

REPORT ON POTENTIAL COLLABORATIVE
INDUSTRIAL ENTERPRISES IN
THE NEAR EAST REGION

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INTRODUCTION

This report is one of a series prepared for USAID which explores the possibility and feasibility of collaborative projects among the nations of the Near East. The underlying assumption is that favorable political conditions resulting from an interim or full peace agreement would make cooperation between Israel and one or more Arab countries possible. Indeed, the preservation of peaceful coexistence may depend in significant measure on the development of economic and financial ties between public and private business entities in Israel and those in the neighboring countries or territories.

The purpose of this paper is to study the potential for collaborative industrial development in the Near East region and to identify ways and means to facilitate it. In more specific terms, the paper attempts to establish the criteria for establishing joint ventures, while also assessing the benefits and constraints which face potential collaborators in this particular region. Where complementarity of factors and means of production exist between countries, indicative types of collaborative industrial enterprises are identified.

The study begins with an overview of the current status of industry in the Near East region, followed by more detailed accounts of the industrial sector in the economies of Egypt, Israel, Gaza, the West Bank, Jordan, Syria and Lebanon. The proposed nature of joint ventures involving these countries is then discussed, with certain possibilities identified. Because of the delicate international relationships in the region, the potential role of third parties or outside donors is discussed. The study concludes with a number of recommendations based on the previous discussions.

II. CURRENT STATUS OF THE INDUSTRIAL SECTOR

Overview of the Region

As a region, the Near East retains a strong rural orientation, with nearly one-third of its population of more than 80 million people drawing a livelihood from agriculture. This characterization is particularly true for Syria, Iraq, the West Bank and Gaza, although considerably less so for Lebanon, Israel and, increasingly, Jordan and Egypt. The further development of agriculture will be especially crucial to the Arab countries of the Near East where population growth has generally outstripped food production.

Considerable potential for both vertical and horizontal expansion in agriculture still exists in Iraq, Syria and to a lesser extent Egypt, and even to a degree in Jordan and the West Bank, but continuing rapid population growth in these areas will likely absorb all further production. Israel has exhausted most of its agricultural potential, while becoming a net exporter of agricultural products. The centrality of agriculture in the region has, however, gradually diminished in the last 30 years through continuing rural-urban migration, increasing urbanization and varying degrees of industrialization.

Industrialization has progressed considerably in Egypt and Israel; industrial output now constitutes approximately one-fourth of total gross domestic product (GDP) in each country. Although both countries have developed some heavy industry and Egypt has the potential to develop a diverse base for capital goods production, most manufacturing in these and other countries is small to medium scale. Throughout the Near East, much of the industrial development that has occurred has been in the nature of import-substitution, especially in basic consumer goods, although export-oriented investment has predominated in recent years in Israel and is growing in Egypt.

In Israel, a sturdy industrial foundation has been laid, with many, if not all, of the forms and supporting institutions usually associated with modern industrial society. Israeli industry already has the manufacturing and marketing capability in many areas of production to compete successfully in world markets. Industrialization in the Arab Near East, however, although progressing steadily, has not reached that stage. One Arab economist has characterized the state of industrialization there as follows:

The theoretical and applied research that goes with industrial innovation is still largely missing; factory organization, institutionalized relations and labour discipline are still in their first stage; scientism and awareness of cause-effect relationships are making their first steps, ... and finally, only a beginning has been made in the manufacture of producers' goods -- the machines that make the manufactured products.

1. Sayigh, Yusif A., The Economies of the Arab World Developments since 1945, Vol. 1, St. Martins Press, New York 1978.

Yet, further industrialization will be required to provide productive employment for the significant numbers of currently unemployed and underemployed workers in Syria, Iraq and Egypt, and the labor surpluses which future population growth in those countries will likely produce. Although much of the potential unemployment in Jordan and especially Egypt has been relieved through migration to the oil-rich countries of the Arabian Peninsula, the permanency of such movement remains in question.

Also, in the event of peace, demobilization could bring large numbers of skilled and semi-skilled Egyptian and Syrian workers into the active labor force. While bringing further pressures on the job market, these workers could, at the same time, provide a convenient pool of partially trained resources upon which to base certain industrial development efforts.

A major constraint on industrialization in the Near East is the relative paucity of natural mineral resources. Apart from the major hydrocarbon deposits in Iraq and the Arabian Peninsula, available raw materials in any significant supply are largely limited to phosphates, sulphur, limestone, potash, low-grade iron ore and some coal, zinc, manganese and copper. These resources are already being exploited, although further industrial potential can be drawn from them.

The future of industrialization in the Near East will lie in the more efficient operation of existing industrial capacity and the more rational allocation of further investments according to location-specific comparative advantages. It will also depend in large measure on the further development of the productive capacity, skills and equipment of the people themselves. Israel has moved a good distance in this direction and, among the Arab countries, Egypt has also made significant strides forward.

In a similar regard, both Israel and to a lesser extent Egypt have already developed a considerable capacity to manufacture armaments primarily through the use of imported raw materials and components. Given peaceful relations, such capacity could be re-directed relatively easily to socially and economically more productive purposes.

One major factor of production newly available in the Near East, at least for large-scale industrial ventures and infrastructure, is investment capital. Tens of billions of petrodollars are now and have been flowing from the capital surplus countries of the Arabian Peninsula to capital deficit areas such as Egypt, Jordan, Syria and others. The Kuwait Fund for Arab Economic Development, the Gulf International Bank, the Arab Monetary Fund, the Arab Fund for Economic and Social Development, the Arab International Bank, the Gulf Organization for the Development of Egypt and others have

channeled surplus capital resources to needy Arab countries and organized joint or regional development projects and financial undertakings.

While the capital aid provided by these organizations is their most important contribution, the regional nature of their activities also promises to have a significant long-term impact on the development of the Near East. Past efforts at joint and regional collaboration in the Arab world have borne little fruit. The political union of Egypt and Syria did not hold and the long-time quest to implement the Arab Common Market has never met with much concrete success. The substantial cooperative activities engendered by the new petrodollar funds, however, constitute a good basis upon which to expand collaborative industrial and other development ventures in the region.

For the most part, the countries of the Near East region are not blessed with an abundance of natural riches for their own individual development. Equally, they share few significant economic or resource complementarities with which to form the basis of major joint industrial ventures. Nonetheless, the need to industrialize further is common to them all. It is therefore likely to be in a sharing of the skills, technology, labor and markets required to upgrade existing capacity and to develop the facilities to manufacture goods from imported raw materials that these countries will find the greatest potential for industrial collaboration.

The Industrial Sector in Egypt

General Background

Industry (defined as manufacturing and mining but excluding petroleum-related production) has become a large and significant sector of the Egyptian economy (see Table 1). From 1946 to 1976, industry's share of GNP increased from 9 percent to 24 percent or L.E. 2.46 billion. As of 1976, industry also employed more than 1.6 million persons; i.e., some 17 percent of the civilian labor force. Finally, industry's share in total commodity exports increased from 7 percent in 1954 to almost 50 percent in 1976 (see Table 2).

As with most developing countries, Egypt's industrialization strategy has emphasized production for the domestic market through import substitution, with only a modest share of production going for export markets. Basic policy objectives have included the utilization of domestically available raw materials wherever possible and the diversification of the industrial base. These basic policy thrusts have continued through Egyptian experimentation with several types of economic systems, ranging from free enterprise before 1950, to the mixed system of the 1950s, the planned socialist economy of the 1960s and early 1970s, and the present effort to attract foreign investment and promote exports.

Egyptian industry is now well advanced into the import substitution phase. In 1947 the production of basic consumer goods (textiles, food, beverages and cigarettes) dominated

Table 1. Most Important Egyptian
Industrial Products Years 1975
and 1976, Compared with the
Five Year Plan Target
for 1975-1982

Most Important Products	Unit	Realized		Target	
		1975	1976	1978	1982
<u>Food Sectors:</u>					
Refined Sugar	1000 tons	523	599.7	670	830
Cotton Seed Oil	1000 tons	120	123.5	128	250
White Cheese	1000 tons	141.5	134	139	185
Beer	(Million litres)	28.6	30.2	39.9	50
Soft drinks	(Million bottles)	864	959.9	1331	1728
Cigarettes	(Million cig.)	20	22	27	30
<u>Spinning and Weaving Industries:</u>					
Cotton Yarns	1000 tons	180.8	194.5	218	252.5
Cotton Textiles	"	117.9	131.6	142	165
Woolen yarns	"	12.3	13	14.8	18
Woolen Textiles	"	3.8	4.6	4.3	5.3
Silk Yarns	"	12.5	10.3	16	27
Silk Textiles	"	9	8.1	11	14.6
Leather Shoes	(million)	37.9	39.2	44	51
<u>Chemical Industries:</u>					
Coke	1000 tons	645	630	750	1100

(Continued) --

Table 1. (Continuation)

Most Important Products	Unit	Realized		Target	
		1975	1976	1978	1982
Nitrogen Fertilizer	1000 tons	794	1012	1130	3400
Car and Tractor Tires	1000 tons	459	485	500	1176
Manufacturing Metallurgical					
<u>Industries:</u>					
Marble Half Shaped	1000 tons	100.3	91.7	140	248
Steel Blocks	1000 tons	3.2	5.8	150	440
Steel Sections	1000 tons	59.3	54.2	90	125
Steel Sections pieces	1000 tons	37.7	39.6	70	100
Steel Sheets Hot Rolled	1000 tons	44.8	46.4	55	75
Tapes Cold Rolled	1000 tons	55.8	66.8	150	210
Tapes and Sheets	1000 tons	107.6	79.4	180	250
Reinforced Iron	1000 tons	242.1	254.8	340	510
Aluminum Blocks	1000 tons	-	54.2	90	100
Ferro-Silicon	1000 tons	4.7	4.4	25	62
Steel Tubes	1000 tons	24	32.7	65	160
<u>Electronic Engineering Industries:</u>					
Lorries	Number	1390	1374	2280	3800
Buses	Number	305	373	530	600

Table 1 . (Continuation)

Most Important Products	Unit	Realized		Target	
		1975	1976	1978	1982
Electric Cables and Wires	1000 tons	24.6	23.7	25.9	29.6
Refrigerators	Number	114483	116744	135000	157000
Television	Number	84600	95966	14100	143000
<u>Building Materials and Refractories Industries:</u>					
Ordinary Cement	1000 tons	2278.1	2170	3800	4590
White Cement	1000 tons	59.4	80	100	134
Slag Cement	1000 tons	1245.3	1450	1900	2390
Refractories	1000 tons	91.1	86.7	92	102
Crown Glass	1000 tons	20.1	22.4	24	26.6
Clay Bricks	million bricks	-	-	-	920
<u>Mining Industries:</u>					
Salt	1000 tons	500	500	1200	1950
Phosphates	1000 tons	520	615	1500	2110

Source: Government of Egypt, Ministry of Planning, Five-Year Plan (1978-82).

Table 2. Most Important Egyptian Industrial Exports Projected
for 1982

Activity and Products	Unit	Quantity	L.E. Value (thousands)
1. <u>Foods:</u>			
Jams, Juices and Drinks	1000 tons	20	4000
Alcoholic Drinks	1000 tons	24	10000
Sugar	1000 tons	50	15000
Molasses	1000 tons	90	1725
2. <u>Yarns and textiles:</u>			
Cotton Yarn	1000 tons	50	110466
Cotton Textiles	1000 tons	35	44394
Leather Shoes	-	-	21200
3. <u>Chemicals:</u>			
Nitrogen Fertilizers	1000 tons	800	15000
Tires	1000 tyres	244	14449
Cosmetics	Value	-	25000
Medicines	Value	-	10000
4. <u>Basic and Engineering:</u>			
Metals			
Raw Cast Iron	1000 tons	160	8000
Aluminum Blocks	1000 tons	65	20800
Vertically Welded Tubes	1000 tons	50	16500
Passenger Cars	1000 cars	10	12000
Lorries	Number	400	3067
5. <u>Mining:</u>			
Phosphates	1000 tons	1166	19091
Salt	1000 tons	600	2174

Source: Government of Egypt, Ministry of Planning, Five-Year Plan (1978-82).

the industrial sector, accounting for 80 percent of gross value added. By 1976 the share of basic consumer goods had decreased to 46 percent, while intermediate goods (building materials, fertilizers, chemicals and metals) had risen to account for 45 percent. Capital goods, however, only amounted to 9 percent of the total value added.

Currently, the Egyptian public sector (defined as firms with more than 50 workers) generates some two-thirds of the value added in industry and mining. Its 200 firms account for almost all large and medium-scale industry and for roughly half of the total industrial employment. The nationalizations of the 1960s reduced the private sector in Egypt to small and some medium-scale industries (employing usually no more than 10-50 workers) for the production of basic consumer goods. The small-scale or artisan sector (up to nine workers) produces household goods and provides repair services. With some 15,000 establishments, the private sector has held its own and even grown. It now accounts for about one-third of total value added in industry and slightly more than half of total industrial employment.

Compared to agriculture -- the leading sector in the Egyptian economy -- industry has experienced a generally accelerating growth trend in recent decades. Industry, for example, grew at an average annual rate of 8-9 percent versus some 3.5 percent for agriculture in the 1960s and early 1970s. In the past 2-3 years, industry has grown at a rate of approximately 10 percent while agriculture continues at roughly its earlier pace.

Within the six major industrial subsectors, food and textiles remain in a leading position, although their traditional dominance has declined with the continuing growth of chemicals, metallurgy, engineering and building materials. The public sector accounts for 70-90 percent of the total output in these sectors. In the private sector, the most promising subsectors are engineering (including transport equipment), chemicals, food processing, wood working and furniture, ready-made garments and leather products.

The growth prospects for the industrial sector are not insubstantial. Egypt has a large domestic market, a considerable pool of skilled and unskilled manpower, a low wage structure, and a location well suited to serve the growing regional market. The prospects are, however, constrained by many factors. Apart from oil, Egypt has few known natural resources not already being utilized. Primary among those in use are iron ore, limestone and phosphate rock. Further expansion of natural advantage industries is therefore restricted.

Another major constraint is the uncertain availability of investment capital. The low productivity of labor and capital presents still other serious problems. Thus, despite relatively impressive growth, industry has not played the role of the dominant sector in Egypt. It has not imparted growth momentum to sectors other than services or created backward and forward linkages with them. For example, in agriculture, it has not developed farm implements adapted to local conditions that could have increased growth in productivity.

The expansion of Egyptian industry has been achieved primarily through a variety of protectionist policies pursued since 1930. Consequently, segments of Egyptian industry produce at such low quality standards and are so lacking in basic marketing skills as to be unable to compete in world markets. Some Egyptian industry would not even fare very well in the domestic market without protection. At the heart of this problem is a seriously distorted and government-administered price structure.

Other major problems include antiquated machinery and deficient production and management techniques (in such areas as product design and development, production planning, material selection, preventive maintenance and working conditions). Even where introduced, more sophisticated techniques and specialised machines have simply created a need for skill upgrading. An increasing shortage of skilled workers (due in part to emigration) has compounded the problem and produced a need for programs to train unskilled workers. Additional constraints include the lack of adequate space for expansion, of timely procurement of raw materials and the lack of access to foreign exchange and to institutional finance.

Industries producing iron and steel and assembling such durable consumer goods as TV sets and automobiles represent yet another constraint on industrial growth. These industries, for which Egypt has no natural advantage, were established primarily for purposes of prestige and, unfortunately, constitute a continuing wasteful drain on the economy.

Future industrial strategy would best focus on simple mass-produced consumer goods and intermediary products for industry and other sectors and on industrial exports based on natural advantage industries such as textiles, cement, fertilizers, leather goods, chemicals and food products. The government of Egypt has recognized this need in the allocation of resources for the industrial sector in its most recent Five-Year Plan (1978-1982) and in its "Open Door" policy of attracting foreign partners for export manufactures.

In this Plan, which allocates the largest share of resources (over one-third) to industrial development, highest priority goes to the replacement and repair of existing plants in order to increase capacity utilization. Second highest priority is given to the completion of projects already underway, while third priority is left for new projects.

Given the limited scope for expansion of agricultural production in the near term, Egyptian planners have clearly assigned to industry the leading role in generating income, employment and foreign exchange in the future. Under the Plan, public sector industrial production is scheduled to increase to L.E. 3.38 billion by 1984, a 9 percent annually compounded rate of growth over 1976, while industrial exports are planned to increase to over \$900 million, a 20 percent compounded growth rate. The private sector in particular is being looked to for the dynamism needed to lead the Egyptian economy into an era of vigorous expansion.

This is especially true for export expansion as private sector exports have doubled in recent years while public sector exports have been stagnant.

Financial Institutions and Industrial Financing

Institutional financing for industry in Egypt is provided almost entirely by the banking sector, although public sector industrial investments continue to be financed primarily from the national budget and, to a limited extent, from internally generated funds. The Development Industrial Bank (DIB) provides, as did previously the Bank of Alexandria (BOA), some long-term financing generally for small reconstruction and expansion projects. For private sector investments, the main source of external long-term investment funds is the DIB, for both local currency and foreign exchange.

The Misr Iran Development Bank is now an additional and important source of foreign exchange financing for projects that can generate, and therefore repay in, foreign exchange. Significant interest in term financing has been shown also by two joint venture commercial banks: Chase National and Cairo Barclays. Other financial institutions have shown some interest in consortium financing of large industrial and tourism projects.

All the commercial banks provide short-term financing for working capital and for investment purposes. Short-term loans are sometimes rolled over, making them disguised medium-terms loans. Many private sector businessmen use the local

resources so obtained or their own local resources for purchasing foreign exchange in the "parallel market" or purchasing items imported under the "own exchange scheme" which allows Egyptian citizens earning foreign exchange abroad to import capital or consumer goods. Although the foreign exchange inflow into the parallel and free markets was estimated at about \$1 billion in 1977, most of it was being used for purposes other than private imports of capital goods. Given the perennially precarious balance of payments situation, however, the Government will not likely allow the private sector uncontrolled access to foreign exchange funds in large amounts over a prolonged period of time.

Regulatory Environment

Since the October War of 1973, the Egyptian government has been actively trying to liberalize the vast network of administrative regulations imposed on the economy during the Nasserist period of "Arab socialism." This new policy has aimed at decentralizing the management of public sector industries and also at stimulating an inflow of private foreign investment and technology.

Although the so-called "Open Door" policy has met with expected resistance from an entrenched bureaucracy accustomed to another era, a gradual transition in the economic environment appears definitely underway. The law regulating foreign investment has been twice revised, with greater flexibility resulting from each revision. The stock exchange has been re-opened for modest trading. Free trade zones

have been established, investment incentives have been provided, and exchange rate policies liberalized.

For the first time in years, foreign banks and other corporations are now permitted to undertake joint ventures with Egyptian public sector banks, industries and trading firms. Finally, the highly protective labor laws have also been somewhat relaxed, as have been the restrictive export-import regulations.

In terms of concrete results, however, economic liberalization in Egypt still has a long way to go, as evidenced by the paucity of foreign joint ventures approved so far. Until further reform of existing tax, commercial and administrative law, the "Open Door" policy will at best proceed with all deliberate speed. Nonetheless, the stage has been set for what could possibly become a significant transformation of the Egyptian economy in the coming decade.

The Industrial Sector of Israel

General Development

The industrial sector of Israel is in a state of transition, with its structure and capabilities undergoing rapid changes. It is being transformed from a large number of small enterprises -- traditional, labor intensive, high cost and concentrated almost entirely on domestic markets -- to a more modern sector, becoming more capital intensive, and with its fastest growing elements concentrating on foreign markets.

At the end of World War I, when Britain assumed its mandate over Palestine, the territory of the mandate was largely agricultural and rural, with a small number of cottage industries and workshops. By the time Israel was proclaimed a state in 1948, mass in-migration from Europe had nearly doubled the population in the areas comprising the new nation and had resulted in the establishment of an industrial sector typical of most developing countries. Representative industries included bakeries, soap-making and textile products, woodworking and cement. By 1952, there were 20,000 establishments classified as "industrial" -- most of them small workshops -- with a total employment of about 100,000. Fewer than 100 establishments has as many as 100 employees.

By the mid 1950s, the needs for more employment, coupled with the need for reducing imports, pressed the government of the new state to expand the industrial sector, particularly concentrating on import substitution to assure an adequate supply of consumers' products. Expansion took place in food processing, textiles, apparel and footwear, and the domestic market was heavily protected against foreign competition, mainly through administrative controls.

Transformation of Structure

By the mid 1960s the essential need for exports became fully recognized. The obstacles to expansion of exports, however, were numerous and substantial. The industrial sector was characterized by small plants, fragmented production and limited competition. The domestic market was small, and each plant tried to produce as wide a variety of products as possible. The result was a lack of the

specialization which characterizes modern, efficient plants. Also, small enterprises are usually at a disadvantage in all aspects of operations, production, distribution, management, and financing. Since the total production was quite small, most of the production in each field was concentrated in a very few enterprises. These firms, enjoying protection against imports, limited competition and divided the market among themselves. The industrial sector was characterized by high costs and by high prices. Israel, with its scarcity of labor and raw materials as well as capital, was in a poor position to compete in world markets.

By replacing import controls with tariff duties and then reducing these duties, Israeli policies began to promote the industrial sector to greater efficiency. By the end of 1966, import controls has been removed from 85 percent of relevant industrial products, but duties averaged 90 percent of import values. Since then, duties have continued to be reduced in stages and now average about 25 percent. Under the agreement with the European Economic Community, which permits duty-free access to its large market, Israel is committed to the gradual elimination of its import duties by 1985.

In addition to the general liberalization of industrial imports, several other elements have helped the transformation of Israel's industrial sector. The government has focused its inducements for industrial investment, both domestic and foreign, on enterprises whose outputs are oriented for export. The maturing of a new generation of workers and managers has brought a more professional approach

to industrial operations. A large number of Israelis have received advanced education and experience in Western Europe and the United States, emphasizing the physical sciences, business management and engineering. Many immigrants to Israel have been acculturated to the modern industrial world, particularly by the defense forces. Finally, greatly expanded, well equipped vocational training programs have contributed to the upgrading of the labor force.

The transformation of the industrial sector has only begun. While the "traditional" subsectors of the industrial sector, such as food processing, clothing, textiles, and furniture, still compose a major part of the entire sector, the fastest growing branches are those that are "export oriented," such as transport equipment, machinery, metal products, basic metals, electronics, chemicals and plastics. In general, these "export oriented" branches have recently increased their production at double the rate of the rest of the industrial sector. Between 1972 and 1977, their exports increased by 25 percent while the other branches increased their exports by only 11 percent.

Production Levels of the Industrial Sector

The industrial sector¹ makes up about 24 percent of the total net domestic product of Israel. In the period 1974-77, the industrial sector has increased its total production,

1. For purposes of this report, the industrial sector data excludes diamonds, because the high value of their output includes an exceptionally large raw material cost. Their inclusion tends to distort the interpretation of industrial totals.

in real terms, by nearly 5 percent a year. This is in contrast to the total gross national product (GNP), whose growth rate slowed down in 1973 to about half the previous annual rate of growth and in 1975 slowed down further to the brink of stagnation.

Production for Export

Industrial production in the 1970s has been characterized by one central trend, the rapid growth of output destined for exports and the increased share of exports in total output. The intensity of this trend, however, has been weakening somewhat. Industrial exports (excluding diamonds) increased by about 21 percent in 1978, compared with an increase of 24 percent in 1977 and 26 percent in 1976. The proportion of total industrial sector production earmarked for export, both directly and indirectly, has grown from 29 percent in 1973 to 40 percent in 1977. While the transformation from a domestic market focus to an export orientation is far from completed, it has gone a long way to demonstrate the growing vitality of this segment of Israel's economy.

The export oriented subsectors or branches of the industrial sector are developing characteristics that clearly distinguish them from the traditional branches. The export oriented branches increased their production at double the rate of the traditional branches. Their fixed capital also grew at double the rate (64 percent compared with 32 percent). Labor inputs which had not increased much since 1972 for the industry sector as a whole, did increase in the export oriented branches, although at a low rate of about 3 percent. Thus, output per worker

in these branches increased at a reasonably high rate, the obvious result of more and better capital equipment, more professional management and better trained workers and technicians.

The growth of exports in the industrial sector was also characteristic of those enterprises that emphasized research and development. A recent survey of 67 out of a total of 300 exporting enterprises showed that 20 percent of industrial exports were products that resulted from local research. Plants that were expanding their research were emphasizing that it provided a competitive advantage in costs, design and engineering.

The degree of concentration in the exports of the industrial sector has been increasing. In 1977, there were 22 establishments that accounted for more than half of the total industrial exports. In 1976, there had been 25 establishments in that category. An examination of the 100 largest export firms in the industrial sector, which exported 72 percent of the total, showed that the leading role of food processing was being replaced by chemical, electrical and metal products.

The bulk of the industrial exports, as well as their growth, however, is concentrated in the hands of a limited number of producers, and this concentration is found in each of the subsectors. This would seem to testify to the substantial difficulties of breaking into the export market and the great importance of external marketing experience.

Investment

As do most developing countries, Israel has always faced a severe capital shortage. Currently, the shortage is even greater than it has been in the past. In 1977, there was a continuation of the decrease in total investments, which was also marked in 1976. Total investment in fixed assets in Israel decreased by 13 percent in 1977 and by 11 percent in 1976. Industrial investment fell by 17 percent in 1977 and by 8 percent in 1976.

While the growth rate of investment decreased, the investment was still large enough to increase the stock of capital by 5 percent, compared with an increase of 7 percent in 1976. The growth of capital stock was least in those branches that produced primarily for the domestic market.

In a real sense, there has been an accumulation of unutilized capacity throughout the industrial sector, including the export oriented branches. Some enterprises have become more capital intensive than production levels and technology demand because of the considerable privileges (grants, subsidies, credit financing, etc.) made available by government. Labor shortages, labor problems and increasing labor costs have edged enterprises into capital expansions that have avoided second shifts on existing capacities. Productivity increases in some enterprises, however, have been offset by lower productivity in others, and the general level of productivity in Israel has not improved as widely as would be desirable. However, there are encouraging exceptions in some science-based, export-oriented enterprises.

Resource Base for Expansion of
Industrial Sector

Israel has relatively few natural resources available for expansion. Low-grade phosphate rock is available to add about 2 million tons of rinsed phosphates a year. Increased potash production of about 1.2 million tons will also be possible under present plans. Increased production of bromides, magnesium and other salts is under development from Dead Sea sources. In total, the amount of natural resources available may be considered a constraint rather than a spur to expansion of industrial production.

The human resources available for industrial expansion present a more hopeful picture. Two aspects of the availability of industrial labor force must be examined; the availability of unemployed and underemployed labor, and the growth possible through the upgrading and training of more and better labor inputs.

Table 3. Numbers of Employees in Industrial Sector - 1975

Branch (consolidated)	No. of Employees
Food, beverages and tobacco	36,800
Textiles, clothing and leather	59,350
Wood, paper, printing and misc.	15,400
Rubber, plastics, chemicals & fuel	23,700
Metals and Electronics	<u>109,800</u>
Total industry (excluding diamonds)	284,150
Diamonds	<u>7,850</u>
Total industry	292,000

In the first half of 1978, unemployment in Israel was estimated at about 4 percent. It was particularly felt among women and academically trained persons. Women are entering the labor market at increasing rates and now constitute 34 percent of the labor force. Unemployment among women in the labor force is estimated at 6 percent. Particularly disturbing was the high proportion of academically trained among the unemployed, such as building engineers, architects, chemical and electrical engineers.

It is to the human inputs that Israel must look for comparative advantage in entering international markets. Comparative advantage is usually interpreted to mean relative cost advantage, and this is difficult to determine and apply, particularly in forecasts for developing countries. A more realistic interpretation of seeking comparative advantage is to concentrate on the use of those inputs that can be increased with relative ease and increased with minimal available resources. In Israel, comparative advantage must lie in developing the quality and training of its human inputs -- scientific, technical, managing and marketing -- in a way that makes these inputs the determining elements of successful operations.

The essential nature of this emphasis has been recognized and made part of national economic plans. Improving the professional, educational and technical levels of all types of workers, even of blue collar workers, will provide flexibility in industrial job transfers and facilitate

labor mobility. Wage level changes have already begun to help move workers from the slow to the fast-growing branches of industry. Existing government benefits are also slowly being re-directed in favor of export oriented enterprises.

Investment Financing and Incentives

Israeli industry is served by an extensive and well developed system of banks and specialized financial institutions. Moreover, under the Law for the Encouragement of Capital Investments, it is assured of generous credits by the government and provided with additional incentive grants.

Dominant in the system of financial institutions are the three largest commercial banks - Bank Leumi L'Israel, Israel Discount Bank and Bank Hapoalim. Each of them also has a number of affiliates engaged in specialized financial operations, including investment banking and development financing. All three banking groups have branches and other affiliates in the United States and Western Europe. Together with the government as the largest stockholder, the three banks established the Industrial Development Bank of Israel, which grants mainly medium-term loans and also has raised substantial amounts of capital abroad by floating bond issues in the United States and Western Europe and securing loans from the World Bank.

The operations of the entire financial system are strongly influenced by government direction, especially in the extension of loans and credits to industrial enterprises. In effect, more than 80 percent of the investment in fixed assets of industry appear¹ to have been (in 1977) financed by "directed credits" and government cash grants. Additional "directed credits" are made available for working capital, especially to enterprises engaged in export.

The amounts and terms of loans and grants to industrial ventures vary with the type of industry, the geographic location of plants, and such other factors as the proportion of exports and the expenditures for research and development. Development loans, generally amounting to 40 percent of the investment in fixed assets, are extended for up to eight years at low rates of interest which in recent years have been far below the rate of inflation and thus are providing a substantial subsidy to industrial investment.

In addition, "approved enterprises" receive a cash grant of 35 percent of investment in fixed assets if they are located in the least developed areas (Development Zone A), 20 percent in Development Zone B, and 5 percent in other areas. Cash grants are also given for research and development, ranging from 30 percent of such expenditures for development of products to be sold locally to 70 percent

1. Because of the rapid rate of inflation in recent years, precise estimates and comparisons between separately reported categories (such as investments in industry and loans granted for this purpose) are difficult and somewhat uncertain.

for export products of plants in Zone A and 80 percent for products of national priority and work done on behalf of industrial firms by Israeli universities and governmental research institutes.

Further incentives for industrial investment are provided by exemption from the Company Tax (normally 30 percent) for five years, starting with the first year of profitable operation, and by the privilege of depreciating fixed assets at the rate of 50 percent per year. Firms with at least 25 percent foreign investment may, in lieu of this rapid depreciation, select to accumulate a tax-free special reserve designed to assure the maintenance of the dollar value of their investment.

Also important to foreign investors is the fact that, since the fall of 1977, there no longer is any control of foreign exchange transactions and that all exports to the European Common Market and many exports to the United States are free of custom duties in these areas. These and other advantages of industrial production in Israel have attracted a sizeable number of investors from Western Europe and especially from the United States, including both multinational corporations and medium-sized American companies.

The Industrial Sector in the West Bank and
the Gaza Strip

Industrial activity in the largely rural West Bank and the Gaza Strip of Palestine has traditionally been modest and remains so to this day. In 1968, manufacturing in the West Bank, which is limited to meeting domestic demand, accounted for only 8.2 percent of the territory's gross domestic product and employed 15,000 workers, principally in small scale enterprises. By 1973, and after six years of Israeli administration, industry contributed only 9 percent of the West Bank's GDP with about the same level of employment.

In the Gaza Strip, industry has played an even smaller role in the economy; in 1968 it amounted to only 5.8 percent of GDP. By 1975 there were approximately 6,000 persons employed in the industrial sector, mainly clothing and textiles, but 39 percent of those working in industry were under subcontractual arrangements with Israeli firms (e.g., female textile workers).

In 1976, total employment in the occupied territories exclusive of those 60-70,000 day laborers employed in Israel, was reported to be 140,900 of which 20,290, or 14.4 percent, were employed in industry. In 1970 the comparable figures were 21,072 and 13.8 percent.

From the indices of industrial employment shown in Table 4 below, some idea of the subsectoral growth can be

obtained. While growth was fairly consistent over the period 1969 to 1975 in the West Bank, there was a sharp decline in employment in the recession year of 1976. This decrease did not occur in Gaza, however.

Table 4.. Indices of Industrial Employment
(Index Numbers: 1969 = 100)

	West Bank					Gaza Strip				
	<u>1969</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1969</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Food and beverages	100	87	93	93	91	100	90	89	100	107
Textiles and clothing	100	150	160	162	132	100	158	150	144	152
Wood products	100	118	139	166	137	100	100	99	107	129
Light industries (paper, rubber, plastics, chemicals, oil products. misc.)	100	131	132	148	132	100	192	205	213	218
Basic metals and equipment	100	115	128	132	124	100	148	144	168	191

Source: Statistical Abstract of Israel, 1977, Table XXX.

With the exceptions of "light industries" and "basic metals and equipment," none of the subsectors in either territory showed a particularly strong growth pattern during the period.

Underlying the low growth performance of the industrial sector, particularly in the case of the West Bank, have been two major factors; (a) the administrative policies of the governing nations and (b) the investment climate, especially since the 1957 war. It has been pointed out that:

As late as 1965, manufacturing in the Jordanian economy contributed only 10 percent of the GNP. However, the share of industry in the West Bank was even lower than in the East Bank. Of 15 companies existing in 1967 in which government had a share, only 4 were on the West Bank. The government of Jordan placed only 8 percent of its investment in large companies in the West Bank, the rest was invested in the East Bank.¹

And, further, after occupation:

Schemes were prepared by the Israeli authorities for the encouragement of industrial development. But rather than promote industrial development in the West Bank and Gaza, the authorities chose the alternative of importing manpower from these areas in order to strengthen further the Israeli economy. Thus they guaranteed the supply of relatively cheap labour for the industrial enterprises, construction work and agriculture in Israel.²

1. Elias Tuma and Haim Darin-Drabkin, The Economic Case for Palestine, St. Martin's Press, New York, 1978. pp. 65 and 110.

2. Ibid. p. 65.

The climate for direct investment in industrial enterprises has thus generally been poor in both Gaza and the West Bank. Under Jordanian rule neither foreigners nor other Arabs showed interest in investing in these areas, while after occupation, some Israelis chose to settle and farm the territories, but not invest in them.

At the present time there are 500 Jewish settlers living in Gaza and about 5,000 in the West Bank. Were the occupying authority to foster industrialization in these territories, it would likely do so in Israeli-national settlements. If the Israeli occupation were to cease and the territories to gain some autonomy, the million Palestinian Arab inhabitants would likely press for further development of their own small-scale industrial development.

The Industrial Sector of Jordan

The industrial census of 1975 indicated that there were 7,478 mining and manufacturing enterprises in the East Bank of Jordan, employing some 26,700 people. Value added by the sector grew from about \$60 million, 11 percent of GDP in 1972, to an estimated \$136 million and 15.6 percent of GDP in 1975. From 1971 to 1976, the industrial production index increased at an average rate of 14 percent per annum. The 1976-80 Five-Year Plan calls for the sector's contribution to grow to 28.3 percent of GDP by 1980. Income from this

1. See Analytical Assessment Corporation, "Trade and Economic Links in the Transition Phase: The West Bank and Gaza Strip." A report sponsored by the USAID under contract No. AID/NE-C-1557. Marina del Rey, California, 1978.

sector is expected to grow at a rate of 26.2 percent annually. While these are ambitious targets, Jordan's performance during the last Three-Year Plan (1973-75) and in recent years has been sufficiently dynamic to indicate the goals are achievable.

Investments during the 1976-80 Plan period are expected to reach \$694 million, or about 30 percent of total planned investments. Most of the planned industrial development is being concentrated in a few large-scale projects such as phosphate mining and phosphate fertilizer, potash extraction, expansion of the oil refinery and a new cement plant. It is expected that the private sector will invest about \$106 million in medium- and small-scale industries.

Table 5 shows establishment and worker data for the major manufacturing subsectors. The overall average employment is 25 workers, but in the case of chemicals the average is 90 workers.

Industrial production by major products is shown in Table 6 for the years 1971 through 1976. With the exceptions of cement, sole leather/wool and liquid batteries, there was a substantial degree of growth over this period.

On the other hand, exports of manufactures show a mixed and erratic performance as indicated in Table 7. The export picture is overwhelmingly dominated by rock phosphate, and the quantity shipped and the price received play a very important role in the performance of Jordanian industry.

Industrial activity is concentrated in the Amman-Zerka area where approximately one-fourth of the nation's 3 million people reside. This is particularly true for the medium-scale enterprises which produce nondurable consumer products and which are primarily oriented towards import substitution. In recent years exports of textiles, clothing, footwear and processed food have been steadily increasing.

Table 5 . Employment in Industrial Enterprises
Engaging Five Workers or More, 1976

Branch of industry	<u>No. Estab.</u>	<u>No. Workers</u>
<u>Manufacturing</u>		
Food manufacturing	95	2,106
Textile, clothing and leather industry	136	2,500
Wood and wood products	47	397
Paper and paper products	35	792
Chemicals	33	2,971
Non-metal minerals	60	1,789
Manuf. of Fabricated metal products	37	487
Basic metal industry	37	932
TOTAL	478	11,974

Source: Government of Jordan, Department of Statistics, "Employment Survey for Establishments Engaging Five or More Workers," April 1976.

Table 6. Industrial Production in Jordan, 1971-76^a

Product	Units	1971	1972	1973	1974	1975	1976
Phosphate	1000 tons	640.0	709.0	1,080.9	1,674.8	1,352.5	1,701.8
Cement	1000 tons	418.9	661.3	616.8	614.7	598.2	586.4
Petroleum products	1000 tons	556.7	605.1	675.3	748.4	828.2	1,145.5
Sole leather and wood	tons	397.4	661.6	369.9	555.6	531.4	162.3
Upper leather	1000 sq. ft.	1,887.6	2,174.9	3,750.5	2,647.8	2,230.7	2,910.1
Detergents	tons	2,592.0	2,528.0	2,736.0	2,973.0	4,203.0	5,027.0
Liquid batteries	1000 batteries	40.0	36.4	40.1	47.0	44.4	47.0
Cigarettes	tons	1,536.0	1,510.0	2,156.0	1,573.0	1,998.0	2,407.0
Spirits and alcoholic drink	1000 litres	2,396.0	2,421.0	2,927.0	3,288.0	5,503.0	6,329.9
Paper	tons	2,109.0	2,749.0	3,072.0	3,536.0	4,147.0	5,500.3
Electricity	Mill. Kwh	133.7	158.0	181.4	213.4	256.7	323.7
Iron	1000 tons	9.2	30.2	28.1	25.4	31.3	42.4
Textiles	1000 yards	748.0	744.0	703.0	722.0	953.0	915.8
Fodder	tons	34.2	77.2	41.5	33.3	41.5	50.9
Pharmaceutical liquids	1000 litres	154.0	190.2	193.0	262.1	358.8	440.1
Other pharmaceutical products	tons	40.1	60.0	72.0	68.2	113.3	99.6
Industrial production ^{b,c}	index	113.7	139.1	152.9	163.0	175.0	219.3
Industrial production	change in index	17.8	25.4	13.8	6.6	7.4	25.3

a. East Bank only.

b. 1966 = 100; index weighted by 1970 prices and quantities.

c. Pharmaceutical products excluded.

Source: Central Bank of Jordan.

Table 7. Composition of Jordanian Domestic Exports, 1973-76

(Thousands of tons)

Items	1973	1974	1975	1976
Cigarettes	0.3	0.4	0.4	0.3
Phosphate	1,088.6	1,469.0	1,128.8	1,653.2
Mineral fuels and lubricants	24.4	7.5	8.5	28.3
Olive oil	0.3	1.1	0.9	1.2
Chemicals	0.7	1.7	2.8	7.1
Cement	196.3	209.2	73.5	1.1
Batteries and accumulators	2.0	2.0	0.2	0.4
Miscellaneous manufactured articles	0.8	0.8	2.4	3.5

Source: Government of Jordan, Central Bank and Department of Statistics.

The country is endowed with relatively advanced entrepreneurial skills and a well-educated population. Because of the tight labor market due to emigration of Jordanian labor to neighboring Arab countries, Jordanian industry is relatively sophisticated and capital intensive, enabling it to become technologically advanced in relation to competing industry in neighboring countries. Furthermore, the resulting higher quality of Jordanian products has enhanced their acceptability in these markets.

The large-scale enterprises in Jordan enjoy substantial government support and in many cases government participation in ownership. The small-scale sector is beginning to attract attention from government agencies and the Industrial Development Bank (IDB) because of its substantial economic potential. Incentives for industry are provided under the Encouragement of Investment Law. Projects approved under this law are exempted from income and social services taxes for six years (nine outside the Amman-Zerka area). Projects located outside the Amman-Zerka area may also be provided with free tracts of government land. Foreign capital is given similar privileges plus the freedom to repatriate profits and interest earned on foreign investment, and salaries earned by expatriate staff. Industrial projects must have fixed assets of at least JD 5,000 (US\$15,200), excluding land, to qualify for these incentives, while tourism projects must have fixed assets of at least JD 15,000 (US\$45,500).

Between 1972 and 1975, 105 projects with capital investment totalling JD 21 million (US\$64.1 million) were approved under this incentive scheme. Other incentives include tariff protection, especially from competing imports from non-Arab countries. Tariffs typically range from 10-30 percent; however, for a few items particularly important in local manufacturing and based on local raw materials such as confectionery, shoes, furniture, and tomato sauce, tariffs exceed 50 percent. Imports from the other Arab Common Market Countries (Egypt, Syria, and Iraq) and imports under trade agreements with countries of the Council of Arab Economic Unity compete with Jordan's industry without tariff barriers.

Under the Licensing and Control of Industries Instructions of 1973 new industrial or tourist establishments are set up, modernized or expanded only after a license has been obtained from the Ministry of Industry and Trade or the Ministry of Tourism and Antiquities. Until 1974, the government attempted to avoid "wasteful" competition by restricting the number of establishments in each field to what it felt the domestic market could sustain. However, because of the limited domestic market, many enterprises successfully turned to foreign markets. Encouraged by this trend, the government has adopted a more liberal approach in granting licenses. This liberal approach has not led to excess capacity.

The financial sector in Jordan consists of the Central Bank, 11 commercial banks, 6 specialized credit institutions including IDB, and some 25 insurance companies and agencies. The Post Office began a savings fund in September 1974.

The six specialized credit institutions for agriculture, housing, industry and village development are each incorporated under a special law and extend medium- and long-term credit for specific purposes in these sectors. The insurance companies invest in real estate, government securities and to a limited extent in equities of large industrial enterprises. IDB is the only major institutional source of long-term financing for the medium- and small-scale industrial sectors.

Since its inception in 1965, the Industrial Development Bank has developed into a well-managed institution. IDB's investment decisions are generally based on sound financial, technical and economic criteria. The IDB Law provides it with a mandate to finance private industrial, tourism, and mining projects in Jordan through loans, equity participations, underwriting and guarantees. IDB is also to assist in developing a stock market and in encouraging the private ownership of shares and bonds, to provide technical assistance, to promote new projects, and to help small industries.

IDB has so far concentrated its efforts on making loans to industrial and tourism projects and providing these clients with assistance in the fields of financial management and project preparation in particular. However, in March 1975, IDB expanded its activities to assist very small entrepreneurs through its small-scale industry and handicraft program. Its overall activities are guided by a statement of investment policy which, together with provisions in IDB's Law, provide a satisfactory framework within which IDB can carry out its operations.

The Industrial Sector of Syria

The Syrian economy has a balanced resource base, with good potential for industry, agriculture and services, and with modest reserves of petroleum. Since the mid-1960s the State has controlled basic economic activities including the bulk of large-scale manufacturing and extractive industries, foreign trade and commercial banking. The State directly controls the prices of goods and services produced in the public sector and regulates the prices of nearly all other commodities.

National development planning began in 1961 and is continuing with the recent promulgation of the fourth Five-Year Plan for 1976-80. Following a change in government late in 1970, economic policies have been characterized by the intensification of the development effort, closer coordination with neighboring countries, especially Jordan, liberalization of the exchange and trade system, and a more positive posture toward the private sector.

In part due to the intensification of the development effort since the mid-1960s, industry's share in real GDP rose from 15.9 percent in 1963 to 20.3 percent in 1976. However, the increase in industry's share since 1970 has been marginal despite the continued growth in absolute terms. The performance of the industrial sector is primarily influenced by the production of petroleum, electricity, textiles and food processing which account for about 80 percent of total industrial production.

Table 8 shows production figures for the principal manufactures. From 1971 to 1976 little or no growth was registered by the major products. However, real industrial value added rose by 8.5 percent in 1976 compared to 4.3 percent in 1975. The products with the best growth performance were refrigerators, television sets and batteries.

Current prospects are for further expansion in cement, fertilizer, color television and textile production, the latter through new factories producing polyester yarn and woolen carpets.

The fourth Five-Year plan for the period 1976-1980 sets forth a number of objectives which pertain to the industrial sector and potential effects on collaborative possibilities. Among these are:

Table 8. Production of Selected Industries in Syria

(Thousands of tons, unless otherwise indicated)

Industries	1971	1972	1973	1974	1975	1976 ^a
<u>Food:</u>						
Salt	14.5	49.5	35.1	40.0	34.0	53.8
Vegetable oil	26.2	27.5	28.7	25.4	22.2	25.4
Olive oil	22.2	33.5	13.7	44.4	33.2	--
Preserved foods	5.7	5.8	4.7	8.1	9.8	9.7
Sugar	130.4	137.2	142.0	148.0	117.1	126.0
Tobacco	4.4	4.7	5.3	5.8	6.7	8.5
<u>Textiles:</u>						
Wool yarn	1.8	2.0	2.2	1.7	1.2	--
Woolen cloth (million meters)	5.7	3.5	4.9	4.4	4.7	--
Cotton yarn	23.4	27.9	28.5	30.4	31.7	31.1
Silk yarn	2.5	2.4	2.3	1.9	2.0	--
Cotton and silk textiles	29.1	29.7	31.1	35.1	36.7	37.2
<u>Chemical and engineering:</u>						
Cement	910.0	1,004.0	848.0	965.2	994.0	1,110.0
Glass	15.2	15.8	22.2	24.7	25.4	26.4
Paint	3.3	3.5	3.0	4.0	4.1	4.3
Refrigerators (thousands)	18.7	25.1	28.1	38.6	52.1	60.5
Batteries (thousands)	22.9	33.4	31.7	38.7	81.5	133.0
Furniture wood (thousand cubic meters)	3.5	4.6	6.0	6.3	7.4	7.5
Plywood (thousand cubic meters)	10.3	7.1	5.0	7.7	8.4	7.2
Television sets (thousands)	12.3	0.2	12.7	38.5	39.1	57.9
Washing machines (thousands)	16.2	18.9	22.7	23.9	17.9	18.6
Soap	23.3	25.9	27.8	28.3	28.9	30.2

Continued --

Table 8. (Continued)

Industries	1971	1972	1973	1974	1975	1976 ^a
----- <u>Millions of kilowatt hours</u> -----						
<u>Electricity generated</u>						
Total generated, of which:	1,049.0	1,223.0	1,154.0	1,366.0	1,673.0	1,862.0
Consumed by industry	(559.7)	(664.0)	(621.6)	(743.9)	(863.0)	(938.0)

a. Estimates.

Source: Government of Syria, Central Bureau of Statistics.

- . Realization of self-sufficiency in principal foods and clothing commodities, and endeavor to accomplish self-sufficiency in other commodities
- . To endeavor to produce all implements of agricultural production locally, and to proceed towards securing local production of implements for other manufactures
- . To make available the scientific framework required as to gradually dispense with foreign expertise
- . Industrialization of raw materials that can be economically produced in order to make available materials needed for local consumption, and to export the industrialized excess
- . To participate in changing the structure of commodity export by increasing exportation of industrial products which are suitable to Arab markets and foreign markets, as to quality and specifications
- . To keep in mind the Arab Common Market in order to avoid competition with other Arab industries, in order to achieve Arab complementation as far as possible
- . Extending of commercial exchanges with Arab countries in order to support Arab Common Market
- . Concentration of free zones by enlarging them and by providing facilities which lead to their best exploitation
- . To industrialize materials which constitute part of the strategy of defense and security plans

Two major questions have been raised as to the future progress of Syrian development. First is whether the experience being gained in the field of public enterprise can eventually overcome the loss of private enterprises in this socialist society. The second question is whether internal training and other programs will be able to offset the loss by Syria of thousands of capitalists, professionals, technicians and skilled laborers who have settled permanently outside (mainly in Lebanon and Kuwait) because of the constraints on opportunities for them in their home country.

The Industrial Sector of Lebanon

Industry occupied an important place in the economy of Lebanon prior to the current civil disorders, although the contribution of the sector to GDP was surpassed by that of trade and its growth rate bettered by transport and communications. The significance assigned to industry arises from two factors: first, that it has continually expanded since the end of World War II and done so in the absence of the protectionist policies utilized by other countries in the region. The second factor is the financial constraints which industrialists have had to overcome in an economy and society in which merchant attitudes prevail; trade and commerce still command the majority of resources and power within a structure that continues to be service-dominated.

There are no national statistics on industry in Lebanon but export data indicate clearly that manufacturing has been increasingly competitive in the Middle East, particularly in textiles, processed food, building materials and light manufactures. Many new industries have been introduced in the last two decades, and design of product and technologies used are becoming increasingly advanced. As far as consumer goods are concerned, the variety and quality of these goods place Lebanon ahead of any other Arab country.

Except for a few large oil refineries and cement plants, industrial establishments are predominantly small and heavily concentrated in and around Beirut. Because civil destruction was particularly heavy there, it is estimated that in 1977 only 10 percent of Lebanon's industrial facilities were still functioning.

III. POTENTIAL COLLABORATIVE INDUSTRIAL ENTERPRISES

Concepts and Definitions

A collaborative enterprise, as used in this report, is a business venture for the production of an economic product in which nationals of both Israel and an Arab country or territory are actively participating partners. The Arab partners considered most specifically in this report are Egypt, Syria, Lebanon, Jordan, the Gaza Strip and the West Bank. (For ease of references, the collaborating partners will be referred to as "areas".) Third parties and outside donors may also be participants of these enterprises.

The term "industrial" is the standard statistical category that includes as major consolidated branches:

Food, beverages, tobacco
Textiles, clothing and leather goods
Wood, paper and printing and miscellaneous
Mining, quarrying and minerals
Chemicals, rubber and plastic products
Metal and electronics
Construction¹

1. Construction has been included because it is a modern industrial-type process relevant to the basic purpose of this report, as advised by AID.

The concept of "region" in this report is confined to the Near East geographic region and to consideration of potential collaborative enterprises between Israel and one or more Arab areas. Collaborative industrial enterprises (CIE) in the Near East region are therefore a special construct for this report. Obviously, some of the potential enterprises would be possible with participants from other regions, but this consideration falls into the context of "third parties," whose potential role is discussed later in this report.

Mutual Complementary Basis of Inputs

The purpose of examining the economics of the relevant areas in the Near East is to explore the economic desirability and feasibility of collaborative industrial enterprises. The need for a complementarity of economic inputs in each enterprise must be clearly recognized as the only viable base for such ventures.

Almost every economic system in the world today has unutilized or underutilized resources. For this reason developing countries are trying to up-grade or modernize their economies to increase national product. Often, the modernizing process consists largely of efforts to find some productive work for unemployed workers or workers with very low productivity. Improvements in technology and in the quality of labor inputs usually are combined in the modernizing process but essentially the modernizing process is an attempt to maximize the use of potential economic resources.

The geographic areas considered by this report have many potential resources that are unutilized or underutilized. The employment and products that could be generated from these potential inputs are considerable and could contribute substantially to the several national economies. This examination of the economics of the areas in the Near East region has found that some kinds of inputs potentially available are complementary and could be combined to mutual advantage.

It should be noted that while industrial inputs may be summarized into such broad categories as natural resources, human inputs, capital equipment, etc., in actual operations they must usually be quite specific, fitted almost exactly to the industrial process. Thus, if a venture in electronic production requires an engineer, the availability of building engineers or mining engineers will not provide the necessary complementarity of inputs. The specificity of inputs may not be so exact in unskilled labor inputs, but at higher levels of responsibility and training exact complementarity becomes more critical. This requirement becomes most critical at the management level. No collaborative ventures, for example, should be considered without the availability of competent, experienced management.

Egypt has many unskilled and semi-skilled workers who are either unemployed, underemployed or employed with very low productivity. Egypt also has an industrial sector of wide scope although it is not operating efficiently and needs

improved technology and capital. A lack of supporting services and infrastructure for modern industrial enterprises is a severe constraint to efficiency. Skilled labor is available in some industrial subsectors, but labor demands of the oil producing areas in the region have drained off many skilled and semi-skilled workers. There are some available natural resources, such as water, gas, oil and minerals. Egypt's industrial sector operates at high costs, within a protected market, and its industrial products are not competitive in world markets. With its broad scope and potential inputs, Egypt could become a major workshop and industrial center for the region, given sufficient impetus for modernization.

Israel, on the other hand, has few natural resources and many shortages constraining the expansion of its industrial sector. Yet it must increase industrial production and exports to achieve the economic stability and standards its people seek. Israel has therefore turned to upgrading its industrial sector, concentrating on producing higher valued manufactures with growing exports. It has developed a capacity for engineering and science-based industries (electronics, medical and industrial instruments) and equipment machinery, and design-based industries (textiles, clothing, jewelry) that have successfully entered international markets. While expansion plans have been adopted and are operational, constraints and obstacles are numerous and substantial. Increased production is limited by shortage of capital, of semi-skilled and unskilled workers, and by the small domestic market. Thus, many enterprises are facing shortages of the types of inputs that are unutilized

or underutilized in the Arab areas of the region. The dovetailing of these inputs, accompanied by appropriate investment funds, could add significantly to employment profits and the supply of goods in the participating areas.¹

Jordan, the Gaza Strip and the West Bank have far fewer potential complementarities with Israel than does Egypt, but they do exist in some magnitude. Jordan has some unutilized mineral resources, while Gaza and the West Bank have large numbers of semi-skilled and unskilled workers. The mass movement of labor to the oil areas has removed a large part of the labor input that could have been available. However, the need for providing more productive employment for residents of Gaza and the West Bank is generally accepted. Jordan's need for continued expansion and improvement in the industrial sector is also a recognized part of the regional picture.

Syria and Lebanon also have potential complementarities, particularly with Israel and Egypt. The large agricultural sector of Syria could be developed for producing the variety and quality of processed foodstuffs by CIEs which would find acceptance in Western as well as Eastern Europe. Lebanese industrialists, on the other hand, with their technical expertise and marketing channels to African and Asian countries, might participate profitably with manufactures of more highly sophisticated industrial products such as have been developed in Israel and to a lesser extent in Egypt.

1. Consideration of technical assistance as an input to joint ventures is not in the terms of reference of this report. As required by collaborative enterprises it may be a separate input or part of management and professional services made available by the participants or a third party.

Criteria for Collaborative Enterprises

Every CIE must have economic benefits for each participant. All such enterprises would have training and educational benefits, but there must also be real and visible economic benefits to the investors. Collaboration must offer more overall return to each party than would "going-it-alone."

There must be the utilization or more refined utilization of inputs that would be otherwise unused or inefficiently used. Obviously, it would not be advisable to consider enterprises where necessary and sufficient inputs are not available and cannot be made available in the future by any of the participants.

Increased exports must be given a high priority wherever possible. Import substitution, particularly where it leads to reduced costs is beneficial, but it is not desirable when strong protection is needed to keep the venture profitable.

The CIE must emphasize improved productivity, since there is little to be gained in replicating enterprises with built-in processes for low productivity operations. CIE must take advantage of possible economies of scale.

Every CIE would affect several levels or facets of each participant's economy. Activities at the manufacturing

level might affect related enterprises at the distribution, wholesale and retail levels; supply and service markets might also be affected. Each area participating in a CIE would have to assess the costs and benefits at all levels and facets for itself and judge whether a worthwhile balance could be achieved.

Finally, every CIE should contribute to the economic growth and the social, political and environmental well-being of each area concerned and the region as a whole.

Potential Benefits of Collaborative Industrial Enterprises

A major benefit, obviously, would be the employment of unemployed or underemployed workers and an increase in their earnings that should lead to a higher standard of living. Such ventures could also lead to expanding production of agriculture and mines, to more jobs and earnings for people supplying the CIE with raw materials and services, and to increased government income from taxes. The supply of essential goods might increase and the CIE might reduce costs of essential products for the domestic market as well as for the international market.

Another major benefit from CIE participation, difficult to quantify in a cost/benefit analysis, but nonetheless real and significant, would be the improvement of management. The industrial sectors of all the potential participants can be

characterized as having established industrial enterprises that function in highly protected domestic markets with relatively inefficient management. Israel has been able to change this in some industrial sectors and every country has exceptions to this crude generalization. But it is still an unpleasant fact that management in the industrial sector in this region requires massive changes in skill and experience in order to modernize its operations. The most effective means of transferring improved management practices, technology and marketing is through actual operations. Competition in unprotected markets, which is of course what CIE would usually face, would be a powerful force in the direction of increased efficiency by management.

Expanded markets and improved marketing practices are essential elements for significant increases in expansion of industrial production. Considering the desperate need for foreign exchange in all the areas considered by this report, the expansion of external markets must be given a high priority in industrial investment. Because of political and historical constraints, Israel has been cut off from nearly all markets in the Near East region. While penetration of other foreign markets has been made, the inability to reach Near East markets has been a serious constraint for Israel. Egypt has exported a wide variety of products to the Arab countries of the region, but these exports have been limited by inadequacy of quality control and reliability of delivery, high cost and the need to develop new marketing practices.

Products of CIE enterprises should have a far wider acceptance in the Near East than do Israel's products and their likely greater marketing capability should make available to Egypt's management a wider and more efficient marketing experience, not only for the Near East, but for Western Europe, Latin America, the United States and even the rest of Africa and Asia. While national sensitivities and historical biases might retard the expansion of markets, particularly in the Near East, time and effective management should gradually increase the possibility of fostering this kind of benefit from CIE.

Noted above, but worthy of further note, is the need for improved quality control of industrial products, particularly where world markets are concerned. Industrial products of the region, with the exception of some produced by Israel and Lebanon, are unfortunately labeled as of uncertain quality. This has been reflected in the size of exports and their price. Egypt, for example, has had little success in expanding sales of industrial products to other African and Asian countries. Quality control is basically a manifestation of efficient management; CIE could be a significant force in the development of this in the region.

Finally, CIE could help to provide stability to the localization of labor in the region in two ways. First, it could provide employment opportunities for young people in subareas needing development projects and industry such as the Sinai, the West Bank and Gaza territories. Second,

in the long run, it could absorb skilled and semi-skilled workers returning to their native lands after having accumulated nest eggs in the oil producing countries.

Constraints to Collaborative Enterprises

Perhaps the most serious constraint to CIE is that all nations have a strong bias toward autarchy or self-sufficiency, particularly in the production of basic consumer goods. While this bias is understandable, its overemphasis can be very costly. A policy of maximizing the use of readily available inputs, even though this may mean importing some products that could be produced at home, can maximize the economic returns of a country without jeopardizing its future. But national pride often prevents the pursuit of such a policy. This fact is as true in the Near East as elsewhere.

Another major limitation on CIE is the generally modest endowment of natural resources, apart from the hydrocarbon deposits of Iraq and the Arabian peninsula, with which the Near East is blessed. The potential for complementarity of raw materials in support of CIE is thus clearly restricted.

The inadequacy of the infrastructure, particularly in Egypt, Syria, Gaza, and the West Bank of Jordan, represents another serious obstacle in the way of joint industrial enterprises. There are basic needs for adequate supporting services, such as power, water, communications, transportation, and housing.

Another problem is the difficulty of competing in the world markets with the products of the large masses of unskilled, but very industrious, workers of East and South Asia. Even in Egypt, where localized pools of semi-skilled and unskilled workers may be available for CIE, the capacity to compete economically with certain Asian countries will probably not exist for a significant period of time. Nor will most of the region be able to compete with the highly automated, mass assembly production lines of the economically advanced countries.

Yet another constraint is that massive industrial projects in the region are considered the special preserve of governments and therefore not likely an appropriate model for potential CIEs. In any case, medium-scale, private ventures, although offering perhaps more limited return to participants, provide the more manageable size and structure of organization which successful collaboration will require.

The movement of labor from parts of the Near East that do not enjoy massive oil income to those that do is often a constraint of significance to the labor exporting countries. While the total effect of this labor migration is beneficial, particularly when remittances are considered, there remain specific constraints in certain areas that require consideration. Jordan, for example, must now import certain types of skilled labor and even some unskilled labor because so many of its workers have taken employment in the oil producing areas of the region.

A basic constraint, so obvious that it is often overlooked, is the critical shortage of investment funds, particularly for enterprises that require foreign exchange, especially for the small- to medium-scale establishment. Also, any investments in CIE would need a flow of funds under an assured climate of continuity and fulfillment of contractual obligations. Given the lack of such a climate, it would likely be necessary to induce investment in joint industrial ventures through such governmental support as the provision of capital at concessionary rates of interest. Tax incentives and other inducements might also be needed as would some forms of protection against the ill effects of severe inflation and devaluation of currencies.

Differences in business practice and experience could also prove to be a constraint in CIE. Israeli businessmen are experienced and aggressive in export marketing, for example, and have had sufficient success to bolster their confidence. Egyptian and many other Arab businessmen, for the most part, lack exporting experience and have little confidence in their ability to compete with foreign manufacturers. Such contrasting self-perceptions raise the spectre of a superior-inferior relationship that could hinder close collaboration.

While these various constraints are significant, they need not be controlling. They are, however, a reminder that any joint enterprises must be very carefully selected

and strongly supported; a collaborative venture under prevailing circumstances could fail more likely than succeed. Yet a failure of any such joint project would have serious symbolic importance, as would, conversely, a successful venture!

Potential Collaborative Enterprises

There are five subsectors in which possibilities of CIE are suggested by the availability of complementary inputs. These are briefly discussed below, to establish their potentiality. Available data are not sufficient to undertake even the beginning of what might be called pre-feasibility examinations.

To simplify these descriptions, and to clarify the structure of a CIE, those aspects of it that would exist in all CIEs are indicated below.

Every CIE would be jointly owned and managed by the participating companies, whether public or private. Management would usually extend beyond owner-managers into the employment of professional managers and manager-trainees. Therefore, the management would usually be drawn from all of the equity participants of the enterprise, with the composition and extent determined by the nature and circumstances of each specific CIE. Special emphasis would be given to the training of inexperienced managers. Because improved management and expanded training opportunities should be part of every CIE, these will not be noted in the descriptions below unless they loom exceptionally important in a specific instance.

Technical assistance from the participants, the United States or any other third party may be utilized as required and available.

Supporting Facilities and Services

There are several types of supporting institutions and arrangements that, while not part of the industrial sector, could, if available, greatly enhance the prospects for the initiation of CIE.

Industrial Park in a Free Trade Area

An industrial park as part of a free trade zone, established at the border of the Gaza Strip, the Negev and the Sinai, could add significantly to the prospective advantages of CIE between Egyptians and Israelis. For example, it could provide low cost services (power, transportation, communication) to attract industries (not all would have to be CIE). For some enterprises, collaboration would appear a more real and creditable alternative in such a location than in Egypt or Israel proper, since the location would emphasize the joint nature of the effort. Locating CIE at the extreme frontiers of each country could also help overcome area suspicions and fears of domination.

An industrial park in the suggested area would provide jobs for workers from the Gaza Strip and Egypt. Workers from Israel would also be more available on a continuing basis. A free trade zone could ease movement of supplies and products, particularly if good road transportation were available to nearby ports. An industrial park in the Golan area could provide similar opportunities for collaboration between Israel, Syria, Lebanon and perhaps some Palestinian Arabs.

Products marketed from this free trade zone would likely find greater acceptance in regional markets, at least in the near future.

Good communication facilities could speed up clearance and financial documentation in ways that add significantly to production and marketing efficiency.

The establishment of an industrial park in a free trade zone would take time to clear the planning, financing and administrative hurdles that necessarily exist. However, it could be started fairly rapidly, and agreement to support such a project would represent the bona fide commitment of participants to develop CIE.

Special Regional Development
Fund for CIE

A special financial agency to provide investment funds could expedite the development of CIE and establish such ventures more easily than could existing institutional

structures. This regional fund could receive capital contributions from Israel, Egypt, other Arab countries and outside donors. Its Board of Directors could have representation from the Development Banks of Egypt, Jordan and Israel and any other National Development Bank that wishes to participate. The procedures these Development Banks now use could serve as models for providing funds for the CIE but any special fund should operate independently of them to retain flexibility and to expedite decisions. Governmental inducements to investments could easily be channeled through this special fund as is now done through the development banks. Its successful operation would serve as a force toward efficiency in national development bank operations in the whole region.

The Leasing of Capital Equipment

The leasing of heavy production equipment, transportation equipment, etc., would reduce the immediate capital needs of CIE and help introduce into the Near East region a modern technique of financing that can reduce costs and raise productivity. Leasing can also help to overcome the chronic maintenance problems found in developing countries. Equipment servicing contracts can often be written with the manufacturers leasing the equipment, which removes the technical burden of maintenance from the lease.

Special Expediting Group

Egypt, Syria, and Israel are particularly noted for

their labyrinthine bureaucratic structures and long delays, waits, reexaminations and regulatory obstacles. Improvements are unfortunately slow in coming as new conditions constantly create new bureaucratic requirements. Operating under varying parts of two or more countries' rules and regulations would clearly not enhance the prospects for the success of CIE. Yet it would probably be impossible to circumvent these requirements because they represent legitimate national considerations for which government staff will continue to be responsible. However, CIE clearances could be expedited by assigning responsibility to a special group of officials from key national agencies of the countries concerned. The expediting work could be a part time assignment, with the officials continuing to hold their regular positions with their government agencies.

Potential Candidates - Subsectors for CIE

The examination of the industrial sectors of Egypt, Syria, Lebanon, Israel, Jordan and, to a lesser extent, the Palestinian West Bank and Gaza Strip, their present composition, availability of inputs and their markets, indicates that there is a reasonably wide variety of theoretical possibilities for CIE. Mutually advantageous linkages could of course only be identified with any degree of certainty by specific visits and technical evaluations. Yet, even a preliminary assessment indicates that a number of specific industries in the region seem to meet the following important tests:

- . They are now operating and must expand their production.
- . They have proven management experience.
- . There are unutilized or underutilized human inputs.
- . There are adequate markets and good marketing experience is available. .

In other words, these are "real" industries, with owners and managers who could be convinced of the good prospects for expanded production and profits, if arrangements and inducements for regional collaboration were possible.

For each of the industrial subsectors identified, the following kinds of information are provided:

1. Examples of the products now produced
2. Materials inputs required and available
3. Human resource inputs required and available
4. Markets - actual and potential
5. Timing

Food Processing

This industry consists of the canning, dehydrating, freezing and packing of foods, including fruits, vegetables and animal products. The raw materials are products of the agricultural sector, and the food processing industry must be vertically integrated to the sector's operations. It is

a widespread industry, characterized by small- and medium-sized plants, usually located near the source of supply. Food processing sometimes competes for supplies with the fresh food distribution system, which generally pays higher prices for the raw materials and sometimes supplements it by providing an outlet for products not suitable for bulk distribution.

In Israel, the agricultural sector has achieved high levels of productivity and marketing is relatively efficient. Food processing, particularly of citrus fruits, is a proportionately large industry. Frozen and dried foods, particularly poultry, are being exported in growing quantities. The processed foods being exported are of high quality and are received favorably in the markets of Western Europe and the United States.

Egypt also has many food processing plants, but production is largely for a highly protected domestic market. While the remainder is exported almost exclusively to Near East markets (e.g., Saudi Arabia), quality is variable and prices are not competitive in world markets.

All of the Near East areas considered in this report are pressing for increased food production and increased exports. In all areas, food processing may be expected to expand, given the proper stimulation by government. This is needed because control of key inputs, particularly capital, lies in government's hands, particularly in Egypt and Syria. Food processing plants lend themselves particularly to the private sector and especially small and moderate sized enterprises, with their critical day-by-day marketing and buying decisions.

In Israel, there are experienced managers, with export marketing experience and plant engineers experienced with maintenance, transportation and quality control. Egypt, Syria, the Gaza Strip and the West Bank have more limited management available, but do have potential raw material supplies and semi-skilled and unskilled labor that lends itself to the seasonal operations of food processing.

The market for processed food is expanding in the whole region. Food products processed in a collaborative industry could have reasonably widespread acceptance in the Near East. Markets in Western Europe could also be expanded and tapped.

While it might take two to three years to make the supply and marketing arrangements and to build the plants, the establishment of a means for financing such plants on a regional basis could bring fairly prompt and effective responses from local entrepreneurs, from Israel as well as the Arab areas of the region. The engineering capacity and much of the machinery and equipment (pumps, tanks, heating and control equipment) are available in both Egypt and Israel.

Textile and Leather Products

Israel and Egypt have relatively large, sophisticated textile industries. These countries manufacture many types of textile and leather products, including all kinds of apparel and accessories. Syria, Lebanon and Jordan also have considerable capacity in these areas.

In Israel, the textile industry is concentrating on replacing imported material. Cotton spinning production is for the domestic market, and modernization efforts will replace obsolete equipment. The subsector as a total is pressing for expansion of clothing for export. Automated operations, where they are possible, are designed to reduce costs and to help the clothing plants meet the competition that is expected from imports, since the agreement with the European Common Market removes tariff barriers.

Exports in this group of industrial projects aim largely at the quality and high fashion markets in Western Europe, the United States and Latin America. Israel has

developed design and fashion capacities and experienced management and marketing channels which have expanded exports and could provide possibilities for CIE in this product group.

The Egyptian textile industry is undergoing massive programs in modernization. The large plants, which are in the public sector, will import new equipment and will receive technical assistance under several kinds of external aid programs, both bilateral and multinational. Export volume is not very large, and is limited mostly to the Near East region and East Europe. There are also many smaller textile mills and a large number of very small clothing shops also producing for the local market.

In Israel, production of textile and leather clothing and other products cannot expand very much because of labor shortages. The industries in this group of products find it very difficult to recruit an adequate number of beginning workers to build up the skill pool. Handsewing, for example, is becoming a lost craft in Israel because few Israeli young people will enter the field. New migrants do not come from areas that employ such workers and that former source for new entrants is consequently disappearing. Similar shortages confront manufacturers of leather clothing and products; leather tanners are also scarce and leather clothing exports must compete with products from low wage countries.

While the numbers of workers involved may not be very large, there are reasonable prospects of candidates for CIE in this product group. High fashion and design, with

experienced management and marketing contacts could make possible several ventures in accessories, purses, leather coats, shoes and scandals, and similar products. The high prices received by successful penetration of Western markets, and the flexibility of the manufacturing process makes CIE an advantageous form. Pieces could be designed and assigned to different shops and plants where transportation and communication is fast and reliable. The large variety and number of the entrepreneurs in this field make it very likely that candidate projects would be suggested, if appropriate inducements were available for investment and management.

CIEs in this area could be economically established in industrial parks in either the Golan or Negev/Sinai border areas.

Chemicals and Allied Products

Petrochemicals and their byproducts have been omitted from consideration primarily because of the obvious domination of another part of the region, the Arabian peninsula, in the development of this sector. Although Egypt now has surpluses in gas, some of which is being flared off, negotiations on withdrawal from the Sinai suggest in any case that oil and gas and their byproducts are generally not likely candidates for collaborative industrial enterprises in the near future.

Two broad classes of chemical products are strong candidates for CIE, however. These are pharmaceuticals and agricultural chemicals. Pharmaceuticals include drugs, biologicals, medicines, etc. The raw materials are chemicals, made locally or imported in bulk. The processes used are scientific; they require proper design, careful maintenance, exact quality control and experienced marketing. The markets, both domestic and international, are widespread and competitive. Demand is price inelastic; that is, price is less a determinant of the demand than quality and reliability.

Both Egypt and Israel manufacture pharmaceuticals. In Israel, the industry is modern and has already penetrated international markets. There is a supply of experienced management, scientists and technicians. Research and development facilities are available, with 6 percent of the industry's gross sales now allocated to research and development. The scarce components and constraints are capital and the cost of penetrating the international markets.

Egypt has a limited pharmaceutical industry, focused on its domestic market. Health products, particularly medicines and drugs, have a strongly rising market in the Near East. As standards of living rise, together with increases in education, communication and transportation, the demand for health products also rises sharply. No government can or would deliberately resist this increase and the economic system, particularly the private sector, responds rapidly, if it can, by importing all kinds of pharmaceuticals, drugs and medicines. The markets in the Near East, as well as in Africa, respond quite favorably and promptly to available supplies of modern drugs and medicines, if they carry with them an image of quality control and reliability.

In Israel, there are managers experienced in production and export, engineers and scientists. Egypt has management familiar with production, but unfamiliar with modern techniques, quality control and export markets. The expansion of this industry is essential for the development of modern health facilities in the Near East. A few plants in Egypt and in an industrial zone near the Gaza Strip, the Negev and Sinai could market their products in Egypt, the Near East region and Africa.

Agricultural chemicals follow much the same pattern as pharmaceuticals in their growth prospects. Pesticides and fertilizers face increasing demands throughout the world. The domestic demand in Egypt is still met through substantial imports, although Egypt does have appreciable production capabilities and plans much more. In addition to the critical shortage of capital, there is a shortage of experienced management, of engineering capability, quality control, and technicians. As Egypt struggles to expand this essential subsector, the situation could be markedly advanced by a CIE demonstrating the possibilities and importance of vigorous, experienced management, in a science-based industry.

Marketing opportunities would be ample in the Near East and in Africa. Transportation costs loom large in these bulk products. Manufacturing in Egypt or in a free trade industrial park near Gaza would lower costs and provide employment for workers from that area.

Metal and Electrical Products and Parts

This is a broad category, stretching over many industrial branches. It is discussed here so broadly because the complementarity or matching of the region's inputs are much the same, although the products vary. This category includes all machinery, including electrical and mechanical; instruments, including engineering, educational and scientific, controlling and measuring devices, medical instruments and equipment; automobile parts; farm tools and equipment; pumps and irrigation equipment; office and computing equipment, transformers, electrical distribution equipment, solar energy heaters, air conditioners, etc.

This category is the fastest growing part of Israel's economy. In the past 20 years, the average annual growth, in real terms (eliminating price increases), was 14 percent compared with 10 percent for all industries. While military products formed a significant market for this group, exports were even more important. Exports increased, in current dollars, about 22 percent a year, compared with about 18 percent for all industries. The development of this group has therefore deeply affected the scale and character of Israeli industry and, in a certain sense, the whole economy. In the coming decade, agricultural equipment, water and irrigation control equipment, desalination, solar energy, automobile parts, and medical equipment are expected to typify the major elements of expansion.

The production of these products required Israel to develop a pool of engineers, designers, scientists, and technicians. The educational and training capabilities to develop this input have been achieved, and Israel has added a growing research and development capacity that has already established a role internationally. In spite of the sharp expansion of the industrial sector, the capacity for training has produced more engineers, scientists and technicians than the local market required. A pool of unemployed engineers and academically trained persons is developing, relieved somewhat by emigration, but not entirely so. This pool holds the promise of making possible the development of several CIEs that would be exceptionally useful and profitable.

The areas in this metal and electrical products group that seem particularly promising candidates for CIE are:

Agricultural machinery and equipment

Factory machinery (compressors, tanks, control devices)

Irrigation items (pipe, pumps, control devices)

Solar equipment (heating and air conditioning)

Automobile and truck parts

Many, if not all, of these products are made in Egypt. However, Egypt imports far more of these products than it produces. As Egypt -- and the whole Near East region -- expands its industrial base, improves its communication and transportation systems, and raises the standard of living of

its inhabitants, the requirements for these types of metal and electrical products will increase at an even faster rate. The market for these products extends beyond the Near East, to Europe and North and South America. These are products that do not necessarily lend themselves to mass production, automatic factories or to mass assembly line operations. Competition lies in quality and engineering, in research and development, in knowing the market and servicing its specific requirements.

Several CIEs in this group, located in Egypt or in an industrial park near Sinai, the Negev and the Gaza Strip, could integrate the inputs from Egypt, Israel and Gaza. Marketing would be relatively easy in Egypt and Israel and should not be more difficult in other areas of the Near East and Africa. The training capacities in these enterprises would be a significant addition to the capability of the Egyptian industrial sector. The management staff in a few years could be drawn largely from the area where the plants are located, with R&D work assigned to locations where laboratories and work shops exist, both in Egypt and Israel.

The timing of CIE in this group would vary greatly. Some, smaller and quite specific, such as a company that produces solar heating and air conditioning equipment, could start a collaborative enterprise with an Egyptian company in less than two years. Parts could be made in Israel, sent by truck to Egypt, where more parts could be made and final assembly and testing could complete the product. Distribution to markets in the Near East and Africa could

be from both Israeli and Egyptian ports. If the regional funding institutions and the industrial park were in operation, the solar heating and air conditioning equipment-CIE could be initiated relatively easily and quickly.

Other metal and electrical CIEs might take several years to establish. It is, of course, better to go slowly and investigate prospects as carefully as possible; there would likely be many proposals that represent more wishful hopes than market realities. The small size of many of the existing enterprises, both in Israel and in Egypt, provide some base for flexibility and a hope for proposals and candidates from the private sectors. The speed of development would be a function, generally, of how supportive the governments themselves wish to be in this matter.

Construction

Construction is not formally a branch of the industrial sector; it is a type of activity that precedes and makes possible industrial production. It is basic to the infrastructure of power, water, roads, etc. and the buildings for trade, offices and housing. It is included here because it is a promising candidate for CIE.

The construction industry in Egypt is badly organized and not very efficient, according to a recent World Bank report. Supply of materials to construction projects is generally uncertain and delayed, with consequent delays and high costs. While there are still many skilled and semi-

skilled construction workers in Egypt, many others have left for the oil-rich areas, as have many unskilled workers. Experienced foremen and supervisors also have left in large numbers. The result is a domestic industry that needs re-organization, both in its private and in its public sector.

In Israel, construction does not have a universal image of efficient operation. In many companies, both public and private, there are restrictions against laying off workers, and management is often less efficient than it should be. Reductions in the levels of construction over the past three years have reduced employment in this sector by about 15,000 workers. There are a growing number of unemployed building engineers in Israel. As in the case of the Egyptian sector, there is room for improvement in operations of the construction sector; there are unutilized and underutilized inputs. The possibility therefore exists for developing several CIEs in construction.

Israel could provide architects, engineers, supervisory personnel, some foremen and some building supplies. Egypt could provide almost similar inputs, plus the much larger number of semi-skilled and unskilled workers from the locality of the construction activity. Both countries could supply the management, working collaboratively. Thus, a CIE could be organized to do a single major job, such as a road network through part of the Sinai, a housing development near the Suez Canal, a water and sewerage system expansion, and similar large projects. A desirable project might be the construction of the industrial parks suggested in this report, with adjoining housing for some of its future workers.

The projects for which a CIE might be desirable could be in both the public and the private sector. A government sponsored CIE might be a highly visible signal of national collaboration and confidence, as well as an efficient vehicle for getting some needed buildings or facilities.

Construction CIEs could be organized jointly to do only one large job or could be operated for small projects on a continuing basis. Construction is one of the subsectors for which CIE could be organized fairly rapidly, once the scope and site of a project has been approved.

IV. ROLE OF THIRD PARTY OR OUTSIDE DONORS

In the Near East, there is little history of active collaboration either among Arab countries or between these countries and Israel. Consequently, there would likely be a need for a continuing interest by third parties, whether governments, multinational corporations or aid donors, in the initiation and the operation of CIE. There is ample evidence that, in spite of the desire -- even eagerness -- for peace on both sides, suspicions, conflicting priorities and even fears will continue to be a fact of business life in the Near East region. The actual and imaginary constraints on such regional innovations as CIE, or on a special regional financing institution will be major obstacles for a long time. Bureaucratic delays, in particular, will probably always stand in the way of progress in the Near East. The presence of third parties, constantly pressing for positive action and compromise on small differences could provide a highly useful catalytic influence.

The continuing need for financial aid, particularly foreign exchange, should not be overlooked. Unless some of the oil areas join enthusiastically in the CIEs -- which is not very likely for some time at least -- capital shortage would be an acute constraint.

The CIE would be less familiar, and, consequently, perceived by both Israeli and Arab entrepreneurs and managers as more risky than domestic investments. The experienced, successful entrepreneurs required for CIE would usually have other options available for their time and resources. Their interest and commitment would therefore have to be captured, not only by financial inducements, but by the political and social importance to all participants, including third parties.

Experience in dealing with international business operations is generally lacking in the Near East. Managers, experienced and successful in their own countries, would have to expect frustrations, disappointments and misjudgments, as well as opportunities, while dealing with production and distribution problems in another country. The continuing interest, availability, and assistance of third parties at nearly all levels of operation could thus be a highly useful element in a CIE development.

Added to this would be the need to provide outside assurance of stability and continuity. Entrepreneurs, in both the private and public sectors, would want assurances of continuity before investing their time and resources in ventures based substantially on the continuing good will of all the participants. Business judgments about trade-offs between short-term and longer term gains, investment in good will and public acceptance, and about changes in government policies would all require a firm, visible base line that a third party presence could best provide.

There might be any number of third party participants, and they might participate in specific projects or functions. Regional institutions and agreements should be both flexible and open.

There are many different types of inputs that third parties could supply:

Investment Funds

This is a critically short input, in all of the relevant areas. Financial assistance should be made part of the inducement for CIE and could be provided in the forms of equity holdings, loans at concessional rates, loan guarantees, etc.

Suggestions for Specific CIEs

Because of the highly innovative quality of CIE, it would likely be necessary to stimulate the interest of potential participants and urge their serious consideration of possible candidate ventures. Third parties could play an important role in identifying potentially successful candidate ventures, particularly at the beginning of the program.

Assistance in Establishing
and Operating the Special
Regional Financial Agency
for CIE

This special institution would be basic to a successful CIE and third parties must not neglect this. Assistance could be both financial and operational.

Technical Assistance

For pre-feasibility and feasibility studies, third party technical assistance could be of strategic value to the CIE program. The speed and competence of this phase of operations would be so important that third parties should take a special interest in its execution.

Insurance Against Expropriation,
Losses from Devaluation, and
Severe Inflation

These are types of continuing need that would have to be carefully considered and met. Each participant in CIE might have different methods of confronting these uncertainties and third party assurances and commitments might be essential elements of the answers needed.

In short, it is difficult to visualize a CIE program without serious and continuing support by third parties. If the CIE were based solely on financial cost/benefit criteria, third party participation would not be so critical.

But potential profits in regional industrial ventures are not so high as to override all obstacles and uncertainties. Third party participation, in active commitment, would be an essential input.

V. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

1. A review of the Near East region's unutilized and underutilized resources, marketing capabilities and the potential effect of additional capital inputs leads to the conclusion that considerable economic benefits could accrue to participants in collaborative industrial enterprises.
2. Since the governments of the region control the ownership and operation of large construction and manufacturing enterprises, the possibilities for joint ownership and management would seem more likely for small- to medium-sized firms in the private sector.
3. Although the major inputs of management and labor would have to come from the participating countries of the Middle East, it would be essential that third parties or outside donors play a vigorous role. These would have to supply some of the incentives, mostly in the form of capital input. They would also have to assist in generating innovative proposals, in doing pre-feasibility and feasibility studies, in securing governmental clearances and providing technical assistance. Third parties might be governments,

international lending institutions or multinational corporations.

4. Although the potential economic benefits of collaborative enterprises might become clear after a careful feasibility study, social, cultural and political obstacles would remain. Thus, the long period of confrontation, uncertainty and animosity in the Near East region might make special inducements by all participants necessary to encourage joint projects. Even then, each participant would have to decide on an overall cost/benefit comparison, including the costs of offering such special benefits, whether and how "profitable" a particular CIE might be.

5. Any collaborative industrial enterprises in the region should concentrate on modern production processes on relatively high valued products. They should also emphasize export markets to earn foreign exchange; and not rely solely on the expansion of domestic markets or only on import substitution in the domestic market.

6. There is considerable potential for the expansion of markets in the Middle East region, but any such expansion must be approached slowly and carefully. For a long time, it would be unreasonable to expect products made in Israel to be exported directly to many of the Arab countries, and vice versa. Free trade zones and industrial parks on the borders of Egypt, Israel and Gaza and the borders of Israel, Lebanon and Syria could help solve the "country of origin" problem.

7. To expand export markets, quality standards and reliability would have to be raised and controlled. This could be achieved through the improved management and technology of joint enterprises.

8. The efficient operation of the types of joint industrial projects envisaged would depend to a large extent on the availability of proper infrastructure. Communication and transportation facilities of modern types and adequate capacities would be absolutely essential.

9. While there would be many "essential" elements in CIE, the most pressing (and the most difficult to secure) would be that of skilled experienced management. The selection of specific enterprises would be contingent on this need above all others.

B. Recommendations

1. Third parties or outside donors should accept, as part of their policy for the Middle East region, that collaborative industrial enterprises are both desirable and feasible and that support of them should be given serious consideration. However, possible ventures should not be pushed too rapidly or too impulsively as they face many costs and constraints. Businessmen and government officials essential to their successful implementation will be cautious and skeptical. The potential for individual joint enterprises must be studied very carefully before decisions are made and implemented.

2. International lenders, particularly, should encourage the Near Eastern countries to give jointly sponsored projects serious consideration in their investment plans and to devote adequate administrative capacity to the study, initiation and operation of a program for such regional enterprises.

3. Third parties, working with Egypt, Israel and any other area or country in the Middle East, should establish a special fund for collaborative industrial enterprises. This institution should be linked with the development banks of the participating countries and should provide funds and services to such enterprises.

4. The possibly affected areas and outside donors should examine the desirability and feasibility of establishing free trade zones and industrial parks near Egypt, Gaza and Israel and in the Golan for housing some of the collaborative industrial enterprises.

5. As part of these free trade zones, there should be an industrial bank which could provide or otherwise arrange for buildings and services (water, power, transportation, communications, etc.) for the joint enterprises. Some of these services, as well as loans, could be provided at subsidized prices.

6. Each government participating in the program should develop a special package of inducements to attract private sector investment in and operation of joint enterprises.

7. Because of existing delays in clearance and decisions, special emphasis should be given to facilitating governmental regulation of these joint enterprises. Each government should establish a special group of responsible officials from key agencies to assist in overcoming delays and to see that matters of the collaborative industrial enterprises receive high priority consideration.

8. Among the numerous possible industrial subsectors noted in Section 3 above, the following are the most likely candidates and should be among the first of any potential CIEs explored:

Food processing - dehydrated and frozen fruits and vegetables

Farm and garden machinery

High fashion fabrics

Women's apparel and leather accessories

Office and computing machinery

Solar heating and air conditioning devices

Electric industrial apparatus

Electronic components and accessories

Engineering, scientific and educational instruments

Medical instruments and supplies

Pharmaceuticals and agricultural chemicals

Construction - housing, public buildings, industrial buildings, highways

9. Joint ventures among government agencies or industries should consider leasing equipment for production in manufacturing plants because of the advantages offered by this type of operation.