, many firms are already established there even if the labor force remains in Cairo. Firms have therefore been confronted to a labor shortage problem. The local labor is not qualified for the execution of the jobs and commuting workers to and fro Cairo is a costly option since there is no public means of transportation which can perform the task in good conditions. Workers are ready to work in these companies but demand higher wages and firms eventually call on less qualified yet cheaper labor.

ii) Organisms

Two main bodies interfere with the promotion of investment: One specialized in agriculture and the other more directed to the industry.

PBDAC (Principal Bank for Development and Agricultural Credit)

Created in 1931, it was the principal credit body for the agricultural sector in order to provide credit needs for a developing agriculture. In 1976, it expands to provide agricultural credit, distribution of subsidized agricultural inputs and marketing of products. In 1994, PBDAC has an extensive national network: A central holding in Cairo (17 BDAC banks, 158 affiliated agencies to the BDAC and 801 village agencies, 4450 Mandubias which are shops to sell inputs and collect payments as well as 38000 workers spread on the totality of the territory.

After the governmental reforms, PBDAC had to redefine its role and activities. Until 1993, 48% of its revenues came from the sale of inputs. Under the suggestion of the IMF, the PBDAC has to separate from this activity which provides work for 12000 people. The objective is to develop the banking activity which is unable to provide its clients with the classic offers it is supposed to. Moreover, it has to compete with commercial banks which are developing their activities in the rural areas and with the Union of Agricultural Cooperatives.

GAFI (General Authority For Investment)

This organism studies the investment files and approves or rejects them according to their conformity with the 230/89 law, it also guarantees a good execution of the approved projects. It has the authority to sanction or even cancel projects which are not conforming to the issued authorization.

The GAFI is the only negotiation authority foreign investors have. It handles the procurement of the execution of a project. Equipment import is free but the GAFI controls the distribution of the benefits.

Since 1991, the procedures controlled by the GAFI have been more flexible:

Immediate approbation of projects with the exception of projects on the negative list

Reduction of the number of applications from 20 to 4 for the filing of an investment demand

Suppression of the special approval needed for banking facilities

Systematic help for location scouting and to obtain access to collective services

End of the tariff preference for public sector companies

Reduction of the negative list to 3 categories if investments (tobacco, defense materials and projects within the Sinai desert).

B- Specific measures to the Agro-food sector**i) Rules concerning the sanitary control**

5 governmental entities are implicated in the procedure of getting the agricultural products out of the customs:

Ministry of agriculture and land reform

Health ministry (sanitary control)

Ministry of trade (import-export department)

Ministry of finance (customs' authority)

Ministry of energy (radiation department)

The general control has changed slightly. For a long time, the Egyptian coding centered on the import control which was executed in a restrictive manner. This situation however this the process of changing.

The 3 ministries which are mostly implicated (health, agriculture and industry) are coordinating their activities through 89 comities under the responsibility of the Egyptian Organization of Standards and Quality (EOS) which is the representative in Egypt of the ISO. Competence problems are a frequent source of conflict between the EOS and the General Organization for Import and Export Control (GOEIC), which is a body created in 1971 to control the import of firms and to execute the quality controls of the exchange deals with the Soviet Union. From than period, the GOEIC has maintained a more restrictive approach than the EOS which states the mutual acknowledgment of the norms whereas the GOEIC continues to inspect every product even if it is certified.

The central laboratory of the ministry of health performs some 17000 tests and analyses per month on the agro-food products. Another important player is the Ventral Laboratory of Food and Feed (CLFF) which implements the controls over imported cereals destined and other feeds destined for animals. This body is completely auto-financed and benefits form important means and of a solid reputation of competence.

ii) Reforms to induce quality improvement

One of the problems faced by the sector in order to export is the bad quality of the Egyptian products as compared to that of the competing countries. To remdiate the situation the government is embarking in a reform which, among other items, engulfs:

The privatization of the EOS

The implication of the private sector in the setting of the norms

Charging of the EOS and of the National Institute for Standards as:

Coordinators of the activities of the inspection services

Elaborators of industrial norms

Deliverers of ISO 9000 certificates

Executors of the training programs for quality assurance

Organizers of scientific and industrial research

Eventual suppressers of the GEOIC.

Transferors of the inspection of agro-food products to the ministry of agriculture, the ministry of health only interfering in the elaboration of the sanitary norms and regulations

(ii) Constraints facing exporters in the sector

Exports of the sector are not very important (2 to 3% of the total exports). Many of the constraints have to do with rules and regulations.

Problems in the management of the draw-back: The system of temporary admission and of the repayment of the tax brings excessive costs for the local exporter. Reforms to enhance the efficiency (replacement of insurance policies by cash deposits as a form of guarantee for the temporary admission application) have been set but not applied.

Insurance cost of the fret is above international levels and is the result of the multiple entry barriers on the local insurance market which is closed to international market and is controlled by the public sector.

Guarantee service in the case of non-payment of exports monopolized by a public company

Procedures' problems with mechanisms of phyto-sanitary which penalizes principally the firms transforming fruits and vegetables.

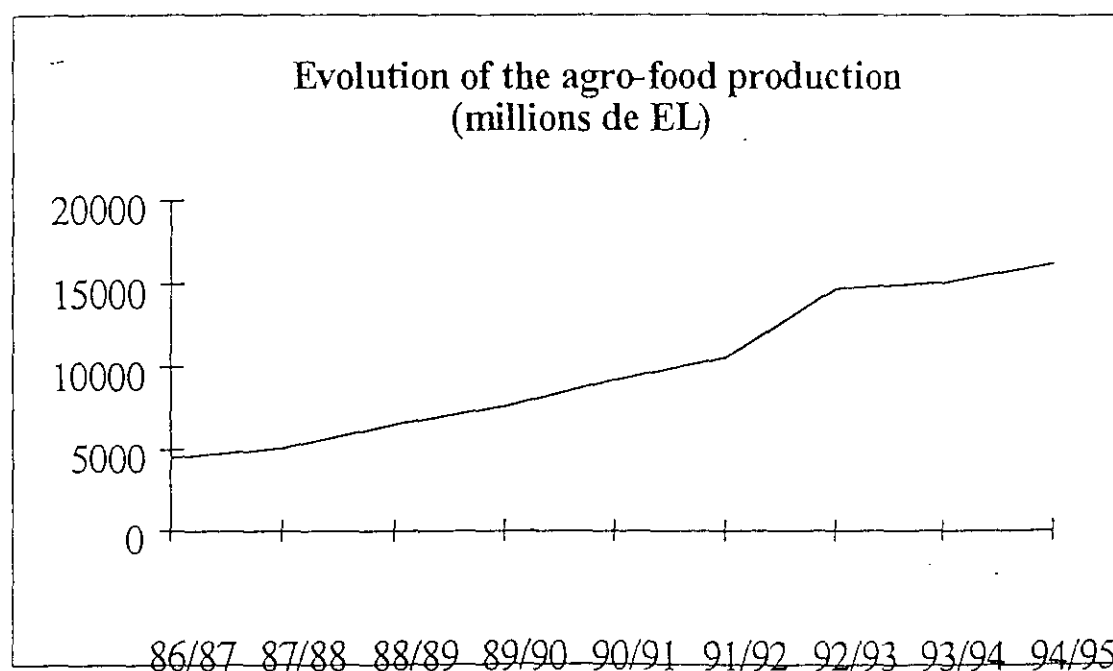
Non-tariff barriers on the inputs like quality control, religious and health considerations, costly readmission for the imported goods when the guaranteed goods have been sent for reparation

3. Agro-food sector

This sector is witnessing a large growth in the order of 15%/year, this is a priority sector and the privatization is already set off.

According to the budgetary census in Egypt the share of nutritional spending is in the order of 52% of the total budget. A change in the eating patterns has been observed in the well to do urbanized population with a trend towards western food, this is mainly due to the arrival of international fast food catering groups and the implementation of large groups of the sector in the country (Nestlé, Philip Morris, Unilever, ...) this trend has had some important effects on the sector.

A- Statistical data



source : CAPMAS

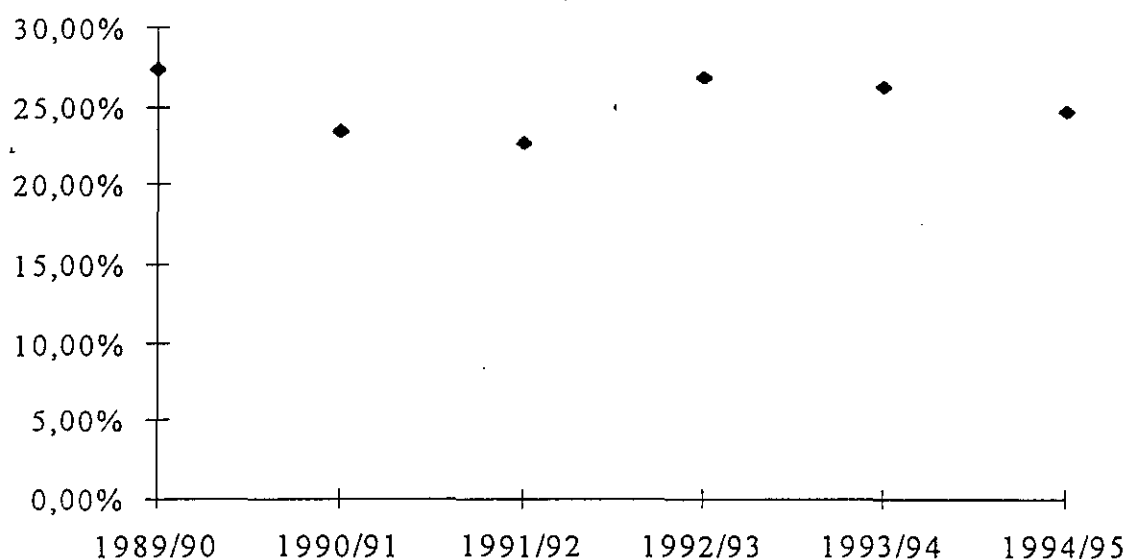
An increase in production is observed, the increase at constant prices is slightly less. However not all sectors and sub-sectors have evolved in the same way.

Republic of Lebanon

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

Annex 36

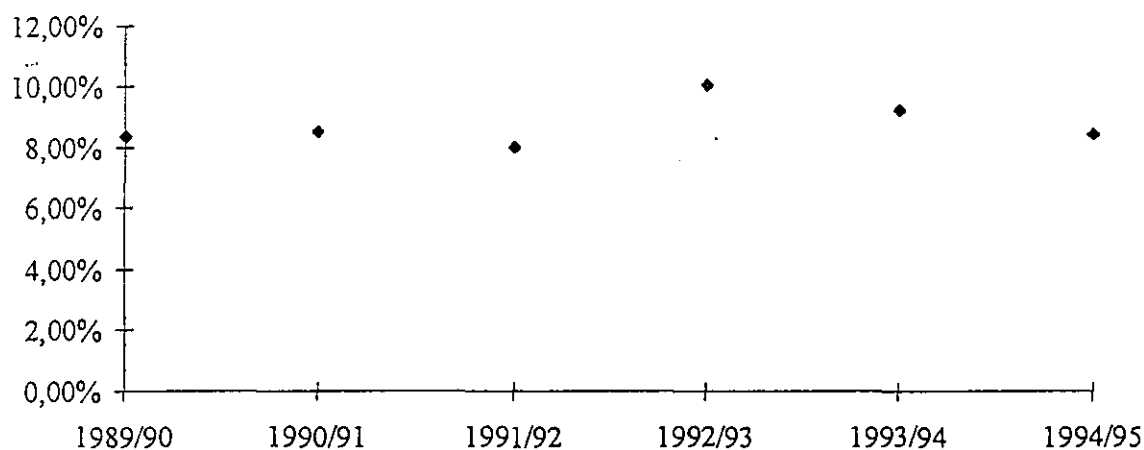
Share of agri-food in industrial production



Source: CAMPAS

The agro-food industry is the first industrial sector even before the textile and confection

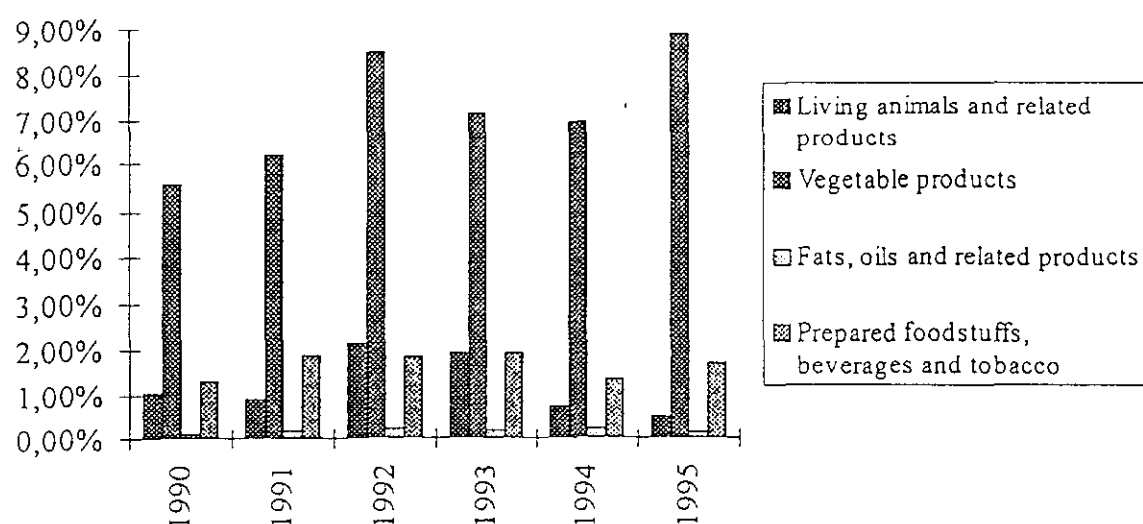
Share of agri-food industries in the GDP



Source: CAMPAS

The weight of the agro-food in the Egyptian economy is not negligible since it represents almost 9% of the GDP

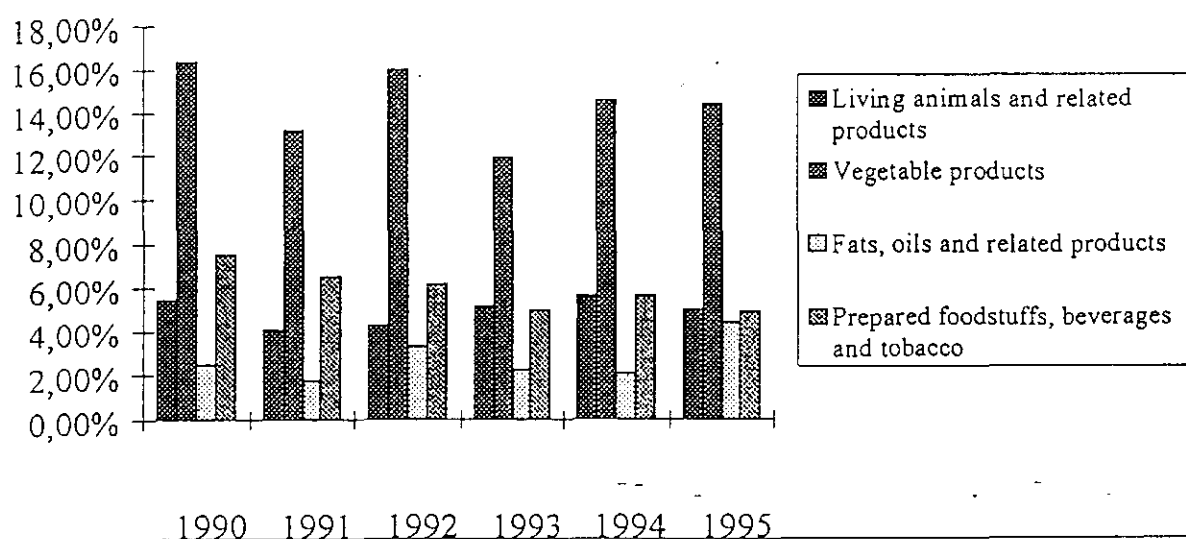
Share in the total exports



Source: CAMPAS

Egypt exports principally raw materials (fruits and vegetables) due to the large competitiveness of its products despite the difficulties to get them to enter the foreign markets (European in particular). But these exports of transformed products are negligible. They are mostly destined to the Arab countries and to the Eastern European countries which require cheap products and whose restrictions on quality are not as tight as that of western countries.

Share of agrifoods in total imports



Source: CAMPAS

Egypt, not being self sufficient has to import a great deal of its nutritional products. The major part of these imports is made of raw materials. The share of transformed products is relatively low due to the large gap between the local prices and that of the imported mainly due to customs.

Exports of principal commodities
(in thousand LE, 1995)

| | |
|---------------------|---------|
| Commodity | 1 995 |
| Sugar cane, refined | 7 659 |
| Oranges | 44 095 |
| Rice | 192 813 |
| Potatoes | 347 484 |

Imports of principal commodities
(in thousand LE, 1995)

| | |
|------------------------|-----------|
| Wheat | 2 975 701 |
| Wheat flour | 202 369 |
| Maize | 1 184 592 |
| Meat chilled or frozen | 600 097 |
| Dairy product | 573 767 |
| Sugar refined | 229 918 |

source : CAPMAS

There is a definite potential to develop exports of agricultural products due to the large competitiveness due to the economy of scale realized in this sector, the firms in this sector own large proprieties and attempt to integrate the production vertically.

B- General description

i) Sector's structure

The sector is subdivided into 3 types of companies:

The large private Egyptian groups which are companies belonging to international groups or which have license agreements:

The big companies of the private sector are the only ones capable of exporting, they have networks outside the country. These networks may or may not be Egyptian. They are highly profitable. There are 10 highly efficient firms in terms of management and utilization of new techniques and they are mostly family type firms which have grown.

Exports are mainly directed to the gulf countries and the Eastern European countries which are countries with no tariff barriers and which don't require high quality products.

These groups have the necessary access to capitals in order to invest. One of the common development strategies is the vertical integration of production. It is mostly the firms in the dairy production and the transformation of fruits and vegetables which resort to this type of strategy.

Public sector companies:

The public sector companies are generally old factories which are not well administered. Often there is a surplus in workers (over 4000 people) and use mainly the products of substitution to imports. They are not profit generating and are backed up by the state just to keep them going. Some of these companies are included in the list of privatization, in that particular case they undergo restructuring (equipment, administration, finance). Privatization is never complete (only 30 to 40% of the capital). However foreign investors enlarge their participation with the buying of new equipment. The program witnesses good results thus far.

Small traditional industries:

The great majority of the firms are small, they have little access to banking credit. The methods of production are largely rudimentary and the products are distributed locally. The requirements of quality and hygiene are quite flexible.

ii) Market's structure

The market is segmented by sub-sector. In certain sectors there is a large local and international competition and therefore the market works as a price regulating mechanism. In other sectors however large firms (private or public) are quasi-monopolistic. In all sub-sectors however, the prices of imported goods are often twice as costly as the local products.

The quasi-monopolistic situation in certain sub-sectors:

Dairy products: Fresh milk (Nestlé 85%, Juhayna 15%) which target the well to do urban class. In the villages the people either consume from their own productions or go directly to small vendors.

Beer: Was previously monopolized by a public company however the firm was privatized and now there is a new comer to the market.

Fruits and vegetables: In general, the products are of good quality but the situation is very different depending on products. In order to export the principal problem remains the access to the foreign markets.
Meat production is basically directed towards the internal market.

iii) Difficulties and solutions

In certain sectors firms cannot benefit from the potential advantage which they might have enjoyed had they been able to export. Some of the difficulties which encounter the exporters are:

- The lack of consumer preference and market trends
- The confection of good quality goods
- A non-standardized packaging
- The misidentification of export opportunities on new markets

Enhancements which should be put to action to increase the competitiveness of the agro-food sector:

- Necessary services of transport
- Post delivery services for cargos
- Increase in the refrigerated transports
- New fret lines to relate Egypt with the African markets in particular

iv) Impact of the changes in the international setting

Egypt was forced to decrease its customs charges due to the WTO (max: 70% and 55% in general) and firms lost a large margin of their protection. On the other hand this decrease has been partially compensated in the agro-food sector by the establishment of non-tariff barriers pertaining to the shelf life of fresh products.

The EUROMED agreements which have not been signed yet are going to increase the import of agro-food products knowing that the difference in price is more important than the difference in quality. It seems that the diversion effect is also more important than the effect of trade creation. The exchange with the EU is much less important than with the Maghreb.

The peace treaty with Israel has not had a major impact especially that the situation is more of a cold peace than anything else. The trade level has been modest apart from petroleum, but in the recent years there has been deals between Egyptian and Israeli firms including knowledge transfer against opening to the Arab world.

4. Field visits report

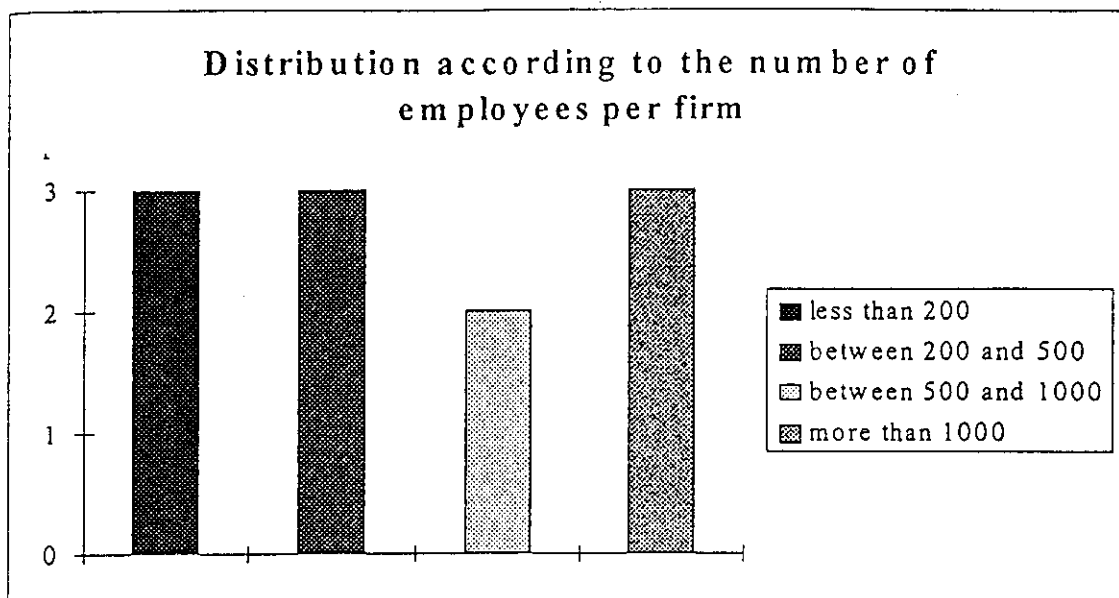
This information is the result of interviews with company managers which could not be included in the company reports. It must be pointed out that the sample is not representative of all the sector with the absence of public companies and certain sub-sectors. The visited companies are the largest of the land depending on the criteria of the number of employees and production, whereas the majority of the Egyptian companies are small scale and traditional. The firms' visit was only done through the Franchem company which sells detergents to these companies and therefore the visits are biased since only the clients of that company could be visited.

A - Description of the sample

List of the visited enterprises in Egypt

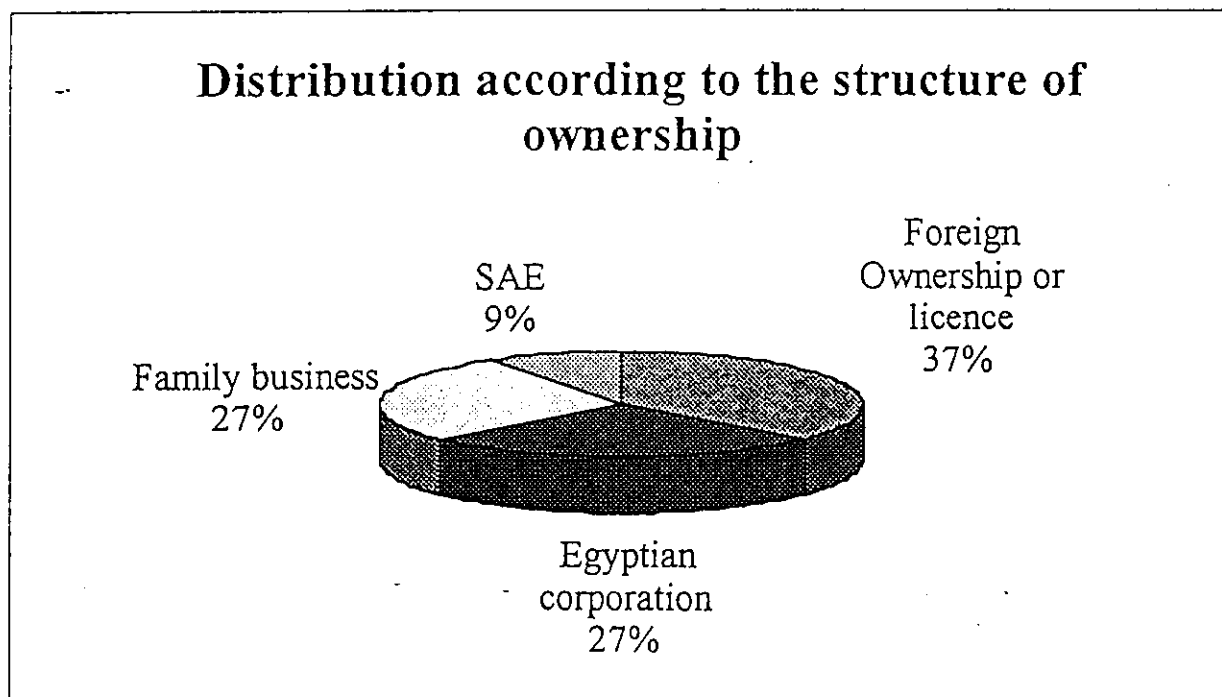
| Name | Activity |
|--------------------|--------------------------------------|
| Sonut- Schweppes | soft drinks, Natural water (to come) |
| Enjoy | milk, yogurt, Juice |
| Edita | industrial croissant |
| Tasty food | biscuits, snacks, chips |
| Al Wadi Hatcheries | One day old chicks |
| Dina Farm | milk, fruits and vegetables, meat |
| Dolce | ice cream |
| Nestlé | powdered chocolate, infant milk |
| Baraka | Natural and gaseous water |
| Montana | frozen vegetables |
| Kimo | ice creams and yogurts |

B - Activity and structure of the industry



The firms employ also many seasonal workers who, most of the time, are not skilled. Workers are initially not qualified but become so at their work place and at the installation of new machinery. Technicians and engineers have the necessary qualifications and attend training sessions. The administrative and management personnel is generally very qualified and has a large experience.

Property structure:



It is very important to notice that the sample is heavily biased and that no decisive conclusions can be taken from this chart.

C - Production cycle

i) Raw materials

The large companies try to have an integrated production whereas the small companies get their supply from the local markets. The major reason which lead the companies to import raw materials is either their unavailability on the local market or the low quality in which they are available. Companies which are under license are obliged to import a large quality of their raw materials. Containers and packaging products are usually present on local markets.

For the imported raw materials, they are obliged to have third party in charge of getting the products out of the customs (28 days on average) and are therefore obliged to have security stocks (3 months on average).

ii) Employees (education)

Professionalism of the administrative and management personnel

Firms have more or less a program of professional training. It mainly involves the contractual employees. Workers have a formation on their work site. The seasonal workers who are often used are not qualified.

iii) Production: diversification and utilization of potentials

Scale economies are possible due to the size of the market.

Production capacities are large (up to 500 tones per day).

Industrial zones allow companies to have large firms (cheap lands, infrastructure,...)

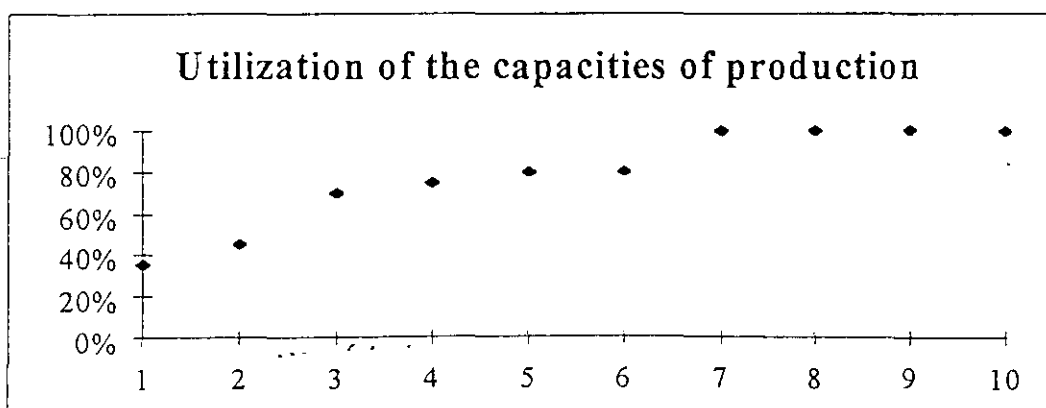
Firms have a strategy of vertical integration: All the companies have their own distribution system (poor quality of transport services). The firms in the "dairy products sector and of the "Fruits and vegetables transformation" try to develop all the elements of the chain (animal feed, packaging products).

Distribution according to number of lines of products

| Number of products | Number of firms |
|----------------------|-----------------|
| single product | 2 |
| 2 products | 4 |
| 3 products | 3 |
| 4 products | 1 |
| more than 4 products | 1 |
| Total | 11 |

Firms try in general to diversify their production and products range are complete.

In certain cases, there is a differentiation of the products depending on the final destination after adapting it to the taste of the potential market consumers.



Capacity use differs greatly from one sector to another

Recent enterprises (Sonut, Edita) are not operating at full capacity yet but one of their objectives is to increase production volume and decrease unit cost.

(iv) Marketing and distribution

Production is destined primarily for the local market and then for export. The size of the Egyptian market is sufficient to handle the growth of supply mainly due to the increase in population.

Competition is mainly based on prices and not on quality. However international brands have an advantage in terms of image and quality which allows to market their products at higher prices.

The lack of institutional structure does not encourage the industrials to export even if there has been a simplification of the principal mechanism (draw-back system). Scouting for new international markets is costs a lot of money.

Egyptian enterprises which export dispose of a network of agents, agents which are not necessarily Egyptians.

A major problem facing export is the low quality of the products.

D - Marketing and finance

Contrary to Lebanon which is in a phase of post-war and whose production apparatus has been partially destroyed and whose equipment has not been renewed, Egypt finds itself in a different situation: Industrials do not have to invest heavily to turn their equipment into international level and only perform such an operation after finding a market opportunity.

The situation of public companies is very different since the equipment is obsolete. For privatizable companies a restructuration has to be undertaken and this includes investment in renewal of material.

Egyptian firms, even those under license, have a technological setback. The problem even concerns the new plants due to the western countries barrier to diffuse new technologies.

Reasons of the installation in Egypt for foreign investors:

Important market with some 60 million consumers with 2 to 3 millions with important purchasing power.

High demographic increase (2.1%/year).

Qualified personnel with the presence of engineers and employees with good knowledge of English.

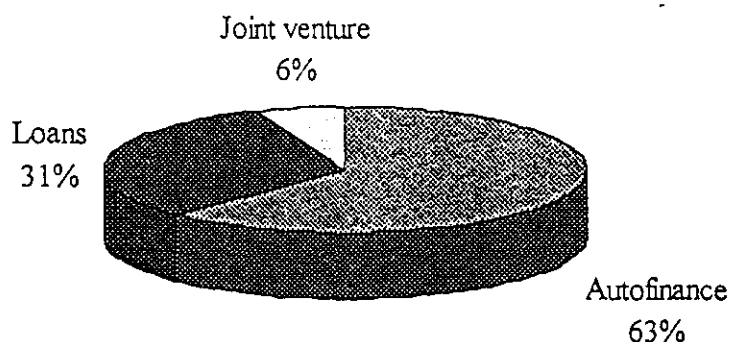
Governmental aids with important fiscal encouragement.

Cost of the land is low and large parcels are available.

Labor wages are low and the wage of a non qualified workers is \$3.5/day but their productivity is somehow low.

Electricity cost is low and all industries benefit from a special price, and this is even lower for firms inside industrial cities.

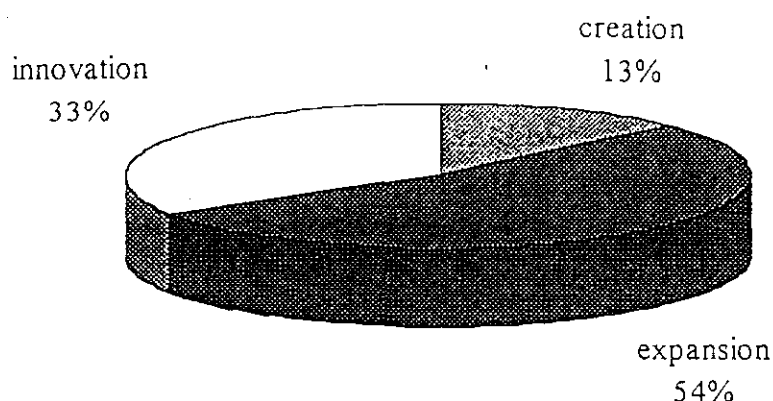
Distribution according to the source of finance of the investments



The firms in the studied sample do not have the problem of getting credit they are well known and can offer banking guarantees to get credit and/or are part of local or international groups which have the financial means to sustain investment offer.

The small firms have the same problems faced by their Lebanese counterparts which include lack of banks offering long term credits, high interest rates,...

Distribution according to the purposes of the investment



Many enterprises work at 100% capacity or at least do so during the peak season and since there is no market absorption problem they are constantly on the expansion with some projects already undertaken and some on the way. There are opportunities for new markets with the change in eating patterns of the wealthy urban consumers towards western food.

Firms have a constant interest in increasing the quality of their products and try to invest in that area like the use of the tetrapack packaging for fruit juices and milk for example.

E - Quality

Firms have a problem concerning the quality of the products and the hygiene conditions during the preparation process. All the firms in the sample possess an analysis laboratory that tests the product at diverse production stages. The ministry of health implements a strict control over the production of agro-food products and has the habit of stopping the production in case of non-conformity.

Very few firms have the ISO 9000 certification in Egypt, and ever fewer are part of the agro-food sector. The companies are at a stage of readjustment before their application for certification and are aware that it is an imperative step before export especially to the EU. Nestlé group companies have their own standard system which they judge superior to the ISO.

Firms dispose of R&D cells however their activities are quite limited.

F - Problems

The firms of the sample are confronted with usual day to day management problems than with large problems (financing, lack of infrastructure,...), however, and even if managers do not concede to it they also face labor problems due to the lack of qualifications. Enterprises are also penalized by the poor quality of their product and the relatively high cost of complementary services to the industrial activity.

List of problems faced by the enterprises

| Problems | Number of times the problem is mentioned |
|-------------------------------|--|
| Electricity (cost or supply) | 6 |
| Availability of skilled labor | 4 |
| Storage | 4 |
| Rules | 3 |
| Transportation | 2 |
| Access to information | 2 |

G- Conclusions and personal impressions:

The agro-food industry works on two speeds, one part is very efficient, profit earning and very competitive on the local and foreign markets. The quality of some goods is increasing substantially and might begin to compete with imported products, the other share of the market belongs to low quality goods destined to local consumption. Relative to the "western norms", there are many disfunctioning problems but are considered as normal by the local managers (contract breaking, formalities to get the products out of the custom, confusion on the role of many public organisms, short term planning,...)

5. Complement of information coming from the PEE study

These data come from the visit of forty Egyptian factories, the objective of these visits were to find commercial outlets for French companies. The sample which is larger than ours is also limited to large companies but gives an idea about the main sub-sectors.

A - Confectionery

Consumption : 32 kg/capita/year

Specificity : the packaging is very small to make affordable these products to the majority of people whose purchasing power is low. These products contain much more sugar than imports. The local firms export less than 25% of their production in general to Middle East countries, Eastern Europe and former USSR.

List of the bigger enterprises :

- | | |
|--|---------------------------------|
| - Corona (public enterprise) | - Biscomisr (public enterprise) |
| - Cadbury (license) | - Bim bim (license) |
| - BMF (license) | - Arabian Danish Food |
| - Tasty food (big family business group) | - Biscato |
| - El shamadan (small) | - Mansour (small) |

Quality : medium except for Cadbury and Bim Bim.

The imported products are 2 or 3 times more expensive than the local ones.

The tariffs are high (55%, law 304/1996).

The big enterprises have their own distribution system. The small ones distribute their products only to the proximity to the production site. In general the agents are inefficient.

B - Dairy Products

processed milk : 15% of the total consumption (Nile Co, Juhayna, Milkyland, ...)

cheese : \searrow consumption \Leftarrow \nearrow price (due to the increase of the price of the inputs : milk and milk powder). Milkyland is the leader.

Butter : lack of structure to store the butter \Rightarrow use the butteroil. \searrow consumption : substitution to vegetal fat

ice cream : Nestle, Hawaii and soon Unilever

Yogurt : Nestle, Juhayna et Nile co.

sub sector : 17 big enterprises

Misr Milk : all products (CA : 200 millions de LE, 5 000 employees)

Nestle : 14 ton/day milk powder (CA : 200 millions de LE)

18 yogurt

82 ice cream

Juhayna : 35 ton/day UHT milk

+ flavored milk, ice cream, cheese, yogurts (total : 300 ton/day)

Milkyland : 200 ton/day

Dina : 200 ton/day

The share of private sector increase. The new factories are brand new equipment which that allow the innovation of new products.

C - Meat processed

This kind of products are bought mainly by the middle and upper class. On the whole the consumption per capita is low. The development of fast food restaurants increase the demand for this kind of products.

75 enterprises in this sector. But the unsophisticated production is still dominant : the products are only distributed on the local market.

Main producers :

- Hassan Gangari (belongs to a Sudanese group)
- Dallah Halwani (joint venture with 2 Saudi groups)
- Mina for meat products
- Egyptian American Meat Industry
- Beefy : belongs to the Koweiti group Americana.
- Uncle America
- Faragalla
- Meatland (Gulf capital)

Size: on average they employ between 100 and 300 people. The capacity of production is between 5 and 50 tons of finished products per day. According to them, they use only 80% of this capacity.

They are about 10 big producers. In general they have their own distribution system for Cairo and the surroundings and they use agents for the others governorates.

D - Jams

Vitrac control about 70% of the market. There are many others producers but this activity is not their main activity : Edfina, Kaha, National Food SAE

The packaging is adapted to the use : industrial and private.

E - Ketchup and others

Main traditional items used : tomato paste and tahina but the development of fast food restaurant increase the demand (still limited) for ketchup, mayonnaise, mustard.

Kaha and Edfina control 45% of the market for the tomato pasta. They are 5 others big producers. There are a tough competition from imports coming from Italy, Greece and Turkey.

Best : complete integration : from the crop to the metallic box.

Ketchup : Heinz : 65% of the market.

F - Fruits juices

traditional consumption : fresh juices bought in the street

Industrial juice are bought only by the middle and upper class. This products are made from concentrate. The demand is seasonal : from May to September. The main products sold are orange juices and mango juices. The consumption is stagnant in spite of the increase of the population. The competition come from soft drinks produced by huge international companies as Coca Cola, Pepsico and Schweppes.

Main producers : Juhayna, Enjoy, Edfina, Foodico, Kaha, Aga et Best. Juhayna controls about 90% of the pack products.

On the local market tropical fruits (mango, goyava) are available. But now the local market is near saturation. A lot of producers can not afford advertisement, the only mean to develop the sales in this very competitive market.

Exports are limited to tropical juices. These are the only competitive products on foreign markets but this represents only 20 to 25% of the total production. This is very sugared products which do not suit to occidental taste. The imports are low : about 100 tons. But the image of the imports is good and the packaging is much better than for Egyptian goods. But they are 2 or 2,5 times more expensive than Egyptian ones and they are only distributed in one liter pack.

The tariffs are high : 55%.

Distribution : wholesalers but the system is long and not always efficient. The margin is quite high : 25 to 25% of the price (out of the factory).

*G - Beverages**i) Soft drinks*

Consumption is low : 10 to 12 liters par capita and per year according a study of Schweppes.

Consumption : about 750 millions of liters per year.

Production : 3 international firms that control nearly 90% of the market : Coca Cola, Pepsico and Cadbury. 2 local firms : Al Ahram beverages and Nile soft drinks.

Main events : the privatization of the bottling firms in 1994. Coca cola and Schweppes came back on the market in 1994 and 1996 respectively. They compete Pespico which was able to keep a bottling unit after the nationalization in 1979.

Coca : 47-55% of the market

Pepsi : 41-43%

ii) Alcohol beverages

During a long time the market was close to the imports. They were only two public producers : Egyptian vineyards (wine) and Al Ahram Beverages (beer). For the tourist market, 2 importers were present (shops, restaurants and hotels). Now imports are allowed. But the tariffs applied on these products are prohibitive :

beer : 1 200%, wine : 1 800%, champagne : 3 000%, others : 3 000%.

AL Ahram was privatized. In 1994 it produced 560 000 hl of beer, 80 000 of non alcoholic beer and two soft drinks.

3 factories employ about 2 500 people. They produce the malt needed for the production. 8% of the production is exported to the Gulf countries and the Eastern Europe.

Vineyards : 1 900 ha.

It produced between 1,5 to 1,8 millions of liters (wine : red, pink, white) and some others alcohols (brandy, ouzo, rhum).

Tariffs are prohibitive and local products are not very good.

iii) Mineral Water

Since the 1980s, the demand of mineral water is increasing due to the tourism.

Demand : 90 millions liter/year

estimation : 2 liter/capita/year \Rightarrow 120 millions

6 main producers

| | |
|-----------------------|----------|
| - Vittor SAE (Baraka) | - Siwa |
| - Mineral | - Delta |
| - Naspo (Safi) | - Nilcom |

In fact, it is not mineral water but natural water : extraction by pomp. According to the technology used, the capacity of production vary a lot (18 to 60 millions). In 1992, the total capacity was about 147 millions but the effective production was about 68 millions.

Even with the decrease of the tariffs (from 110% in 1982 to 55% in 1996), the imports are limited (0,9 millions). The local production is enough for the demand.

There are some exports to Libya, Kuwait and other Gulf countries. Now the exports are going to Israel, Palestine and Kuwait.

Market share :

| | |
|--------------|----------------------------|
| Baraka : 68% | Delta : 1% |
| Siwa : 21% | Sabeel : 3% |
| Mineral : 5% | Safi (public company) : 1% |

Baraka : tourists : 40%, local people : 40%, expat : 20%. They will change the plastic used for the bottle : PET instead of PVC. The costs of production should decrease and then increase its competitiveness. Baraka produces also a sparkling water since 1996.

H - Pasta

Consumption trends : ↗ rice (26 kg/capita in 1988, 46 kg/capita in 1994), ↘ pasta (6,9 kg/capita in 1988 to 4.2 kg/capita in 1994).

2 kinds of inputs are used : wheat (tender or durum)

6 factories : wheat (durum) : 10% of the total production. 2 leaders : Regina and El Mohandes

many small family business (about 150) with small capacity of production (1 to 6 ton/day) share the market with public factories.

The imports are mainly "luxury" pasta. The quantities imported vary a lot (102 tons in 1993, 17 tons in 1995). Their prices are two or three times higher than the local products.

The fruit and vegetable processing industry is witnessing a development since many years now in order to satisfy local demands and export outlets including the Arabian peninsula. Many enterprises have recently invested in fruit concentrates production (strawberry, mango), frozen vegetables, frozen fries (Dutch group Farm frites), jams, dehydrated legumes or preparations (Heinz).

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PALESTINE AGRIL-FOOD SECTOR

1. General given of the Palestinian economy

The Palestinian economy witnesses an important recession since many years now. The economy is characterized by the light influence of the public sector even it is regaining some of it's influence in recent years.

A - Macro-economic indicators

| | West Bank | Gaza Strip |
|---------------------|-----------|------------|
| Real GNP | -19.0% | -16.3% |
| Real Per Capita GNP | -36.0% | -35.3% |
| Real GDP | 1.2% | 11.5% |
| Real per Capita GDP | -20.0% | -13.7% |
| Population growth | 26.6% | 29.3% |

source : World Bank

One of the reasons in the loss of revenue is the loss of free access to Jerusalem from the west bank. The private sector has a large bearing in the west bank at a time of serious dwindling of production and work. In Gaza the public sector has much more influence than the west bank and has increased since 1994 given that Gaza has recieved a lot of foreign aids. Despite the increase in the number of working hours the purchasing power has decreased between 1995 and 1996. The wages are the principal source of income of the citizens.

B - Quick overview of the sectoral structure of the economy

i) Agriculture

Agriculture has a large share in the economy as a principal activity but also as a provider of food security. For numerous products, agriculture provides a surplus which is being used in part by the agro-food industry.

Agricultural production in Gaza Strip
(1000's USD)

| Crops | Value |
|-------------------------|--------|
| Vegetables and potatoes | 61 950 |
| Meat | 28 634 |
| (including) poultry | 23 035 |
| Citrus | 16 390 |
| Eggs | 14 955 |
| Fruits except citrus | 11 046 |

Agricultural production in Remaining West Bank
(1000's USD)

| Crops | value |
|-------------------------|-----------|
| Fruits except citrus | 155 859,5 |
| (including) Olives | 112 873,5 |
| Meat | 123 946,2 |
| (including) Poultry | 53 734,9 |
| Vegetables and potatoes | 76 418,0 |
| Milk | 48 398,6 |

Citrus varieties are among the most strategic products in Gaza. In the last few years, a large portion made it to foreign markets and a third of the production was sold to the Israeli juice factories. This sector also provides the raw materials of the agro-food sector (fresh juice, concentrated, jams, molasses and oils).

ii) The services

The service activities are rather concentrated in Gaza mainly in teh form of governmental institutions. This sector however is not very developed: Banks, insurance, transport...

The small scale of the sector and the lack of competition cause a major halt for industrial development.

2. Governmental policy to encourage investments

There are many declared intentions to encourage the development of the industry however these are not followed by any actions on the ground. To compensate the lack of efficiency of the state, many NGO have been created. Their main objective is to promote Palestinian exports and to allow the development of enterprises mainly focused towards export.

A - Agencies of the public sector

Two bodies are implicated in the agro-food sector in particular.

DRC: D Resources Center

The main missions of this body are the development of qualifications, the development of products, the altering of technologies, the opening to the market and other measures which lead to the increase of competition in the local industry.

Applied actions:

Training programs in different sectors including the agro-food.

Technical assistance program: Local and international experts' recruitment to solve the technical problems, enhance technology of the production process.

Project development: Assist the industrials to identify and develop projects and assist them with the proper technology.

Feasibility studies are also excluded in the package.

Access to the market and product development: The competitiveness of the local products on the local and foreign markets has to be increased. Competition for high revenue demand is limited to foreign and Israeli products this situation however is prone to change with the advent of more competition vis à vis the cheap regional products coming from Jordan and Turkey. In order to enter the foreign and international markets there must be an efficient service which could guarantee product elaboration, quality standards, cost and product confidence.

Research programs

Ministry of agriculture: The ministry of agriculture handles the relationship between agriculture and the industry, for the moment however, its action is far from important.

B - Private sector agencies

PTPO: The Palestinian Trade Promotion Organization, a Dutch NGO.

The objective is to develop export and help firms export on foreign markets which would otherwise be impossible for a large number of firms due to their small scale, their meager resources in management and their lack of experience on international markets. For the moment, they did not launch in the agro-food sector but only in fresh products.

PCTD: Palestinian Center for Trade Development

It is a non-profit private organization with an objective to facilitate trade and allow investments in the export sector.

PARC: Palestinian Agricultural Relief Committees

Founded in 1983 by a group of agronomists and farmers, the main mission was to help development of agriculture (agricultural extension, seed distribution,...). A part of the activity (women labor, food security, training,...) concerns directly the agro-food sector.

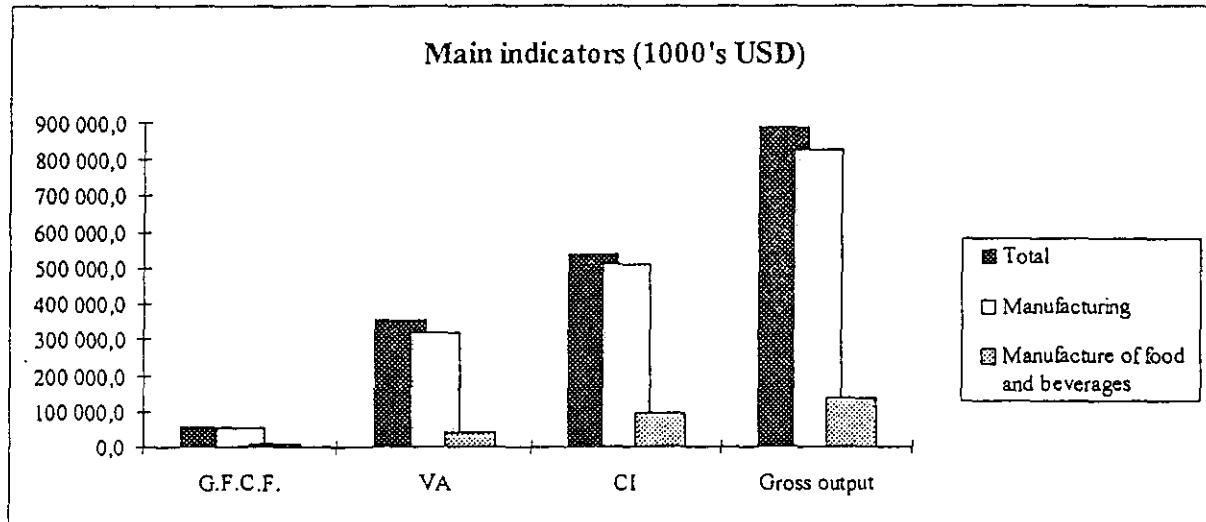
3. The agro-food sector

This sector is one of the most developed of the Palestinian economy. The agro-food industry is an important outlet to commercialize agricultural surplus and to allow food security (perishable fresh goods, high transport costs,...). The origins of the agro-food industry date back to the 50's, the production of sweets dominated the market due to the influence of the neighboring Arab countries. After the 1967 invasion, and due to the migration of the Israeli know how to Palestine the industry diversified the production. The main new productions are: Ice cream, biscuits, dairy products, pickles, pastas, meat and fish processing and beverages. However, this transfer of knowledge did not lead to the establishment of a proper production process but to an adaptation to the local market.

A - Statistical data

Relative share of agro-food industry in total manufacturing

| Economic activity | Manufacturing | Manufacture of food and beverages | in % of total manufacturing |
|--------------------------|---------------|-----------------------------------|-----------------------------|
| G.F.C.F. | 53 009,1 | 6 381,9 | 12,04% |
| VA [*] | 317 221,7 | 40 790,8 | 12,86% |
| CI | 507 121,8 | 96 641,5 | 19,06% |
| Gross output | 824 343,5 | 137 432,3 | 16,67% |
| Number of persons | 46 548 | 7 372 | 15,84% |
| Number of establishments | 9 660 | 1 484 | 15,36% |



Distribution of the value added and the gross output per sub-sector

| Economic activity | Gross added value | % | Gross output | % |
|--|-------------------|--------|--------------|--------|
| Production & preserving of meat products | 2 284,1 | 2,36% | 2 671,8 | 1,94% |
| Preserving of fruits & vegetables | 2 419,8 | 2,50% | 3 658,7 | 2,66% |
| Manufacture of vegetable & animal oil | 9 827,8 | 10,17% | 13 445,1 | 9,78% |
| Manufacture of dairy products | 6 679,4 | 6,91% | 11 882,2 | 8,65% |
| Manufacture of grain mill products | 1 745,1 | 1,81% | 2 537,4 | 1,85% |
| Manufacture of prepared animal feeds | 16 387,3 | 16,96% | 22 010,7 | 16,02% |
| Manufacture of bakery products | 25 328,8 | 26,21% | 39 128,6 | 28,47% |
| Manufacture of chocolate & sugar products | 10 714,7 | 11,09% | 14 638,5 | 10,65% |
| Manufacture of macaroni & similar products | 1 990,4 | 2,06% | 2 424,7 | 1,76% |
| Manufacture of other food products | 16 632,2 | 17,21% | 22 060,6 | 16,05% |
| Distilling & blending of alcohol | 2 631,7 | 2,72% | 2 974,2 | 2,16% |
| Manufacture of food and beverages | 96 641,5 | 100% | 137 432,3 | 100% |

Distribution of the employee and the firms per sector

| Economic activity | Number of persons | % | Number of Establishment | % |
|--|-------------------|--------|-------------------------|--------|
| Production & preserving of meat products | 65 | 0,88% | 6 | 0,40% |
| Preserving of fruits & vegetables | 113 | 1,53% | 8 | 0,54% |
| Manufacture of vegetable & animal oil | 1 804 | 24,47% | 221 | 14,89% |
| Manufacture of dairy products | 473 | 6,42% | 22 | 1,48% |
| Manufacture of grain mill products | 249 | 3,38% | 110 | 7,41% |
| Manufacture of prepared animal feeds | 175 | 2,37% | 15 | 1,01% |
| Manufacture of bakery products | 2 875 | 39,00% | 810 | 54,58% |
| Manufacture of chocolate & sugar products | 695 | 9,43% | 60 | 4,04% |
| Manufacture of macaroni & similar products | 82 | 1,11% | 5 | 0,34% |
| Manufacture of other food products | 690 | 9,36% | 217 | 14,62% |
| Distilling & blending of alcohol | 152 | 2,06% | 10 | 0,67% |
| Manufacture of food and beverages | 7 372 | 100% | 1 484 | 100% |

B - General description of the sector

i) The different problems facing the industry

Infrastructure problems:

- Lack of water quality and quantity (water is saline). To remediate this problem and due to the fact that companies do not have the means to treat water, firms resort to the increase the quantity of sugar used. Alarming water shortages have sometimes taken place.

- Electricity is supplied with weak current and there are frequent power failures which forces the firms to use gas ovens or possess their own power generators.

Plants are usually too close to the water networks with a threat to the health and other sanitary conditions.

- Security measures are poor with the use of alarms and fire extinguishers.

- Raw materials problems with the total dependency of the sector on import. Raw materials come from:

Israeli agents

Manufactured Israeli products

International suppliers

UNRWA (flour)

Egyptian sources

It is practically impossible to obtain a license to import agro-food products from outside Israel.

- Quality control of raw materials with the absence of quality control on the validity or quality of products.

- Raw materials processing knowing that the internal transport of raw materials is done by unskilled workers.

ii) Advantages and disadvantages of the investment of the agro-food sector

Potential advantages of investment in Palestine

- Free exchange deal between the United States and the Palestinian authority. This deal allows the free access to the American market for some of the goods. Certain conditions have to be respected by the Palestinian exporters or by the ingredients included in the preparation.

- Geographical localization with a strategic place in the Arab world

- Preferential agreement with Egypt, Jordan and Tunisia. Saudi Arabia and other Gulf countries give the Palestinian products free access on the market.

- Good health of the private sector in terms of entrepreneurial qualification (85% of the GNP)

- Population relatively educated with a disproportional number of university degree holders.

- Salaries structure in Palestine

- Palestinian network extended throughout the world

Potential investment problems

- Legal structure with a necessity of court presence and pecuniary efficiency.
 - Infrastructure adaptation: Facilities and utilities (electricity, water, telecommunication, roads, irrigation system).
 - Human resources: High level of development also present technically. However, there is a shortage in certain administrative positions. There is also a need for technical formation which allows an increase in productivity. The Palestinian network which is spread all over the world must be called in order to fill in the vacant positions.
 - Institutions: Law system, standards, law enforcement mechanisms. Foreign donors have allowed an enhancement in the situation.
 - Investment funds: Lack of availability of investment funds. A development in the financial system must be undertaken and the creation of investment banks is a must. Investment funds are necessary for long term credits with international interest rates rather than the much higher local rates.
 - Industrial zones: Since the Israeli occupation, few lands are available for commercial or industrial use. Cost of the land is therefore high and is not an indicative factor to invest. The cost is 10 to 15 times higher than that of Jordan and there are no appropriate industrial zones for that end. More than 60% of the lands in the west bank are not registered correctly with the suspension of the registration process by Israel.
- Cooperation with Israel: There is no enhancement of the investment climate without the cooperation of Israel.

4. Field visits report

The sample size being small, the observations' results must be treated with caution. The visited enterprises are the most important. The small traditional units (between 5 and 10 people) are not taken into account here whereas they constitute the bulk of the industry.

The data also engulfs the observations of two other studies executed on the ground.

A - Sample description

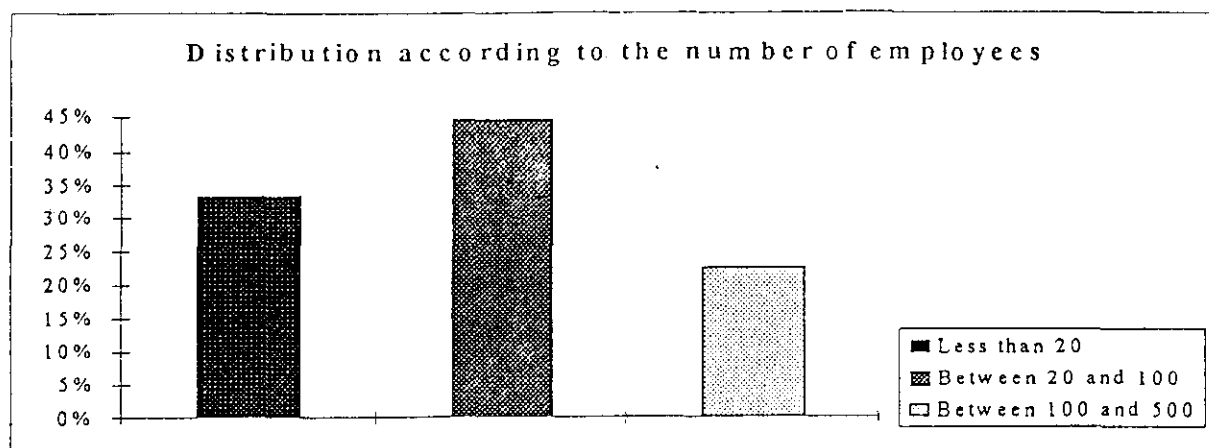
| | Name | Main activities |
|---|--------------|-------------------------------|
| 1 | Al Nasser | pasta |
| 2 | Al Bader | canned products, tomato pasta |
| 3 | Al Rawabi | dairy products |
| 4 | Citrus plant | concentrate & fresh juices |
| 5 | Silvana | confectionary |
| 6 | Sinokrot | confectionary |
| 7 | Snacks | soft drinks, snacks |
| 8 | Al Sheed | canned products |
| 9 | Salwa | meat processed |

The sweets sector, biscuits and other similar products is important because these are products relatively easy to produce and there is a high demand for them.

Many enterprises have been created after the Israeli invasion of 1967 mainly by people who acquired the know how and possessed networks (agents,...) in order to compensate for the loss of jobs in Israel or because there was an opening in the Palestinian market.

At the beginning of the peace process, many firms have invested while hoping that there will be an enhancement in the situation and there will be opportunities to export on the Israeli market, it turns out that the situation is less favorable than it used to be (even during the intifada) due to the actions lead by Israel (closing of the borders, discrimination towards the Palestinian firms in the form of extra import costs at the port for security reasons). The large firms have the means to confront these measures but for the small industries it creates heavy costs.

Industrialists are not very optimistic about the immediate future of the economic situation in Palestine. The international setting has worsen too especially that the peace process is a critical condition. The role of the EU is positive in terms of politics, but economically it has no possibility of making Israel respect the peace treaty it signed. Palestine cannot therefore fulfill the allowed quotas of the EU.

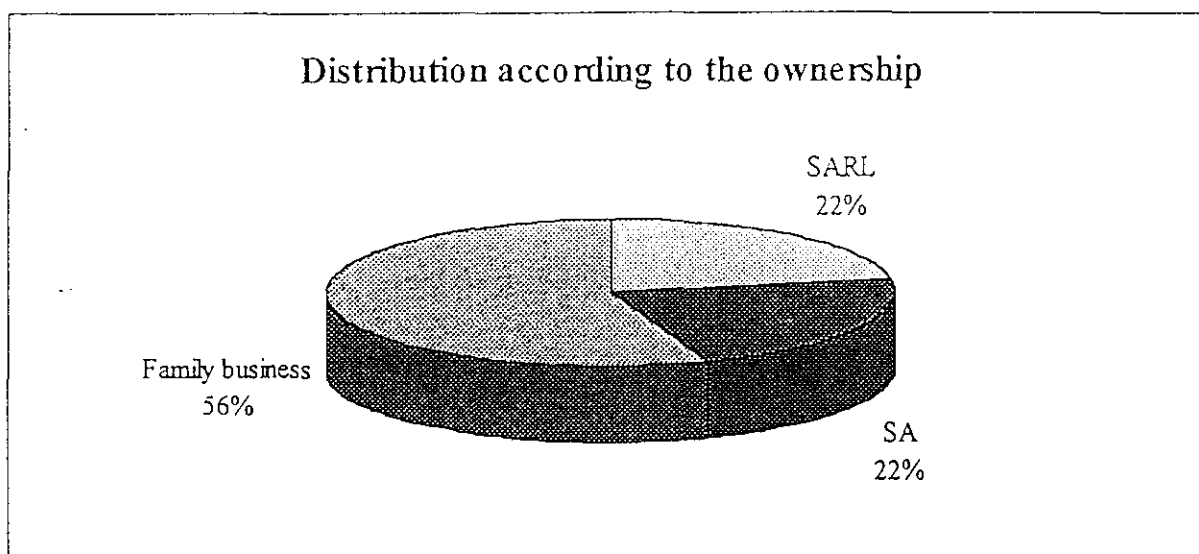
B - Activity and structure of the industry

Small scale production: The major part of the enterprises have less than 20 people however the sample is not representative on that level.

The largest Palestinian agro-food industries are those with more than a 100 workers.

Local competition, in most of the sector there is a heavy competition.

The majority of the firms are family type companies.

*C - Cycle of production**i) Raw materials*

The major share of the raw materials is imported mostly from Israel, those coming from other countries do through Israeli agents some 95% of the time.

Due to the frequent and unannounced closings of the borders industrialists find themselves under the obligation of stopping the production process unless they have an important cash flow which allows them to constitute back up stocks.

Palestine does not have transport infrastructure for the moment (international ports and airports) and are therefore dependent on the Israelis. The Israeli authorities are also able to delay or stop the process of getting the merchandises out of the customs. Other miscellaneous costs exist like the security tax on imported goods and there is no way of getting round the Israeli attitude.

The quantity of agricultural products (milk, tomatoes,...) is not sufficient, and it is impossible to convince farmers to produce more because they have to be paid in advance and the industrialists have a cash flow problem. The government does nothing but worsen the situation by fixing the price at a higher level than that set by Israel and in some case it restricts the market to the internal supply (as in the case of tomatoes) even if the quantity is not sufficient.

The custom tariffs are not very high and Israel has a free exchange treaty with the EU which is limited to the industrial products, also present is a free exchange treaty with the United States which applies practically to all countries. In general, tariffs are not high and Palestine is considered as part of a custom union with Israel and therefore benefits from both treaties but a 17% surplus of Israeli TVA.

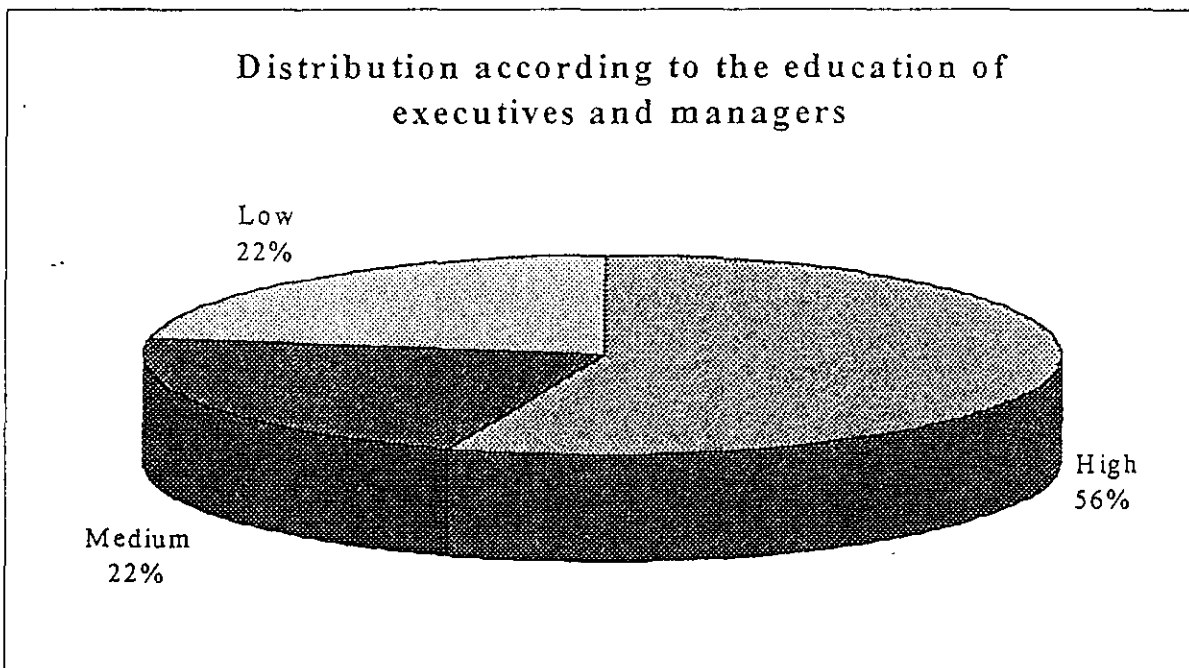
The Local producers and due to the high cost of the imported raw materials often chose an inferior quality, otherwise their prices would be superior to the Israeli products.

ii) Labor

In general, the proprietors of enterprises are the sole managers and occupy all administrative posts (accounting, marketing managers, sales managers, supervision,...). In their absence their companies are vulnerable.

They are highly motivated since they are investing their own money or that of their families.

The executives level of education is very variable, in the large enterprises, they are usually holders of a university degree. This, however, is not the case of the small units and they may be old workers who worked in Israel and decided to open their own company.



Workers are usually not qualified and only few have acquired a satisfying level of experience. The skilled labor prefers to work in Israel with much higher salaries (even if it inferior to that offered by Israelis). Moreover, the much more qualified labor (engineers and others) are emigrating.

iii) Production

The production structures are very small and do not allow scale economies due to many reasons:

The limited size of the market (<2 million)

The weakness of the population's buying capacity

There are very few exports, the products are not competitive in quality when compared to foreign products and are not competitive in terms of price when compared to Egyptian or Jordanian goods.

The equipment size is modest and lacks investments for growth. It is, however, necessary to use this indicator cautiously because the production capacities are under-used. None of the visited firms used more than 65% of its potential.

There is an important competitiveness problem in the companies, the cost of the utilities is higher than that of Israel and the supply of raw materials induces supplementary expenses. Moreover, the cost of labor, even if it is cheaper than that of Israel, is higher than that of the neighboring Arab countries without a compensation in production.

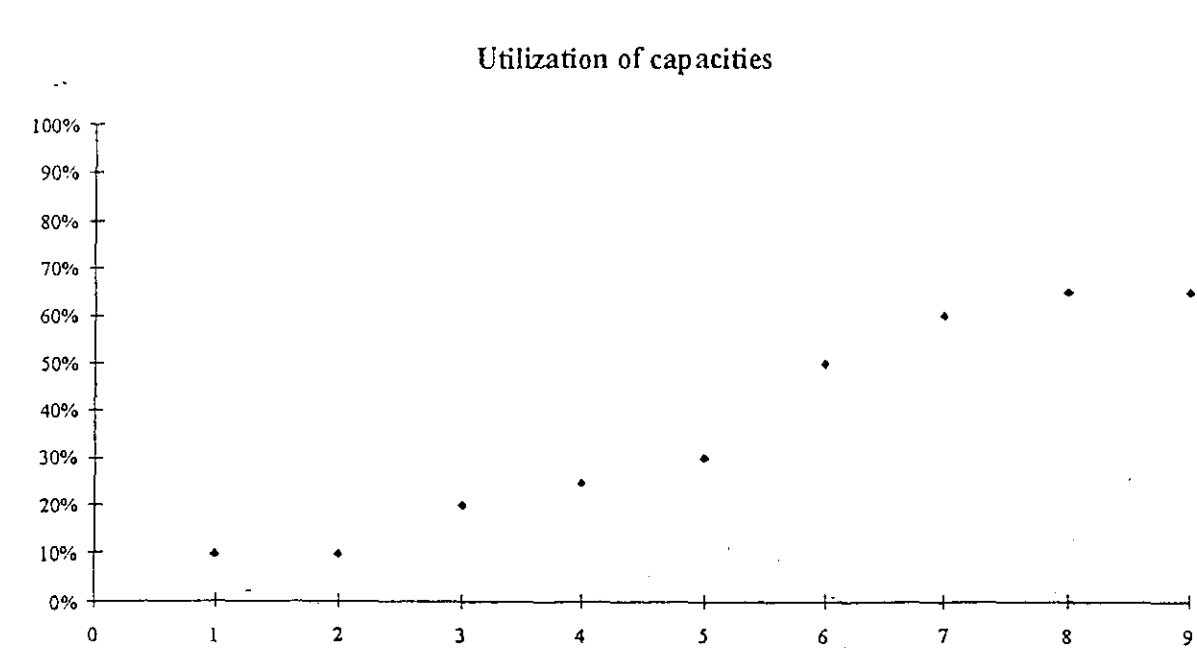
The enterprises are themselves in charge of the local distribution and the passage through an Israeli agent is a must in order to export in Israel and distribute in the rest of Palestine.

The firms usually adopt a diversification strategy.

Distribution according to number of lines of products

| Number of products | Number of firms |
|----------------------|-----------------|
| single product | 1 |
| 2 products | 2 |
| 3 products | 2 |
| 4 products | 2 |
| more than 4 products | 2 |
| Total | 9 |

The production capacities are under-used. One of the main factors is the bad macro-economic situation and the decrease of the household purchasing power, other important factors include the lack of raw materials necessary for the production process.



iv) Commercialization and distribution

Production is mainly channeled towards the internal market.