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POTENTIAL FOR ARAB COOPERATION IN INDUSTRIAL DEVELOPMENT

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Arab Countries Bureau
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This study was prepared as a joint undertaking between the United Nations Industrial Development Organization (UNIDO), the Arab Industrial Development and Mining Organization (AIDMO) and the United Nations Economic and Social Commission for Western Asia (ESCWA), with the able assistance of Professor Heba Handoussa, Cairo, Egypt.

EXPLANATORY NOTES

References to dollars ($) are to United States dollars.

ACDIMA	The Arab Pharmaceutical Company
AFESD	Arab Fund for Economic and Social Development
AIDMO	Arab Industrial Development and Mining Organization
AMF	Arab Monetary Fund
ASEAN	Association of South-East Asian Nations
ESCWA	Economic and Social Commission for Western Asia
FDI	foreign direct investment
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GNP	gross national product
GSP	General System of Preferences
IRR	internal rate of return
MFA	Multi-Fibre Agreement
MFN	Most Favoured Nation
MVA	manufacturing value added
NAFTA	North American Free Trade Agreement
NICs	newly industrialized countries
NTBs	non-tariff barriers
OAPEC	Organization of Arab Petroleum Exporting Countries
OECD	Organisation for Economic Co-operation and Development
QRs	quantitative restrictions
R&D	research and development
ROW	rest of world
TNCs	transnational corporations
TRIPS	Trade-Related Intellectual Property Rights Agreement
UNCTAD	United Nations Conference on Trade and Development

Contents

Tables

Figures

Executive summary

Arab countries have placed special emphasis on the growth and diversification of their manufacturing sectors over the past three decades, with a large proportion of their investment budgets allocated to industry and its need for infrastructure. Yet the performance of Arab manufacturing has not been uniformly positive. Key problems have been the import substitution nature of industrial strategies, high levels of protection and the absence of regional coordination in individual country plans.

The growing importance of regionalism, the projected impact of the General Agreement on Tariffs and Trade (GATT) and the continued ascendancy of Association of South-East Asian Nations (ASEAN) countries are likely to divert trade away from Arab countries and in favour of members of the new trading blocs (the European Union and the North American Free Trade Agreement (NAFTA)), of ASEAN and of select developing countries that are able to respond to the global challenge. Arab countries are thus faced with a configuration of circumstances on the world market with grave implications for growth unless a concerted effort is made to change the structure of their economies away from dependence on the export of raw materials and low-value-added intermediates and towards the export of high-value-added manufactures.

Intraregional trade among Arab countries still accounts for only 10 per cent of their trade (excluding petroleum), up from 7 per cent in 1980. In contrast, the share of intraregional trade in total trade of the three new regional blocs has increased rapidly and accounted for 58.9 per cent of total European Union trade, 37.4 per cent for East Asia and 36.3 per cent for North America in 1989. Another feature of Arab countries' structure of industry is the extent to which the expansion of certain subsectors (steel, aluminium, petrochemicals, fertilizers and other basic chemicals) has been emphasized and that of others (e.g. capital goods, downstream petrochemicals, processed metals and various engineering products) neglected.

Another global trend is the rapid increase in the number of giant transnational corporations (TNCs) as well as in the scope of their operations in world production and trade. TNCs from Europe and Japan have increased their market share at the expense of United States-based TNCs. In parallel with the process of industrial restructuring taking place across the countries of the three regional blocs is another equally important trend that involves mergers, acquisitions and the establishment of joint-venture industrial projects and joint research and development (R&D) programmes in which several countries cooperate.

Arab States should seriously consider strengthening their existing public and private holding companies and providing appropriate incentives for more of them to be established. These holdings should obtain full legal autonomy and independent status and should be encouraged to invite equity participation from various Arab countries as well as foreign partners. Both industry-specific as well as industry/finance, industry/trade and industry/trade/finance configurations should be envisaged as important agents of dynamic growth and flexible response to the challenges and opportunities of the increasingly oligopolistic global environment.

The conclusion of the Uruguay Round after many years of negotiations for free trade is expected to bring to an end the economic stagnation of industrialized countries and increase world GNP by some $300 billion. However, it puts a major responsibility on the policy makers of each developing country to ensure that their country will share in the expected benefits of an increase in world trade and world GDP. For Arab countries, it is of particular importance to realize how vulnerable both their domestic and export markets will become as all economies—developed and developing—attempt to capture maximum advantage from the progressive dismantling of barriers to trade.

The result of GATT 1994 is improved market access to countries of the Organisation for Economic Co-operation and Development (OECD) for all developing country products except textiles and clothing. These will continue to be subject to quantitative restrictions (QRs) under the Multi-Fibre Agreement (MFA), which is to be phased out over a decade. However, the elimination of QRs will be accompanied by the imposition of tariffs on several commodities including agriculture and food products, shoes, leather products and consumer electronics. It also means that the exports of the more competitive and aggressive developing countries may well displace those of the less competitive developing countries, which are losing the shelter provided by the quota arrangements that controlled OECD imports from the more successful export-oriented developing countries and newly industrialized countries (NICs). The net effect on any one Arab country can therefore go either way and will depend on its ability to put in place all of the incentives and institutional elements that make for efficiency growth, market orientation and the penetration of export markets.

Global trends imply that Arab countries cannot afford to take a passive attitude to the impending trade war that can soon be expected amongst developing countries over the opening of markets of the advanced countries (accounting for 60 per cent of developing country exports) as well as the opening of developing country markets themselves. What is equally obvious is that the gradual enforcement of GATT rules concerning the reduction in tariff and non-tariff protection in developing country markets will pose great difficulties for non-competitive domestic producers in the Arab region. The only viable

strategy for Arab countries is to pursue a vigorous programme of rationalization, restructuring and reorientation: there are many benefits to be enjoyed if the programme is deliberately designed to capitalize on regional opportunities, with regional policies and measures that enforce harmonization of investment and trade policies as a minimum or a more ambitious plan for long-term integration as a maximum.

The revolution in information, computers and telecommunications is also resulting in the dismantling of the barriers to the geographic dispersion of economic activity. This means a reduction in the concentration of manufacturing in rich capitalist countries, which will no longer have the edge in attracting investment since global sourcing of capital, technology and manpower gives the location advantage to those countries that are best able to provide production and organizational economies. The opportunity for Arab companies to associate and form strategic alliances with the new breed of smaller knowledge-intensive enterprises must not be overlooked since these enterprises are far more flexible in the terms they offer their partners and since they are expected to become major players in the future of the global market.

For the purpose of evaluating the performance of Arab industry, Arab countries have been classified into three groups according to income per capita and the degree of reliance on the energy sector. After reviewing five major manufacturing sectors at the regional level, four observations can be made that concern the industrial structure of all three groups of Arab countries: one observation is that there is a considerable degree of complementarity (i.e. each group is relatively specialized in its own subset of manufacturing activities) across the three groups of economies. This complementarity can be exploited to their mutual advantage if industrial policies and strategies are coordinated in such a way as to encourage the process of deepening along each group's comparative advantage while promoting a parallel growth in intragroup trading. A second observation is that Arab countries still rely heavily on the extractive or primary processing stages of their raw materials (petroleum and basic chemicals and metals in the oil-based economies, and cotton and other agricultural products, phosphates and other ores in the non-oil-based economies. The opportunity to raise value added (wages and profits) from further processing of these intermediates is substantial (e.g. downstream petrochemicals, synthetic fibres, rubber, plastics, metal products, specialized chemicals and clothing) and could significantly benefit from a more open trading system among the members of the Arab region since this would enable a better dispersal and allocation of investments to take advantage of locational advantages and economies of scale.

A third observation is that most Arab countries have neglected the enormous potential and importance of building up a viable capital goods industry. Data show that imports of capital goods (excluding transport vehicles) to the Arab countries exceeded $6 billion in recent years, concentrated in three major categories—non-electric power-generating machinery, office machines and electric power machinery and switch gear—which together accounted for more than two thirds of total imports of capital goods (over $4 billion). Data also show that only a few Arab countries have a significant capital goods industry—namely, Egypt, Iraq, Morocco, Algeria, Tunisia and Saudi Arabia—and even these rely heavily on imports of capital goods from the rest of the world. A fourth and final observation is that the export performance of Arab countries' manufacturing sectors has been very poor and that except for a few of the oil-rich economies, their balance of trade deficits from the industrial sector are extremely high and could be easily remedied with appropriate export promotion policies, coupled with efforts to liberalize intraregional trade in manufactures, in addition to eliminating the obstacles that impede the proper functioning of joint Arab projects.

Meaningful and sustainable Arab cooperation in the field of industry starts from the premise that it must serve each and every member's objective of obtaining real economic gains from cooperation, i.e. it should be a non-zero-sum game. Gains include higher commercial profits from equity participation in projects, growing market share for the industry in question, lower costs of operation and technology acquisition and greater leverage in negotiating with transnational corporations.

In order for Arab countries to overcome the two most critical constraints to efficient growth of industry, namely foreign market access and access to technological advances and innovations, a number of proposals are advanced for regional cooperation.

Investment policies

Arab countries should abandon their now obsolete systems of investment licensing and fully liberalize market entry except for security-related and other clearly identified sectors according to a set of commonly agreed criteria. They should harmonize their investment encouragement code for foreign investors rather than compete on the tax and other fiscal incentives each provides. Foreign investors should be given the same treatment as domestic investors. The only consistent way in which countries should discriminate against foreign investors is by selective choice of areas where such investments have been identified as detrimental to indigenous industrial development according to a clear set of criteria.

Floating shares of public enterprises on Arab capital markets is an important vehicle to activate and develop the region's capital markets, to capture a larger fraction of private savings and to provide enterprises with corporate finance and a measure of market evaluation. Each country should combine its privatization scheme with a strong reaffirmation of its commitment to support the restructuring of public enterprises under autonomous management with a view to utilizing their strength as a principal agent for catching up in the process of growth and development.

Joint venture projects

Arab countries should encourage the participation of foreign investors in joint ventures with public enterprise. The most suitable organizational structure that can promote the successful establishment of joint ventures is the public or private holding company, which can negotiate

from a position of strength over the terms of technology acquisition and the plans to penetrate foreign markets. Foreign partners are in fact more likely to prefer to enter joint ventures with public guarantees that reduce risk. Transnational corporations are also known to have recently become more accommodating to the terms of agreement.

In order to take advantage of the huge Arab market, Arab countries should prepare a plan for the launching of the first pan-Arab product from the engineering industry, e.g. a car or bus specially designed to meet the needs of the region's climate and terrain, in collaboration with a leading transnational. Data show that the recent value of Arab imports of transport equipment reached $13.3 billion in 1992.

Trade policies

Arab governments should commission a comparative study of trade barriers (tariff and non-tariff) currently imposed by each Arab country on all manufactured products from other Arab countries and the rest of the world. The study should appraise the impact of these trade barriers on intraregional trade and propose a schedule for the gradual elimination of non-tariff-barriers (NTBs) and the reduction in tariffs on Arab intraregional trade.

Serious consideration should be given to the establishment of an Arab trade promotion organization to provide potential exporters and importers with all trade-related services including producer and product information from a database directory linking up national databases, market trends (regional and international), itemized trade statistics on all Arab countries on a regular basis etc.

Arab countries should also evaluate the experience of early successes in establishing Arab trading companies and study the prospects for the creation of new ventures that can take one of the many forms that are currently operating on the global scene.

Industrial policy

Arab countries should together design a plan that develops a number of key industries for which dynamic comparative advantage and growth prospects are expected and in which cooperation would raise the rate of return. Among the industries and subsectors that deserve attention and study are capital goods, downstream petrochemical products, special metals, microelectronics and software. In each of these fields, a number of specific lines can be identified as potential niches.

Joint R&D programmes with industrial applications can also be pursued in such areas as renewable energy, desalinization, building materials, irrigation equipment and biotechnology. The R&D would complement and support the growth of related industrial sectors and provide opportunities for new investments. Consideration should also be given to the establishment of a computerized regional reference library on ongoing R&D throughout the world in all existing industrial subsectors as well as those that have been identified as potential new industries for the future. This library should be linked to national and regional research centres and its use should be promoted within industry itself.

From among those industries with high growth prospects, Arab countries should proceed to identify a number of subsectors that qualify for regional integration based on market study (size of domestic markets and the regional market and forecast of world demand), regional capacity, world supply forecast and technological aspects. Various scenarios and time-frames for implementation should be considered. Once the subsectors have been chosen, a programme for the development, restructuring and integration of each of those subsectors should be prepared. Special consideration should be given to the expected life of existing plants and the redeployment of labour. Each programme should include investments for the technical and financial restructuring of viable plants, phasing out obsolete plants, relocation where necessary and implementation of expansion projects.

Three criteria are proposed for the selection of viable candidates for regional cooperation: opportunities for import substitution with dynamic comparative advantage, opportunities for forward integration into high-value-added products and opportunities for the horizontal integration of existing sectors with a high comparative advantage. The first criterion can be used to select new projects whose feasibility is contingent on taking advantage of the vast Arab market as a single market in situations where economies of scale on the supply side have prevented any one country from making a viable import-substituting investment based on its local market alone. The second criterion can be used to identify new projects, the feasibility of which relies on exploiting existing manufacturing subsectors whose resource advantages provide the Arab region with low-cost intermediates that can be further processed into high-value-added products for regional and export markets. The third can be used to select existing subsectors for which regional integration along horizontal lines will promote mergers and subcontracting arrangements among firms of different Arab countries and that would enhance productive efficiency, competitiveness and the scope for rapid expansion to meet the demands of a fast-growing regional market, especially in consumer goods.

Arab countries should also promote the setting up of regional industry-specific state of the art institutes that engage in R&D and training in production, design, modernization, quality control and market study. These institutes would provide consulting services and technical assistance both regionally and internationally and would act as a major support to capacity building of technical staff in each industry in the region. Each institute would establish a computerized directory with an index of regional consultants and consultancy houses by field of expertise in all services related to industry.

Moreover, special attention should be given to the development of human resources. One viable option for upgrading human skills in the realm of industry is by paying special attention to industrial training. Industrial training is one of the areas that would benefit most from cooperation among Arab countries, at both the regional and sub-regional levels, because there are a large number of specialized training institutions and institutionalized in-plant training programmes within the region.

The assessment of human resources capabilities in the region undertaken by the Arab Industrial Development and Mining Organization (AIDMO) has indicated that there is an urgent need to develop training programmes on a regional or subregional level in the following areas:

(a) Training of skilled and semi-skilled workers;

(b) Training of middle management;

(c) Short-term training courses for high level management;

(d) Industrial consultancy and engineering services training programmes.

Accordingly, it has been proposed that a network be established between training centres in order to facilitate joint training programmes and that the capabilities of the existing centres be strengthened.

Environmental policy

A commitment by Arab governments to adopt a common policy on environmental legislation and its enforcement, opportunity-cost pricing of energy and incentives at the national level would have important positive implications in avoiding further degradation of the environment, in sharing fairly the burden of waste control among Arab countries and in helping those industries whose costs of introducing environmental standards are exceptionally high, including large-scale energy-intensive industries (e.g. cement and fertilizers) and the small and relatively older plants operating in specific subsectors such as metals and plastics. Incentives can take the form of fiscal measures and direct financial support for enterprises to install cleaner production technologies. On balance, it would seem that the long-term gains to each economy from environmental protection—in the form of higher production efficiency, lower direct and indirect costs of pollution and better access to OECD markets—outweigh the capital costs to entrepreneurs and the financial costs to governments of providing incentives and regulating, monitoring and maintaining the regionally agreed common standards for the protection of the environment.

Action programme

In order for regional cooperation to follow a coherent and feasible action plan, a number of concrete steps should be taken prior to the enactment of the proposed policy measures to be undertaken by the relevant government authorities, after these have been approved through inter-government consultation. It is proposed that the action plan should address the following: the trade-related barriers that have limited the expansion of production at the scale needed to cater for regional demand; the institutional and policy environment facing joint investment; the need for increased private investment in industry; fields of cooperation and policy measures for integration; gaps in the supply of major manufactures; the training needs of the regional industries; the science and technology needs of the new growth industries.

Introduction

Arab countries have yet to reach the stage of self-sustainable growth and development. While all except the least developed of their economies made large temporary gains either directly or indirectly from the oil boom of the 1970s, none has been able to harness its windfall income and secure a sustainable growth path into the future. Ever since the mid-1980s, one country after another has experienced economic stagnation, unemployment, internal and external deficits and growing foreign debt. Forecasts are bleak for any resurgence in petroleum prices or petroleum demand. The terms of trade for other raw-material-based exporting Arab countries (e.g. phosphates and cotton) are also likely to remain unfavourable.

Moreover, the growing importance of regionalism, the projected impact of GATT (see section p.10) and the continued ascendancy of ASEAN countries are likely to divert trade away from Arab countries and in favour of members of the new trading blocs (European Union and NAFTA), of ASEAN and of selected developing countries that are able to respond to the global challenge. Arab countries are thus faced with a configuration of circumstances on the world market with grave implications for growth unless a concerted effort is made to change the structure of their economies away from dependence on the export of raw materials and low-value-added intermediates and towards the export of high-value-added manufactures. South-East Asian success stories have been made possible through a dynamic and consistent export-led process of industrial development, based on a well-structured industrial policy whose details cover trade policy, financing of industry, industrial diversification, ownership, technology, the labour market and the physical infrastructure. The governments of Malaysia, the Republic of Korea, Singapore and Taiwan Province of China have actively promoted manufactured exports using a variety of incentives and measures. In the Republic of Korea, businesses were both supported and disciplined, meaning that imports were restricted unless they were related to exports. In the 1960s, the Government induced companies in the Republic of Korea to link production for a protected market with production for exports. While trade policy in this sense could therefore be termed outward-oriented, export expansion was not achieved through a free market. South-East Asian countries have encouraged foreign direct investment (FDI), except for the Republic of Korea, which has imposed tight investment screening and extensive control on FDI in the economy, except in electronics.

The Arab world's most abundant and least-developed asset is human resources, with another 53 million people having been added to its population over the past decade. Policies have yet to be devised that raise the labour force participation rate in each country, reduce the rate of open and disguised unemployment, promote the productivity of labour and hence wages and incomes, and exploit this vast and growing consumer market to the benefit of domestic industries, which in turn create jobs, incomes and future growth. What is needed is to smooth the cycle whereby the

benefits of higher incomes in Arab countries translate to higher domestic economic activity, including industrial output and employment, rather than to continued dependence on imported manufactures. Arab countries must turn from being consumer economies to becoming producer economies, with the appropriate combination of incentives and institutional reforms both within each country and regionally.

The performance of Arab industry has been uneven. Some countries have made enormous strides in setting up globally competitive industries using the most modern technologies that can enable them to develop horizontal and vertical linkages for further industrialization. However, many other countries in the region have not instituted those mechanisms that are necessary to absorb technical progress and maintain their competitive edge. One example can be found in the engineering sector, which was developed early on by some middle-sized Arab countries and yet failed to keep up with technical progress (e.g. automotive industries). Another example is the sub-optimal performance of the pharmaceutical industries that were started more than 20 years ago in certain Arab countries (e.g. Egypt, the Syrian Arab Republic and Tunisia) but have failed to become export-oriented or to undertake sufficient investment in R&D and in the development of human skills and to increase their share of the domestic market. The result is that a large number of industrial subsectors in the Arab world are losing their capacity to compete on the international market or to grow along a sustainable path that generates employment, savings and foreign currency.

International evidence shows that the manufacturing sector is the sector most able to act as an engine of growth if it is allowed to develop along an efficient path that promotes its ability to capture technological progress, provide employment, earn net surpluses for the balance of payments and become the leading source of savings and capital formation in the economy. For the Arab region, the challenge is to redeploy its significant industrial base so that it takes advantage of its installed capacity, restructures its weaker segments and turns from its inward orientation to become a dynamic competitor on the world market. Actions are needed on the macro and micro policy front, at the institutional and incentives levels, both domestically and regionally.

The current process of structural adjustment provides a real opportunity for domestic reforms to translate into regional coordination and cooperation, which in themselves would enhance the prospects for the manufacturing sector of each Arab country for accelerated growth and increased competitiveness. In parallel with the ongoing process of economic reform and structural adjustment, Arab countries would significantly benefit from effective industrial policies that respond to the challenges and opportunities for their industrial sector to rapidly catch up, especially if these policies are well coordinated among the Arab countries. Three sets of opportunities must be sought to raise the level of competitiveness and the degree of diversification of manufacturing industry across the Arab world: opportunities for further import substitution, opportunities for forward integration and opportunities for horizontal integration. In 1992, total imports of manufactured goods by Arab countries were valued at $83.4 billion, of which only $5.8 billion (6 per cent) were from the region. Arab exports of manufactured goods stood in the same year at $32 billion ($17 billion excluding petroleum refineries), only 1 per cent of world exports of manufactures ($3 trillion) (table 1). The challenge is great and the potential for improving the performance of Arab manufactured exports enormous.

Table 1. Arab trade in manufactures
(Millions of dollars)

Category	Imports		Exports	
	1980	*1992*	*1980*	*1992*
Food	9 227	10 547	608	1 161
Beverages	261	160	141	89
Tobacco manufactures	524	658	90	38
Textiles	4 029	5 234	638	1 628
Wearing apparel	1 733	2 214	582	2 962
Leather and fur	212	307	33	93
Footwear	341	438	72	245
Wood and cork	2 427	1 892	146	70
Furniture and fixtures	1 043	562	47	64
Paper and paper products	1 009	1 888	68	225
Printing and publishing	291	398	12	53
Industrial chemicals	3 299	4 363	811	5 333
Other chemical products	2 480	3 883	92	1 212
Petroleum refining	2 275	1 420	13 015	14 508
Miscellaneous petroleum and coal products	264	220	131	125
Rubber products	1 209	1 441	66	58
Plastic products	579	700	37	143
Pottery and china	370	309	4	29
Glass and glass products	609	620	19	76
Non-metallic mineral products	2 587	1 137	110	296
Iron and steel	6 911	5 846	242	695
Non-ferrous metals	929	1 402	451	1 169
Metal products excluding machinery	7 139	4 536	247	319
Non-electrical machinery	13 445	10 229	310	324
Electrical machinery	9 261	6 058	256	607
Transport equipment	11 234	13 315	732	323
Professional and scientific equipment	1 757	1 930	23	75
Total manufacturing	86 516	83 441	19 122	32 035
Total excluding petroleum refining	84 241	82 021	6 107	17 527

Source: UNIDO, *Global Database, 1994.*

Major changes in the industrial sector worldwide

The changing international environment facing industrial activity

The emergence of three leading regional blocs

Unlike military and political power, which has become unipolar, with the United States monopolizing the international scene after the collapse of the Soviet Union, economic success has shifted from being a United States hegemony to being shared by two other equally powerful centres revolving around the European Community and Japan—the world's new economic giants. Regional integration around those three poles is proceeding at a rapid pace, based on the economic, organizational and technological advances made at the core. The competitive strategies of these three groups of players are strongly capitalist-oriented yet vary in their styles of operation and scope of government intervention. In the rest of the world, socialist modes of industrialization are fast disappearing (with east European countries actively seeking to integrate into the European Union) and giving way to varying forms of industrial and commercial cooperation.

Competitive cooperation within each of the three regional blocs involves significant and continuous rationalization and restructuring of one industry after another, in response to the reduction in level of protection in each country relative to other members of the region. In the European Union, for example, this began early with the coal and steel industries, followed by textiles and more recently passenger cars. In South-East Asia, the Flying Geese model allowed a more staggered approach to restructuring, with Japan followed by the first generation of countries gradually restructuring and relinquishing those industries that were labour-intensive (e.g. textiles, electronics and engineering products) and opening up their markets to other members of ASEAN. For example, the textile industry first moved from Japan to the Republic of Korea and Taiwan Province in the 1960s. In the 1980s, the Republic of Korea lost its competitive edge in some labour-intensive products, such as clothing, and is facing competition from countries in which wage costs are lower. Thus diversification into heavy industry, which is more capital-intensive, was undertaken, and growth was particularly rapid in the basic metals (including steel) and transport equipment (automobile assembly and ship building). The same process of restructuring is expected in NAFTA, with United States and Canadian labour-intensive industries gradually losing ground to Mexico and vice versa. The result is increasing specialization and complementarity among the countries in each region as well as a reduction in vertical integration (to the benefit of smaller and more efficient plants producing components on a subcontracting basis) and increased intraregional trade. The figures show a tremendous rise in the share of intraregional trade in total trade of each of the three regions. By 1989, intraregional trade accounted for 58.9 per cent of total European Union trade, 37.4 per cent for East Asia and 36.3 per cent for North America (Thurow, 1992).

In contrast, intraregional trade among Arab countries still accounts for only 10 per cent of their trade, up from 7 per cent in 1980. Another feature of the Arab countries' industrial structure is the extent to which the expansion of certain subsectors (steel, aluminium, petrochemicals, fertilizers and other basic chemicals) has been emphasized and that of others (e.g. capital goods, downstream petrochemicals, metals and various engineering products) neglected. Three major factors are behind the relative lack of trade or complementarity across the industries in the Arab world: one is the relatively high tariff and non-tariff barriers to intraregional trade; the second is the similar resource base of the oil-rich group, which has prompted similar investments oriented to the international market; and the third is the common legacy of import substitution patterns of industrialization, which have ignored the opportunities for integrating within the regional and international

markets. Today, both rapid trends—globalism and regionalism—as well as the disappearance of managed trade opportunities with former Soviet economies are making it increasingly difficult for countries that are not part of one of the three emerging blocs to retain their previous share of the global market for manufactures. This makes it imperative for Arab neighbours to harmonize their trade and investment strategies so as to consolidate their past achievements and maximize their chance of sharing in the fruits of the expected large expansion in world trade that will follow from GATT.

In parallel with the process of restructuring taking place across the countries of the three regional blocs is another equally important trend that involves mergers, acquisitions and the establishment of joint venture industrial projects and joint R&D programmes in which several countries cooperate. National identity goals and policies have given way to regional identity goals and policies, and the objective of these various forms of cooperation is to realize efficiency gains at the level of the group that can sustain its competitive position in the face of the unprecedented speed with which innovations can change the ranking of industrial leaders. Although each advanced country has had its leadership in particular industries, all three economic giants are moving away from concentrating on a niche towards competing on all fronts (e.g. Airbus Industrie, the joint European venture worth $26 billion, managed to break the United States monopoly and succeeded in gaining 20 per cent of the aircraft market, with plans to reach one third by the mid-1990s) (Thurow, 1992).

Another global trend is the rapid increase in the numbers of giant transnational corporations as well as in the scope of their operations in world production and trade. Transnationals from Europe and Japan have increased their market share at the expense of United States-based multinationals, as shown in worldwide figures on the 100 largest industrial corporations:

	United States	*European Union*	*Japan*	*Other*
1970	64	26	8	2
1990	27	47	12	12

New conglomerates from South-East Asia, Brazil, India, Turkey and some Persian Gulf States are starting to acquire the organizational and marketing skills to compete with transnationals from the advanced countries. In most cases, these national holding companies have been given special support by their governments in the form of legal and fiscal incentives, which allows them to take advantage of scale economies in production and sales so as to face the international oligopolies with equal strength. They often combine industrial, finance and trading activities, either alone or with foreign partners.

Arab states should seriously consider strengthening their existing public and private holding companies and providing appropriate incentives for more of them to be established. These holdings should obtain full legal autonomy and independent status and should be encouraged to invite equity participation from various Arab countries as well as foreign partners. Both industry-specific as well as industry/finance, industry/trade and industry/trade/finance configurations should be envisaged as important agents of dynamic growth and flexible response to the challenges and opportunities of the increasingly oligopolistic global environment.

Trade liberalization and trade diversion (regional blocs)

The conclusion of the Uruguay Round after many years of negotiations for free trade is expected to bring an end to the economic stagnation of industrialized countries and increase world GNP by some $300 billion (Chabrier *et al.*, 1995). However, it puts a major responsibility on the policy makers of each developing country to ensure that their country will share in the expected benefits of an increase in world trade and world GDP. For Arab countries, it is of particular importance to realize how vulnerable both their domestic and export markets will become as all economies—developed and developing—are attempting to capture maximum advantage from the progressive dismantling of barriers to trade. Not only have members of the three competing regional blocs positioned themselves to exploit the new opportunities of freer trade, but many developing countries that are outside these blocs as well as the economies in transition (countries of the former Soviet Union and eastern Europe) are fast restructuring their economies and liberalizing their investment and trade regimes to become major exporters.

Key achievements of the Uruguay Round include the elimination of QRs and the "tariffication" of all NTBs on several commodities, including agricultural and food products. In addition, tariffs on industrial products (excluding petroleum) will be reduced by an average of 37 per cent (table 2). The result of GATT 1994 is improved market access to OECD countries for all developing country products except textiles and clothing. These will continue to be subject to QRs under the MFA, which will be phased out over a decade. Another equally important tariff-related instrument that will contribute to the predictability of market access has

been "tariff bindings".* The commitment to increase the portion of bound tariff lines is considered to be a key element in the security of market access.

Table 2. Developed countries tariff reduction by major industrial product group (excluding petroleum products)
(Percentage)

Product category	Tariff averages weighted by: Imports from developing economies		
	Pre-UR	Post-UR	% Reduction
All industrial products	6.8	4.3	37
Fish and fish products	6.6	4.8	27
Wood, pulp, paper and furniture	4.6	1.7	63
Textiles and clothing	14.6	11.3	23
Leather, rubber, footwear	8.1	6.6	19
Metals	2.7	0.9	67
Chemicals and photographic supplies	7.2	3.8	47
Transport equipment	3.8	3.1	18
Non-electrical machinery	4.7	1.6	66
Electrical machinery	6.3	3.3	48
Mineral products and precious stones	2.6	0.8	69

Source: Jesus Seade, *The Results of the Uruguay Round: The Uruguay Round and the Arab Countries*, Seventh Annual Joint Seminar of the Arab Fund for Economic and Social Development (AFESD) and the Arab Monetary Fund (AMF), 17-18 January 1995.

Benefits accruing to Arab countries as a result of the multilateral trade liberalization will be contingent on two important elements. Firstly, the commodity composition of exports will significantly influence the extent to which tariff reductions and the dismantling of non-tariff barriers will lead to static gains following opportunities of trade creation. Secondly, dynamic gains, which are regarded as more important than static ones, will depend upon the efficiency generated by increased competition, greater innovation and the extent to which the supply response of tradable sectors will meet with the trade-created opportunities.

An assessment of the commodity composition of Arab exports does reveal that despite the dynamic shifts occurring between the three major export sectors—agriculture, mining and manufactures—and the increase in the share of manufactured exports in total exports from 4 per cent in 1970-1974 to 20 per cent in 1990-1992, the share of petroleum in total exports remains excessively high and still accounted for 63 per cent of total exports in 1990-1992 (table 3). The Uruguay Round has not included trade in oil, and as oil dominates Arab exports, its exclusion has been criticized by Arab countries as one of the weak elements of the Uruguay Round. Given the fact that more than two thirds of all Arab exports will fail to benefit from the liberalization of international trade, it is safe to argue that the structure of Arab exports—which is in turn the outcome of existing industrial structures—has to a considerable extent predetermined the size of accrued gains. While crude petroleum faces few trade barriers in OECD markets, refined petroleum still encounters high protective tariffs, ranging form 21 per cent in the United States, to 45 per cent in Germany, 42 per cent in Japan and 60 per cent in France. Arab countries that rely heavily on exporting oil in its refined form will continue to confront such high tariff walls. Arab exports of petrochemicals face considerable difficulties in OECD markets despite being granted preferential treatment under the General System of Preferences (GSP), which covers 10 per cent of exports. Taken as a group, OECD countries are nearly self-sufficient and import only 1.5 per cent of their total demand from outside the region, over which all developing countries are competing. Petrochemical products will benefit both from tariff reductions (43 per cent) and tariff bindings (on 99 per cent of products), which will improve their competitiveness in the main export markets; however, with the decrease in oil and gas prices, the feed cost advantage of Arab exporters might erode (Malheese, 1994).

Table 3. Commodity composition of Arab exports

Commodity composition	Average 1970-1974	Average 1990-1992
All Arab countries		
Total exports (million $)	29 419	59 128
Share (%)		
Agriculture	7.4	6.2
Mining	88.5	73.7
Petroleum	86.1	63.1
Manufactures	4.1	20.1
Oil exporters		
Total exports (million $)	25 961	43 323
Share (%)		
Agriculture	4.2	3.1
Mining	92.9	85.4
Petroleum	92.1	74.6
Manufactures	3.0	11.5
Non-oil exporters		
Total exports (million $)	3 458	15 985
Share (%)		
Agriculture	48.5	21.0
Mining	32.1	17.9
Petroleum	6.7	8.0
Manufactures	19.0	61.1

Source: Paul Chabrier, Mohamed El-Erian and Rakia Moalla-Fetini, *Implications of the Uruguay Round for the Arab Countries: A General Analysis*, Seventh Annual Joint Seminar of AFESD and AMF, 17-18 January 1995.

*Tariff bindings is a commitment not to increase the tariff rate on a product above a negotiated level, except through negotiation and with adequate compensation for the affected trading partners.

What the trade statistics also reveal is the significant difference between the share of manufactured exports in total exports for the oil-exporters and the non-oil-exporters. Taken to be a reflection of the degree of diversification enjoyed by each group of countries, the implication is that the benefits from trade liberalization will not be evenly spread among Arab countries. A closer look into the commodity composition of exports at the country level sheds more light on the foreseeable distribution of benefits from tariff reductions (table 4).

Post-Uruguay Round tariff reductions concern a multitude of industrial products of immediate export interest to several Arab countries. The largest tariff reduction has been on metals (67 per cent), a product group—as evident from table 3—of export interest to Bahrain, Egypt, Mauritania and the United Arab Emirates. On the other hand, textiles and clothing is the product group that has seen the least tariff reductions. This group of products will, however, benefit from the phasing out of the quota restrictions imposed under the MFA. Arab countries that are major exporters of textiles and clothing (Egypt, Tunisia and Morocco) will face a situation in which their duty-free preferential access to the main European Union markets will be eroded by the post-Uruguay Round tariff reductions. The loss of preferential treatment means that Arab exports are expected to lose market opportunities in the more competitive European Union markets.

The lowering and/or loss of the preference margins received under the GSP programmes will bear important implications in terms of the benefits accruing to Arab countries. Upon weighing* gains from products receiving Most Favoured Nation (MFN) duties that were lowered against the losses on products receiving preferences, benefits accruing to Arab countries as a result of the post-Uruguay Round trade liberalization are estimated to reach $711 million (Yeats, 1995) (table 5).

It is due to the erosion of their preferences that both the Libyan Arab Jamahiriya and the Syrian Arab Republic are expected to experience overall losses as a result of the Uruguay Round.

*In recognition of developing countries' need for technical assistance in the Uruguay Round negotiations, the United Nations Conference on Trade and Development (UNCTAD) and the World Bank developed a desktop system named SMART (Software for Market Analysis and Restrictions on Trade) that allows a country to analyse the structure and restrictive effect of trade barriers on its exports.

Table 4. Export interests of Arab countries

Country	*Product composition of exports*
Algeria	Petroleum (73%); mineral products, precious stones and metals (23%)
Bahrain	Petroleum (53%); metals (31%); chemicals and photographic supplies (5%); mineral products, precious stones and metals (5%)
Egypt	Petroleum (58%); textiles and clothing (12%); other agricultural products (10%); metal (9%)
Iraq	Petroleum (89%)
Jordan	Mineral products, precious stones and metals (74%); metals (6%); chemicals and photographic supplies (5%)
Kuwait	Petroleum (92%); mineral products, precious stones and metals (6%)
Lebanon	Mineral products, precious stones and metals (34%); textiles and clothing (12%); metals 11%); other agricultural products (11%)
Libyan Arab Jamahiriya	Petroleum (92%)
Mauritania	Metals (43%); fishery products (54%)
Morocco	Textiles and clothing (23%); mineral products, precious stones and metals (21%); fruit and vegetables (15%); fishery products (12%); chemicals and photographic supplies (9%)
Oman	Petroleum (97%)
Qatar	Petroleum (81%); mineral products, precious stones and metals (10%); chemicals and photographic supplies (8%)
Saudi Arabia	Petroleum (85%); chemicals and photographic supplies (7%); mineral products, precious stones and metals (6%)
Somalia	Fruits and vegetables (54%); fishery products (18%); other agricultural products (15%)
Sudan	Other agricultural products (43%); oil seeds, fats and oils (19%); flowers, plants and vegetable materials (12%); animals (7%); grains (5%)
Syrian Arab Republic	Petroleum (71%); other agricultural products (8%); transport equipment (6%)
Tunisia	Textiles and clothing (35%); petroleum (18%); mineral products, precious stones and metals (15%); chemicals and photographic supplies (6%); fishery products (6%); oilseeds, fats and oils (5%)
United Arab Emirates	Petroleum (83%); mineral products, precious stones and metals (11%)

Source: Jesus Seade, *The Results of the Uruguay Round. The Uruguay Round and the Arab Countries.* Seventh Annual Joint Seminar of AFESD and AMF, 17-18 January 1995.

Table 5. Estimated effects of the Uruguay Round tariff cuts on Arab countries

Country	1992 exports (million $)			Projected Uruguay Round trade effects (%)			Overall exports change (million $)
	European Union	Japan	United States	European Union	Japan	United States	
Bahrain	172	304	71	1.12	0.42	7.42	8.5
Egypt	2 893	91	465	0.30	1.42	2.41	21.2
Jordan	88	24	18	–0.55	0.76	2.30	0.1
Lebanon	96	2.2	28	7.92	–0.11	–0.16	7.6
Libyan Arab Jamahiriya	7 021	0.7	0.0	–0.13	–1.14	0.00	–9.1
Oman	165	1 962	207	0.88	3.04	0.93	63.0
Qatar	55	2 175	75	—	2.94	1.30	64.9
Saudi Arabia	11 150	10 181	11 285	–0.08	2.40	0.46	287
Syrian Arab Republic	1 225	8	45	–0.20	0.12	0.33	–2.3
United Arab Emirates	1 713	9 733	871	0.95	2.64	1.56	269.3
Total							710.7

Source: Alexander Yeats, "Export prospects of Middle Eastern countries, a post-Uruguay Round analysis", unpublished paper, World Bank, 1995.

The estimated static benefits from trade liberalization on the global level point to annual real income gains of $200-500 billion (Chabrier *et al.*, 1995). The share of developing countries is expected to reach some $80 billion (about 1.8 per cent of their GDP), out of which Arab countries will account for only $710 million, or 0.008 per cent (about 0.15 per cent of Arab GDP in 1992). Part of the reason behind the insignificant gain of Arab countries is the fact that exports of the more competitive and aggressive developing countries may well displace those of the less competitive Arab countries, which are losing the shelter provided by the quota arrangements that controlled OECD imports from the more successful export-oriented developing countries and NICs. The four Asian tigers (Hong Kong, Republic of Korea, Singapore and Taiwan Province) already account for more than half of developing country manufactured exports, and the second generation of tigers is fast increasing its shares. Low static gains at this initial phase should not, however, eclipse potential dynamic gains, and while existing production structures, coupled with former governing trade regimes, have circumscribed the level of immediate gains from trade creation, trade and industrial policy reform at the country level should guarantee that dynamic benefits materialize. On balance, the focus should be on the maximization of benefits resulting from the removal of quotas on products in which Arab countries have a comparative advantage and the ability to put in place all of the incentives and institutional elements (the legal and regulatory framework) that make for efficiency growth, market orientation and the penetration of export markets.

Arab countries that have already acquired a competitive advantage in particular industrial subsections, such as basic petrochemicals and other natural-resource-based products, will have to be prepared to respond to some of the remaining or newly imposed barriers to trade that they are likely to face. These include restrictive business practices by giant OECD corporations, environmentally justified restrictive trade measures, voluntary export restraints and anti-dumping and countervailing measures, which are increasingly being reverted to. According to UNCTAD, the number of anti-dumping cases initiated almost trebled between 1990 and 1993. Other less transparent forms of protection than tariffs include government procurement contracts, public capital transfer and the introduction of quality control procedures such as the European Union's ISO 9000. The latter market restrictions relate to quality and specifications and can be a major obstacle to exports of developing countries to the European Union. The Arab region will need to strengthen the role of specialized institutions that can undertake the necessary inspection, quality control and confirmation of ISO 9000 standards.

The implications of GATT are therefore that Arab countries cannot afford to take a passive attitude to the impending trade war among developing countries over the opening of markets of the advanced countries (accounting for 60 per cent of developing country exports) as well as the opening of developing country markets themselves. What is equally obvious is that the gradual enforcement of GATT rules concerning the reduction in tariff and non-tariff protection in developing country markets will pose great difficulties for non-competitive domestic producers in the Arab region. The only viable strategy for Arab countries is to pursue a vigorous industrial programme of rationalization, restructuring and reorientation, with many benefits to be enjoyed if the programme is deliberately designed to capitalize on regional opportunities,

with regional policies and measures that enforce harmonization of investment and trade policies as a minimum or a more ambitious plan for long-term integration as a maximum. Such a programme must aim at fully exploiting the current level of demand for industrial products and expanding those particular industrial subsectors that enjoy the potential for dynamic comparative advantage as detailed below.

Regional blocks

Although GATT 1994 is intended to activate international trade, the new system of quasi trading blocs that is emerging—particularly European Union and NAFTA—will have serious implications in replacing an open trading system with managed trade, thereby neutralizing some of the gains from freer trade. The principle that governs each trading bloc is that it eliminates tariffs (and sometimes also removes controls on movements of capital and labour) between its members but imposes a unified set of barriers against the rest of the world (ROW). The results are twofold: trade creation (more total imports by the regional bloc) and trade diversion (replacing producers from ROW with producers inside the regional bloc).

On balance, trade diversion becomes more likely if market access for ROW is restricted for a transitional period to help the region's producers to restructure their operations (hence the fears of Fortress Europe) or if members of the bloc have very different resource endowments and productive structures prior to integration, such that the elimination of protection within the bloc leads to increased trade among its members at the expense of ROW. For Arab countries, one estimate of the prospects of Fortress Europe (which has mostly affected United States and Japanese exporters of specific products such as cars) is the loss of some $3.4 billion worth of manufactured exports (30 per cent of exports to Europe) particularly leather products, textiles and clothing and petrochemicals. Tunisia and Morocco are the two largest losers, with $876 and $1,014 million foreseen to be lost respectively (table 6) (Unified Arab Economic Report, 1993).

The value of displaced exports is great; it is more serious than for the more industrialized countries. On the other hand, NAFTA also implies trade diversion for Arab countries—or, to be more precise, reduced export potential to NAFTA—to the extent that Mexico's resource endowment is distinctly different from that of the United States and Canada. Mexico's increased sales of labour-intensive products within NAFTA is therefore expected to divert other developing country exports of these products (e.g. garments, electronics and automotive components). Other Latin American countries are now considering joining NAFTA. However, it must be observed that a major trend that worked in the 1980s in favour of developing countries that were not members of any regional bloc is transnationals based in the OECD and ASEAN countries moving part of their operations to those developing countries that enjoy a comparative advantage and offer attractive terms to investors.

Table 6. The impact of completion of integration on Arab industrial exports

Country	*European Union estimated value of lost trade (million $)*	*Decrease in exports after 1992 (%)*
All Arab countries	3 411	30
Group One	962	—
Algeria	84	6
Bahrain	112	70
Iraq	80	0
Kuwait	84	11
Libyan Arab Jamahiriya	16	1
Oman	80	49
Qatar	12	10
Saudi Arabia	324	11
United Arab Emirates	170	23
Group Two	2 449	—
Egypt	399	39
Jordan	68	61
Lebanon	53	32
Mauritania	2	—
Morocco	1 015	56
Somalia	2	—
Sudan	12	—
Syrian Arab Republic	15	4
Tunisia	868	69
Yemen	8	—

Source: *Joint Arab Economic Report*, 1993, reproduced from UNIDO, *Industrial Development in the Arab Countries and Prospects for Cooperation with the EU and OECD*, 1992.

Arab countries are therefore likely to find that competition from other developing countries that are adopting aggressive export policies (e.g. Latin American exporters such as Brazil, ASEAN countries and the transitional economies) will become the most formidable challenge over the coming decade as these countries increasingly rely on transnationals as a vehicle to penetrate the global market. The two largest economies—China and India—have considerably reduced their controls over foreign investment and have liberalized their trade regimes so as to become increasingly export-oriented. The flow of FDI into China reached $11 billion in 1991. China's exports of manufactured goods to the OECD have grown from $14 billion in 1987 to $46 billion in 1992 (*World Investment Report, 1994*). The growth rate of China's total exports was 11.5 per cent per annum over the decade

of the 1980s. India's economic reform programme began in 1991 with a series of measures to reduce tariff levels and import licensing and to move towards the convertibility of the Indian rupee. Export processing zones have also become eligible to include trade activities as a means of promoting exports. India's garment exports grew by 21 per cent in 1993/94, footwear by 13 per cent, and exports from its chemicals sector exceeded $1 billion in 1989 and are expected to experience rapid growth. After a serious shock to its exports caused by the dislocation of its market in the former Soviet Union, India's total manufactured exports have regained their previous peak and are likely to continue growing at an accelerating rate.

Trends in the structure, location, technology and organization of industry

New growth industries and their implications

The era when large-scale, capital-intensive manufacturing projects were the core of any modern industrial structure is being replaced by a new structure where technology intensity, skill intensity and the ability to better organize production characterizes the seven leading industries of the future: microelectronics, biotechnology, new materials science, telecommunications, civilian aviation, civilian aviation robotics and machine tools and computers and software.

These growth industries are not adaptable to a high degree of centralization and require relatively small quantities of raw materials as compared to the older generation of industries. Thus, economic growth and material progress are no longer based on a country's possession of natural resources, and the centralized control structure of large industrial plants will not be suitable in these new industries. Instead, the stress is now on smaller, flexible organizational structures that can better respond to fast-changing technologies and market conditions.

The opportunity for Arab countries to enter these fields depends on the ability to successfully acquire, absorb, adapt and then generate new technology domestically. Investing in R&D is crucial to industrial success, and a viable industrial policy is crucial to specifying which industrial sectors are to grow faster than others and which priority areas are to receive investment.

In order to be able to venture and compete on the world market, investing in R&D becomes a key policy. R&D should be supported at both the government level and the firm level. Despite their difficulties, Arab governments are rich governments, and it is they who should take the first serious step to inducing more investment in R&D. In this context, science and technology institutes are the channel through which technology is diffused, and more importantly, through their outreach activities, they can help industry define its technological needs. It is important to note that technology is not only about machinery, it must involve a commitment to educate, which is the necessary prerequisite for building up human capacities.

In addition to venturing into the new growth industries, attention should be given to products that have achieved the highest rates of growth on the international front. These include plastic products, scientific equipment, industrial chemicals and electrical and non-electrical machinery, which have been growing during the 1990s at an average of 7.6 per cent annually for OECD countries and 10.3 per cent for developing countries (Al-Nagger, 1994). These products have a promising potential, and through its industrial policy, a country can direct investment towards production in these high growth areas.

As to the prospects for traditional industries, Arab countries enjoying competitive wage levels should expand their production of the particular products that OECD countries are moving out of. Iron and steel, textiles and clothing, food products and leather products are among the slow-growing traditional industries that are no longer compatible with the competitive edge of industrial countries. NICs are also gradually losing their competitiveness as a result of rising wage levels. This provides an opportunity for Arab countries to join the group of major suppliers of these products and reap the benefits of low wage levels before fully graduating to more capital-intensive heavy industry.

Impact of the revolution in information and communications technology

The revolution in information, computers and telecommunications has led to a dismantling of the barriers to the geographic dispersion of economic activity. This means a reduction in the degree of concentration of manufacturing in rich capitalist countries, which will no longer have the edge in attracting investment since global sourcing of capital, technology and manpower gives the location advantage to those countries that are best able to offer economies of production and organization. The increased mobility of capital and the development of institutions and organizations that can measure the degree of risk with accuracy means

that even the most remote and least endowed countries in terms of physical infrastructure stand a good chance of attracting investment.

Process technologies are becoming more important than product technologies. Rapid innovations in the production process itself are providing continuous reductions in total cost of production, especially in the cost of holding inventories and in the use of modular design in each functional step from purchasing, storing and processing to marketing and distribution. This has meant that those firms that are able to introduce process innovations can become more competitive than innovators of new products.

World competition is forcing improvements in organization and management. On the one hand, the globalization of production has been aided by the information/communications/computer technologies that allow transnational corporations to modularize, separate and micro-manage their affiliates in great detail. On the other hand, the rise of the small, efficient, knowledge-intensive enterprise that provides components and services to the large corporation has meant that the latter are increasingly shedding many activities that can now be subcontracted. The era of centralized and highly integrated production operations is giving way to a far more flexible organization with increased interdependence among large and small producers across countries, increased transactions and increased specialization. The opportunity for Arab companies to associate and form strategic alliances with the new breed of smaller knowledge-intensive enterprises must not be overlooked since these enterprises are far more flexible in the terms they offer their partners and since they are expected to become major players in the future of the global market.

Problems and opportunities for Arab industrial development

Overview of Arab economic development

Starting from the early 1970s, Arab economies have gone through four different phases, each characterized by a different set of economic opportunities and challenges and, consequently, a different pace of economic growth. The 1970s marked the highest rates of gross national product (GNP) growth, associated with the phenomenal rise in oil prices, which benefited the majority of Arab economies. Accumulation of foreign reserves allowed the oil-based economies to erect a modern infrastructure to support their growing and rapidly diversifying economies. The rest of the Arab countries benefited both directly, through higher export prices (even though not being net exporters of oil), and indirectly, through workers' remittances, which became one of the main sources of foreign exchange for the Arab labour-exporting countries.

Unfortunately the oil boom did not outlive the 1970s. The collapse of oil prices (oil revenues fell from $205 billion in 1980 to $89 billion in 1983 to $50 billion in 1986) ushered in the second phase of economic change that was to govern until the mid-1980s. In that phase Arab economies suffered from recessionary symptoms, bringing down their GNP growth rates to a negative annual average of –3.4 per cent over the period 1980-1985.

The third phase, beginning in 1985 and ending in 1990, was marked by the attempt on the part of policy makers to radically reverse governing economic policies. Each group of countries began addressing the particular causes underlying the recession affecting their economies. For the oil-based Arab countries, rationalization of government expenditure and the diversification of government revenues became the norm. For the non-oil based economies, the decline in foreign exchange earnings coincided with other structural problems characteristic of more diversified economies and necessitated the adoption of more comprehensive reform measures. Egypt, Jordan, Mauritania, Morocco, Sudan, Syrian Arab Republic and Tunisia are currently applying comprehensive programmes of structural adjustment and economic reform meant to address the existing distortions operating in their economies. Real rates of growth began to reflect positive signs, and the average rate of growth for Arab countries over the period 1986-1989 was 2.0 per cent.

The fourth phase, which started with the 1990 Persian Gulf crisis and goes up until the present, has brought about some economic improvements that were, however, not sufficient for a full recovery. Further economic progress was to a large extent inhibited by regional political upheavals and the associated toll on the performance of Arab economies. To date, the average growth rate over the period 1990-1992 was a low 0.2 per cent. However, if we exclude both Kuwait and Iraq, we reach a growth rate of 5.2 per cent over this two-year period, reflecting the relative success of the economic reform measures and a sign to boost optimism.

Placing the performance of Arab economies over the two past decades in an international perspective reflects the four phases outlined above. Arab countries were not able to sustain their percentage share of total world GNP, which reached 4.6 per cent during the boom era, but fell to 1.6 per cent in 1992 (table 7).

Table 7. The share of Arab GNP in world total
(Percentage)

Country	*1975*	*1980*	*1985*	*1990*	*1992*
All Arab countries	2.5	4.6	3.4	2.2	1.6
Group One	1.7	3.7	2.6	1.7	1.2
Group Two	0.7	0.9	0.8	0.6	0.5

Source: *Joint Arab Economic Report*, published for AFESD, AMF and Organization of Arab Petroleum Exporting Countries (OAPEC), 1993.

Note: Group One is comprised of the oil-based Arab economies, while group Two is comprised of the non-oil based Arab economies.

Upon assessing the current Arab economic situation, one can indeed infer that in 1994, the economic structure of non-oil-based Arab countries did not differ much from that of 1980. The most marked structural changes have taken place in the oil-based economies in terms of the sectoral contribution of the services sectors to GNP. For this group of countries, the share of the services sector overtook the share of the extractive sector (the former's contribution to GNP rose from 22 per cent in 1980 to 43 per cent in 1992, while the latter's fell from 61 per cent to 27 per cent over the same period). As for the rest of Arab countries, the structural scene more or less remained the same, with the services sectors assuming a dominant position at an average of 52 per cent of GNP. While the growth of the services sector is a characteristic of developed economies, it most certainly fails to reflect development in the case of Arab countries. Most Arab countries skipped the rigorous industrialization phase that precedes a service-based economy and were thus relatively slow in expanding and upgrading their productive capacities to capture the benefits of the growth-inducing manufacturing industries.

Over the period 1980-1992 the agricultural sector's contribution to GNP increased from 2 per cent to 12 per cent in the oil-based economies but decreased from 20 per cent to 19 per cent for the rest of Arab economies, despite the fact that they have the bulk of Arab population. In 1991, the food deficit for the Arab region reached $10 billion and has been growing at an average annual rate of 3.5 per cent over the past decade.

The financial and monetary situation in Arab economies also varies depending on the nature of the economy concerned. With respect to government budget deficits, as a group the oil-based economies score highest. Even though reform programmes succeeded in addressing budget deficit problems, with the deficit having been brought down from $51.1 billion in 1985 to $15.1 billion in 1990, it again soared to $41 billion in 1992, marking the surge in government defence financing following the Persian Gulf crisis. In the case of non-oil-exporting Arab countries, foreign borrowing as a source of budget deficit finance increased from 27.7 per cent in 1987 to 44 per cent in 1992.

With regard to trade and payments, oil-exporting Arab countries emerged with a balance of payments (BOP) deficit of $9 billion in 1986, which increased to $32 billion in 1991. The rest of the Arab countries, however, managed to score an overall positive balance of payments surplus, amounting to $769 million in 1986 and increasing to $6 billion in 1992.

The accumulation of foreign debt is another characteristic of Arab economies, increasing from $116 billion in 1985 to $156 billion in 1991. Non-oil-based Arab countries assume the largest responsibility for foreign debt accumulation: their share of total regional foreign debt was 81 per cent and 79 per cent in 1985 and 1991, respectively (Joint Arab Economic Report, 1993).

Overview of Arab industrial development

According to UNIDO data, the growth and diversification of the manufacturing sector of Arab countries has been above the average for developed and developing countries over the past two decades. Growth rates of manufacturing value added (MVA) for the Middle East and North Africa averaged 5.9 per cent in the 1970s and 4.3 per cent in the 1980s. These rates compare with average world growth rates of 3.1 per cent and 2.0 per cent respectively, for the two decades. Over the period 1975-1993 the Middle East and North Africa region also increased its share in world total MVA by 1.5 per cent, with only the East and South-East Asian region exceeding that average. Moreover, the shares of the newly introduced manufacturing subsectors such as basic chemicals and basic metals have increased at the expense of traditional subsectors such as food processing and textiles, implying a rapid rate of diversification (see UNIDO, 1993b). For many of those economies, the emergence of a manufacturing sector began from a very modest base but is now accounting for a significant share of total economic activity. Following the standard classification adopted by most regional economists, Arab countries have been grouped into three categories according to their standard of living (per capita income) and their degree of reliance on the petroleum sector.

The countries in Group One—oil-based economies—have allocated considerable investments to the manufacturing sector, which has raised their MVA per capita to close to that achieved by middle income economies as defined by the world development report (see table 8). Output of manufactures is concentrated in the energy- and capital-intensive subsectors: petroleum refining, petrochemicals and other heavy chemicals as well as some heavy metals including steel and aluminum (table 9). Although the emphasis on using energy as a major raw material is in line with Group One's comparative advantage and has had very positive results on these countries' balance of payments. There is much scope for these countries to expand their industrial structure in the direction of forward integration, that is in downstream activities that further process their output of basic petrochemicals, other chemicals and metal products.

Table 8. Major indicators of industrial development

Country or area	(1) Population Mid-1991 (millions)	(2) GNP per capita 1991 ($)	(3) MVA per capita 1992 ($)	(4) MVA/GDP 1992 (%)	(5) Rate of growth manufacturing 1980-1990 (annual %)	(6) GFCF/GDP[a] 1990 (%)	(7) Total employment in industry 1992[b] (thousands)
Average of developing countries							
Group One							
Algeria	25.7	1 980	207	9.4	5.6	27.1[c]	1 950
Bahrain	0.5	7 130	1 098	16.9	0.7	36.5	74
Iraq	18.6	n.a.	434[d]	11[d]	1.3	19.0	1 246
Kuwait	1.4	n.a.	914	7.5	1.1	14.1	183
Libyan Arab Jamahiriya	4.7	4 706	397	5.7	10.3	12.5[e]	305
Oman	1.6	6 120	235	2.4	21.5	14.9	46
Qatar	0.5	14 770	1 576	8.7	8.7	12.3	31
Saudi Arabia	15.4	7 820	883	10.8	8.1	16.0	584
United Arab Emirates	1.6	20 140	1 622	8.6	2.9	20.0	183
Group Two							
Egypt	53.6	610	124	17.6	5.5	12.8[c]	5 130
Jordan	3.7	1 050	158	14.5	3.1	18.4[e]	260
Lebanon	3.7	n.a.	11	8.4	-21.5	6.2	356
Morocco	25.7	1 030	179	18.4	4.2	22.4[e]	1 957
Palestine	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Syrian Arab Republic	12.5	1 160	101	11.4	4.0	11.5	1 224
Tunisia	8.2	1 500	265	15.8	6.2	21.1[c]	917
Group Three							
Democratic Yemen[f]	n.a.	n.a.	30[g]	9.2[g]	6.3	42.1	n.a.
Djibouti	0.4	n.a.	101	11.3	1.8	17.1	12
Mauritania	2.0	510	48	9.9	6.7	12.1[e]	51
Somalia	8.0	120	10	3.0	2.0	12.3	n.a.
Sudan	25.8	n.a.	36	11.0	1.4	18.6[e]	1 010
Yemen[f]	n.a.	n.a.	34[g]	6.3[g]	7.6	9.9	n.a.

Sources: (1) and (2) World Bank, *World Development Report 1993*;
(3) to (6) UNIDO. *A Statistical Review of Economic and Industrial Performance*, 1994;
(7) *Joint Arab Economic Report*, published for AFESD, AMF and OAPEC, 1993.

[a]GFCF = Gross fixed capital formation.

[b]Employment in the industrial sector (column 7) includes manufacturing, extraction, construction and energy subsectors.

[c]1992.

[d]1989.

[e]1991.

[f]In May 1990, Yemen and Democratic Yemen merged to form a single State, Yemen.

[g]1990.

Group Two countries have a relatively older manufacturing history and a more diversified structure of manufacturing activities that supplies a significant range of products for the local market and relies on their more balanced resource endowment, especially the availability of abundant and relatively low cost labour. The three largest manufacturing subsectors in Group Two economies are food processing, textiles and non-metallic mineral products. These three subsectors have also been important sources of export income, especially yarn, textiles and clothing, but some of the countries have also relied on exports from their chemicals subsectors (nitrogenous and phosphatic fertilizers and petroleum refining) and metal sector (aluminium). Prospects for expansion of the textile and food-processing industries along export lines are favourable for these economies, and so are some niches they can individually pursue in the production and export of special products within each of the chemicals, metals and engineering subsectors (e.g. pharmaceuticals, cosmetics, plastics, rubber, shaped metal and various types of capital goods and consumer durables subsumed under engineering).

In Group Three countries—the least-developed Arab economies—manufacturing industry still accounts for a very small share of GDP, and MVA averages less than $40 per capita. Manufacturing is concentrated in primary processing of some agricultural products—especially food and textiles—and there is little manufacturing diversification. Exports of manufactures in Group Three countries are minimal in relation to imports and they show the highest degree of import dependence as measured by the ratio of exports to imports of manufactures, except for Mauritania, for which 82 per cent of manufactured exports consist of iron ore and related products. These countries still have considerable scope for expanding their manufacturing

sector under import substitution lines to meet domestic demand for a variety of non-durable consumer products and for selecting one or two sectors that can become export-oriented, especially if capital flows are forthcoming from the richer Arab countries to finance such projects.

The foundations of present industrial structures

A more detailed exposition of Arab industrial structures would reveal two distinct trends that have dominated the period since 1981. Firstly, value added in extractive activities has been continuously declining, both in absolute value and as a percentage of GDP. Secondly, a reverse trend is evident for manufacturing activities. Value added in mining declined from $189 billion in 1981 to $102 billion in 1992, while that in manufacturing increased from $29 billion to $50 billion over the same period (table 10).

By closely looking within the industrial sector itself, it becomes evident that extractive activities are still responsible for generating the bulk of industrial value added. In 1981, value added in mining was more than six times that in manufacturing. After the elapse of a decade, although mining is only twice as large as manufacturing it still dominates economic activity and was responsible for 21.1 per cent of Arab GNP in 1992 (ESCWA, 1993a) (figure 1 and table 11).

At the country level, even though the Group One economies were relatively late in establishing their manufacturing industries, in terms of MVA they scored higher than the rest of the Arab countries. Nevertheless in terms of contribution to GNP, the Group Three economies maintained a relatively larger overall share, with MVA accounting for an average of 15 per cent of GNP in 1991, compared to 10.5 per cent for the oil-based economies (figure 2).

The inability of the Arab manufacturing sector to expand the percentage contribution of industrial value added to GNP can be attributed to the general economic conditions that have governed Arab economies during the 1980s. Severe recessionary problems, manifested in debt accumulation and a declining capacity to import, have to a considerable extent hindered the prospects of expanding the

Table 9. Trade Indicators for the Middle East and North African region, 1991

(Millions of dollars)

Country	*(1) GDP*	*(2) MVA*	*Share of MVA in GDP (%)*	*(3) Manufactures imports*	*(4) Manufactured exports*	*Share of manufactured exports in MVA (%)*	*Share of manufactured imports in MVA (%)*	*Share of exports in GDP (%)*	*Share of imports in GDP (%)*
All Arab countries	435 683	40 126	9.2	88 261	30 351	76	220	7	20
Group One	322 110	22 588	7.0	57 544	19 628	87	255	6	18
Algeria	42 917	3 841	8.9	6 875	2 651	69	179	6	16
Bahrain	4 249	690	16.2	1 506	3 197	463	218	75	35
Iraq	66 138	2 933	4.4	7 191	227	8	245	0	11
Kuwait	11 009	783	7.1	5 331	1 873	239	681	17	48
Libyan Arab Jamahiriya	31 718	2 379	7.5	4 758	153	6	200	0	15
Oman	10 188	438	4.3	2 820	549	125	644	5	28
Qatar	6 883	917	13.3	1 428	739	81	156	11	21
Saudi Arabia	115 178	7 946	6.9	23 131	9 620	121	291	8	20
United Arab Emirates	33 830	2 661	7.9	4 504	619	23	1 691	2	13
Group Two	91 889	15 520	16.7	19 991	10 483	68	129	11	22
Egypt	34 228	5 545	16.2	6 434	1 593	29	116	5	19
Jordan	4 083	505	12.4	1 600	450	89	317	11	39
Morocco	27 663	4 939	17.9	5 159	2 931	59	104	11	19
Syrian Arab Republic	12 689	2 534	20.0	2 158	2 472	98	85	19	17
Tunisia	13 226	1 997	15.1	4 639	3 037	152	232	23	35
Group Three	21 684	2 019	9.1	10 727	240	12	531	1	49
Mauritania	1 135	98	8.6	124	2	2	127	0	11
Sudan	12 215	1 130	9.3	5 940	69	6	526	1	49
Yemen	8 334	791	9.5	4 663	169	21	589	2	56

Sources: (1) and (2) *Joint Arab Economic Report*, 1993;
(3) and (4) UNIDO, *Economic Global Database*, 1994;
(5) World Bank, *World Development Report, 1993;*
(6) UNIDO, *Industry and Development: Global Report 1993/1994* (United Nations publication, Sales No. 93.III.E.4).
(7) UNDP/UNCTAD/ITC, *Report on a Programme for Technical Co-operation for Trade Development in the Arab Region*. 1992.

Table 10. Value added in industry
(Millions of dollars)

Year	Extractive industry		Manufacturing industry		Total industry	
	Value added	% of GDP	Value added	% of GDP	Value added	% of GDP
1981	189 847	43.6	29 326	6.7	219 173	50.3
1985	87 281	21.9	30 620	7.7	117 901	29.6
1987	60 423	15.9	35 863	9.5	96 286	25.4
1991	89 574	21.1	44 818	10.5	134 392	31.6
1992	101 831	21.2	48 996	10.2	150 827	31.4

Sources: ESCWA, *Bulletin of Industrial Statistics for Arab Countries*, a publication of AIDMO and ESCWA, December 1993 and *Joint Arab Economic Report*, published for the Arab Fund for Economic and Social Development, Arab Monetary Fund and OAPEC, 1993.

existing Arab industrial base. The adverse impact of the massive outward transfers of financial resources from the region, estimated at several hundred billion dollars in 1989, in addition to diminishing access to new external resources, especially for the non-oil-exporting Arab countries, have also limited the scope of further industrial growth (UNIDO, 1990).

More important, low levels of MVA in GDP can be explained by the existing system of industrial strategies and trade policies. The size and structure of industry determines the commodity composition of exports, and the trade regime in turn determines what industry finds lucrative to produce. Appreciation of the relationship between trade policy and industrial policy in Arab countries is the key to understanding the main characteristics of Arab industry. For this purpose it is convenient to put forth a synoptic portrayal of the foundations of existing industrial structures, to be followed by a brief exposition of the resulting pattern of intraregional trade and its commodity composition.

Sources of value added in industry: a sectoral evaluation

The distribution of value added across Arab industries has been determined by two factors. First, each country's resource base played an influential role in shaping the structure of industrial production. Second, whether national policies favoured an import substitution or an export promotion track of industrialization played an equally decisive role in the distribution of value added among different manufacturing activities. For the oil-based economies, petrochemicals dominate the structure of MVA, owing to the nature of the resource base enjoyed by this group of Arab countries (table 12). Large quantities of low cost oil have paved the way for establishing large-scale oil refining facilities for domestic and export purposes, as well as a large-scale petrochemical industry.

Figure 1. Value added in manufacturing and mining

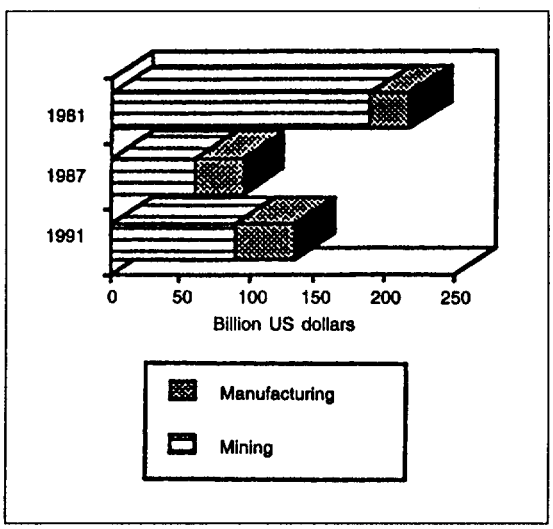
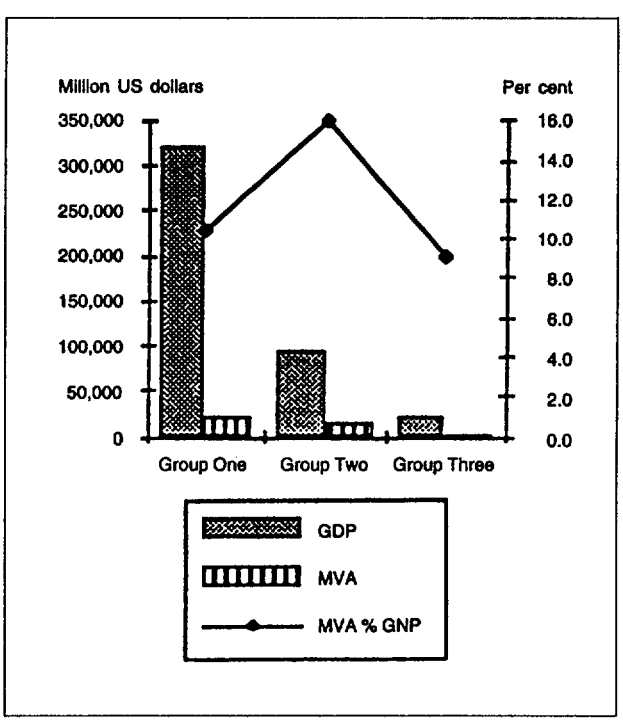


Figure 2. GDP and MVA, 1991



Source: ESCWA, *Bulletin of Statistics for Arab Countries*, a publication of AIDMO and ESCWA, December 1993.

Table 11. Value added in mining and manufacturing
(Millions of dollars)

Country	Value added in mining			Value added in manufacturing		
	1981	*1987*	*1991*	*1981*	*1987*	*1991*
All Arab countries	189 847	60 423	89 574	29 326	35 863	44 818
Group One	180 357	56 644	84 305	18 041	22 311	29 110
Algeria	13 886	8 601	11 031	3 805	7 629	3 803
Bahrain	1 154	598	567	622	508	722
Iraq	11 169	692	959	2 431	491	8 317
Kuwait	14 673	8 283	2 797	1 199	2 875	2 076
Libyan Arab Jamahirija	15 310	6 907	7 962	741	1 635	2 351
Oman	4 279	3 670	4 499	78	290	476
Qatar	5 543	1 612	2 113	410	577	1 225
Saudi Arabia	95 255	17 383	40 363	6 555	6 088	7 507
United Arab Emirates	19 088	8 909	14 014	2 200	2 218	2 633
Group Two	9 366	3 622	4 451	9 586	11 585	13 542
Egypt	4 207	1 126	1 035	3 807	4 617	5 271
Jordan	128	192	289	488	628	528
Morocco	670	520	734	2 593	4 239	5 079
Syrian Arab Republic	3 320	944	1 578	1 698	838	664
Tunisia	1 041	840	815	1 000	1 263	2 000
Group Three	122	146	116	1 021	953	1 102
Mauritania	68	81	110	39	43	104
Somalia	11	5		212	80	28
Sudan	9	12	6	738	770	970
Yemen	34	48		32	60	

Source: *Bulletin of Industrial Statistics for Arab Countries*, a publication of AIDMO and ESCWA, December 1993.

Table 12. The structure of Arab manufacturing industries, 1989

Type of economy	Value added (million $)	Share (%)				
		Food and beverages	Textiles and clothing	Machinery and transport equipment	Chemical products	Other
All Arab countries	39 685	23	13	8	18	39
Oil-based economies	26 066	20	10	9	23	39
Non-oil-based economies	13 629	28	20	6	8	3

Source: *Joint Arab Economic Report*, 1993.

Downstream industrial products such as fertilizers, ammonia and plastics were produced in large quantities and were mainly geared to meeting demand in non-Arab markets. Energy-intensive industries have also been established with large capacities for smelting of aluminium and other non-ferrous metals.

For the non-oil Arab countries, import substitution has been the favoured mode of industrialization since its inception. For this group of Arab countries, the two largest manufacturing industries are food and beverages and textiles and clothing, which alone accounted for 48 per cent of MVA in 1989. Machinery and transport equipment is the weakest product group accounting for only 9 per cent of MVA in Arab countries. Arab countries have thus emerged with a largely duplicated production structure, whether in terms of a massive petrochemical industry concentrated in the Persian Gulf region, but of limited diversity for export purposes, or in terms of confining themselves for several decades to producing the same consumer products for the satisfaction of domestic demand. The outcome was a manufacturing structure that witnessed little structural change.

Textiles and clothing industry

The textiles and clothing industry is one of the largest in Arab countries, accounting for $5.1 billion worth of value added (13 per cent of total value added in manufacturing industries) in 1989. In addition to its high contribution to value added, the importance of this sector stems from its being a labour-intensive one and an important source of labour absorption in labour-surplus Arab countries. In 1991, Algeria, Egypt, Iraq, Morocco and Syrian Arab Republic produced 90 per cent of the

textile output in the Arab region. Despite the fact that Arab countries as a group evidently enjoy a comparative advantage in this sector, the levels of self-sufficiency are quite low and the dependence on imports remains significant. Moreover, self-sufficiency levels have continuously been on the decline, down from 60 per cent in 1975 to 57 per cent in 1985 and to 54 per cent in 1992 (Joint Arab Economic Report, 1993).

Signs of low self sufficiency were clear ever since the late 1970s, yet supply was not quick in closing the gap, which has persisted until the present. In 1979, a gap of 461,000 tonnes of yarn (cotton, 10 per cent; wool, 8 per cent; and synthetic, 80 per cent) was scored, but the increase in output to meet this shortfall has been very modest, with the production of cotton yarn increasing from 312,000 tonnes in 1981 to 370,000 tonnes in 1990. The production of wool yarn was even more slow, increasing from 18,000 tonnes to 20,000 tonnes over the same period. While there are no figures on the production of synthetic yarn, it does not seem to have significantly increased. In 1979, Egypt and Iraq were the only two producers of synthetic silk, and Egypt was the only producer of nylon and polyester. In 1989, Egypt was still the only Arab country producing polyester fibres, polyester threads and nylon threads (AIDMO, 1989k). Raising the level of self-sufficiency could be a relatively easy task given the existence of the petrochemical industrial infrastructure necessary to supply intermediates for the production of synthetic fibres.

Persisting shortfalls in production are being met through imports, with the value of textiles and clothing imports increasing from $5.7 billion in 1980 to $7.2 billion in 1992 (UNIDO, 1994b). It is estimated that by the year 2000, demand will reach 1.7 million tonnes of textiles and 1.8 million tonnes of yarn. Shortfalls will reach 1.0 and 1.2 million tonnes of textiles and yarn, respectively (table 13) (AIDMO, 1989k).

The textiles sector is evidently one important area for expanding the scope of Arab industrial cooperation. Producing for regional as well as for international markets is strongly recommended. The future of the textiles and clothing industry is promising, given the size of regional demand and the fact that world trade in textiles and clothing reached $187 billion in 1992 (UNIDO, 1994a). At present, the share of industrial countries in total world exports is 44 per cent for textiles and 22 per cent for clothing, and these percentage shares are expected to decline following the complete phasing out of the MFA by the year 2005 (Karamy, 1995). The production of textiles and clothing is bound to shift increasingly in the direction of developing countries that enjoy low cost factors of production as well as modern marketing capabilities. The implication for Arab countries is that their comparative advantage in this area should be enhanced during the 10-year period, raising their competitiveness in a world market where only the most efficient producers will survive. Current wage levels enjoyed by major Arab producers of textiles and clothing are very competitive: wages in Egypt are only 5 per cent of those in the United States and those of Morocco, only 13 per cent. Arab cooperation in this field should prove to have high returns. The emphasis should be on expanding the production of synthetic yarn, as well as synthetic and blended fabrics, since both are produced to only a limited extent in the region, both enjoy scale economies and both are becoming a major intermediate in the downstream clothing industry. The extent to which Arab producers and exporters of textiles and clothing can effectively exploit the opportunities from trade liberalization by enhancing their competitiveness will depend on labour productivity, transport costs, the condition of the infrastructure and proper investment in human capital. Some of the existing domestic sectors should also be restructured after a thorough assessment has been made of their capital assets, technological level and of potential market niches in regional and export markets.

Table 13. Projected demand and shortfalls of yarn and textiles for the year 2000
(Thousands of tonnes)

Textiles/yarn	*Cotton*	*Wool*	*Synthetic*	*Total*
Demand				
Textiles	756	103	856	1 715
Yarn	800	110	907	1 817
Shortfall				
Textiles	263	59	705	1 027
Yarn	355	66	869	1 290

Source: Sixth Arab Conference on Industrial Development, 1984.

Food industries

Food and beverages together accounted for 23 per cent of total Arab manufacturing value added in 1989. While value added in this key sector increased from $4.5 billion in 1980 to $9.1 billion in 1989, the increase did not manage to sufficiently meet the rise in demand, rendering the Arab region one of the world's largest importers of processed food products (UNIDO, 1994a). In 1992, Arab countries imported $11 billion worth of food products, accounting for 13.5 per cent of their total import bill (Unified Arab Economic Report, 1993). One of the reasons for the inability of food production to meet regional demand is the failure of agricultural sectors to provide the needed inputs in full measure (table 14).

Table 14. Production and expected shortfalls for selected food products
(Thousands of tonnes)

Food product	*Production 1980*	*Gap 1990*	*Gap 2000*
Sugar	1 180	5 341	7 744
Edible oils	700	1 938	3 448
Milk	9 073	n.a.	26 669
Fish and fish powder	85	371[a]	1 517

Source: Sixth Arab Industrial Development Conference, 1984.
[a]1985.

This situation should drive Arab countries to develop food production in order to safeguard themselves against increasing demand and soaring world prices. One of the major impediments to the growth of this sector is that existing production units are operating well below capacity, with idle capacity in some projects reaching up to 50 per cent. The explanation lies in the inadequate supply of raw inputs, both in terms of quantity and quality (AIDMO, 1989k). The Sixth Arab Industrial Development Conference (1984) acknowledged the need to develop a viable Arab food industry that could benefit from the experience of major Arab producers in Egypt, Iraq, Jordan and the Syrian Arab Republic.

Capital and engineering industries

The production of capital goods in Arab countries is characterized by a low technological base and a dependence on simple production operations catering to domestic demand. The four largest producers of capital goods* include Saudi Arabia, which assumes top position in terms of generated value added, accounting for 23 per cent of total Arab value added in capital goods, followed by Algeria (19 per cent), Iraq (16 per cent) and Egypt (12 per cent). Recently, a group of projects with a high technological base was established in Algeria, Egypt, Iraq, Libya, Morocco, Saudi Arabia, Syrian Arab Republic and Tunisia to produce steel and aluminium structures, passenger cars, trucks, tractors, diesel engines and railway wagons. As in most developing countries, assembly operations are responsible for the bulk of production of capital goods, which makes the value added component (20-40 per cent of output value) quite low (Ahmad, 1985).

In 1981/82, the output of capital goods was valued at $3.2 billion, while total demand reached $29 billion. Local production managed to meet only 10 per cent of demand, and the balance was met through imports. In 1981/82, $1.7 billion of value added was generated in the capital goods sector, accounting for 7 per cent of total MVA. Almost a decade later, in 1989, value added nearly doubled to reach $3.1 billion, but the percentage share of capital goods in total MVA remained at the 8 per cent level (table 15).

While Arab production of capital goods has been increasing in absolute value, this should not obscure the fact that growth of this group of industrial products has been neglected, making Arab countries increasingly reliant on the outside world for their capital goods. To fill the gap between demand and supply, in 1990 Arab countries were obliged to import $28 billion worth of capital goods, accounting for 32 per cent of their total import bill for the same year (table 16). It is estimated that by the year 2000, the value of capital goods in demand will reach some $68 billion (AIDMO, 1989h).

If existing regional production capacities are to remain unchanged, future demand forecasts project substantial shortfalls for the region. Following an end-use method for estimating future demand for capital and engineering goods, the shortfalls shown in tables 17 and 18 were reached. Table 17 gives region by region data broken down by items and table 18 summarizes data for categories of equipment across the entire Arab region.

Table 15. Capital goods industry, 1989
(Millions of dollars)

	Total MVA	*Capital goods*	*Share of capital goods in MVA (%)*
All Arab countries	88 128	3 108	8
Group One	55 328	2 242	9
Algeria	10 433	598	13
Iraq	4 304	515	7
Kuwait	4 800	20	1
Libyan Arab Jamahiriya	3 976		
Oman	2 608	29	8
Saudi Arabia	24 107	729	10
United Arab Emirates	5 100	351	14
Group Two	32 800	866	6
Egypt	10 340	400	9
Jordan	2 663	43	10
Lebanon	1 200	3	1
Mauritania	248	n.a.	n.a.
Morocco	6 918	236	6
Somalia	360	n.a.	n.a.
Sudan	600	4	3
Syrian Arab Republic	2 400	106	5
Tunisia	5 471	73	5
Yemen	2 600	n.a.	n.a.

Source: *Joint Arab Economic Report*, 1993.

*According to the International Standard Industrial Classification, capital goods are included under category number 38, which is comprised of 381, fabricated metal products; 382, machinery except electrical; 383, electrical machinery; 384, transport equipment; and 385, professional and scientific equipment. Capital goods also include some consumer durables such as electronic equipment and washing machines.

Table 16. Imports of capital goods, 1990

Country group	Value of imports (million $)		Share of capital goods in total imports (%)
	Total	Capital goods	
All Arab countries	88 128	28 522	32
Group One	55 328	20 002	36
Groups Two and Three	32 800	8 520	26

Source: Joint Arab Economic Report, 1993.

The three largest product groups produced in Arab countries are transport equipment, electrical machinery and general engineering machinery, and they also happen to be the same three product groups reflecting the largest future shortfalls. In 1992, Arab countries imported $10 billion worth of non-electrical machinery (12 per cent of total manufactured imports) and $13 billion worth of transport equipment (16 per cent of total manufactured imports)(table 19).

In the category transport equipment, passenger cars are the product group that will have the most significant shortfall. By the year 2000, Arab countries will be short 525,000 units of passenger cars, of which 308,000 will be in the Persian Gulf area. At present, car production is only found in North Africa, with an installed capacity in 1989 of 55,000 units.

Arab countries have established 20 joint projects in the capital goods sector, accounting for 10 per cent of all Arab joint projects, with total invested capital of $1 billion in 1989 (AIDMO, 1989c). Capital and engineering products should be among the prime candidates for further cooperation efforts between Arab countries, and to upgrade the performance of this sector attention should be given to the following:

- The development of the capital goods sector has long suffered from the limitations of small domestic markets. Tariff and non-tariff barriers circumscribing the prospects for increased Arab intraregional trade in capital goods must be revised if economies of scale are to be realized. The smallest economic size for any of the proposed projects is beyond the absorptive capacity of any one particular market, and shortfall projections were based on an end-use method for the whole region. Thus, for this vital sector to expand production, free access to regional markets must be assured.
- Capital goods are skill-intensive products, and while the region does enjoy a sizeable pool of low-cost labour, upgrading the skills of the labour force engaged in the production of capital goods is vital to ensuring quality products. The development of existing training institutes and better technical and vocational training at the school level are crucial to upgrading the existing stock of technical skills and expertise.
- Developing the R&D capabilities of science and technology institutions catering to the needs of this sector is essential if Arab countries are to escape full dependence on imported technology for the production and development of capital goods (AIDMO, 1989c).

Iron and steel industry

Steel production increased from 2 million tonnes in 1970 to 6.3 million tonnes in 1986 and 10 million tonnes in 1991. Self-sufficiency has remained at 63 per cent since 1985 (AIDMO, 1989d), with consumption reaching 16 million tonnes in 1991. The production of final iron and steel products reached 15.7 million tonnes in 1991, while consumption reached 18.5 million tonnes (table 20). Projected production of final steel products (final rolled long and flat products) will reach 16.8 million tonnes by 2005, while demand is expected to reach 52 million tonnes (AIDMO, 1989d).

Algeria, Egypt, Iraq, Morocco and Saudi Arabia are the largest producers and consumers of iron and steel products. Egypt is the region's largest producer of steel, with an installed capacity reaching 2.9 million tonnes in 1987, followed by Algeria (2.2 million tonnes) and Saudi Arabia (0.9 million tonnes) (AIDMO, 1989d) (figure 3).

Arab countries enjoy a resource base that could easily allow them to expand production to fully meet regional demand and venture into export markets. The three most important inputs for the industry are iron ore, pellets and energy. In 1985 iron ore reserves were estimated at 14 billion tonnes, concentrated in the Arab Maghreb countries (73 per cent of reserves). Production of iron in its ore form reached 13 million tonnes in 1986, and demand for raw iron is expected to reach 16 million tonnes by the end of this decade. The second raw input is iron pellets, demand for which reached 3.7 million tonnes in 1985 and is expected to reach 10.4 million tonnes yearly in the 1990s. The only plant producing iron pellets from iron ore, in Bahrain, has an installed annual capacity of 4 million tonnes (AIDMO, 1989d). However, taking existing and future production capabilities into consideration, Arab countries are expected to encounter a considerable shortfall in the near future. If future demand is to be met, existing units must be expanded and new capacities installed.

Table 17. Region-wide demand and shortfall of end-use engineering and capital goods

(Pieces of equipment)

Category of equipment item	North Africa					Middle East					Persian Gulf				
	Existing capacity	Estimated demand		Shortfall		Existing capacity	Estimated demand		Shortfall		Existing capacity	Estimated demand		Shortfall	
		1995	2000	1995	2000		1995	2000	1995	2000		1995	2000	1995	2000
Transport equipment															
Railway wagons	2 738	3 923	5 296	1 185	2 558	—	490	780	490	780	240	775	1 140	535	900
Railway coaches	360	533	736	173	376	—	—	—	—	—	—	—	—	—	—
Locomotives	—	82	99	82	99	—	—	—	—	—	—	—	—	—	—
Buses	11 560	13 800	15 660	2 240	4 100	—	1 750	1 930	1 750	1 930	1 700	9 610	10 850	7 910	9 150
Jeeps and station wagons	2 750	4 450	4 500	1 700	1 750	—	—	—	—	—	—	—	—	—	—
Motorcycles	140 000	160 000	222 000	20 000	82 000	—	—	—	—	—	—	—	—	—	—
Bicycles	215 000	266 000	278 000	51 000	63 000	—	—	—	—	—	250 000	428 800	497 600	178 300	247 600
Passenger cars	55 000	181 600	237 000	126 600	182 000	—	23 000	30 500	23 000	30 500	—	244 000	308 000	244 000	308 000
Trucks	23 400	54 000	76 500	30 600	53 100	—	3 540	5 170	3 540	5 170	16 350	20 000	23 000	3 650	6 650
LCVs	17 000	49 400	61 400	32 400	44 400	—	16 600	23 300	16 600	23 300	—	142 000	147 500	142 000	147 500
Material handling equipment															
Lifts	640	1 440	1 790	800	1 150	250	100	200	–150	–50	—	430	820	430	820
Forklift trucks	2 000	2 400	2 400	400	400	—	—	—	—	—	—	—	—	—	—
Tractors	15 500	31 830	35 540	16 330	20 040	5 000	6 670	7 600	1 670	2 600	8 800	8 300	8 920	–500	120
Trailers	13 245	34 105	38 915	20 860	25 670	3 500	6 670	7 600	3 170	4 100	600	17 660	19 200	11 660	13 200
Conveyors	—	30	30	30	30	—	—	—	—	—	—	—	—	—	—
Cranes-EOT	212	215	220	3	8	40	20	40	-20	—	—	—	—	—	—
Tower cranes	195	210	210	15	15	—	—	—	—	—	—	60	100	60	100
Mobile cranes	300	300	300	126 600	—	—	—	—	—	—	—	—	—	—	—
Earth-moving equipment and road-making equipment															
Bulldozers	—	150	450	150	450	—	—	—	—	—	—	—	—	—	—
Excavators/shovels	700	1 200	1 700	500	1 000	—	—	—	—	—	—	—	—	—	—
Loaders	—	—	50	—	50	—	—	—	—	—	—	—	—	—	—
Compactors/road rollers	1 000	1 000	1 500	—	500	—	—	—	—	—	—	500	500	500	500
Dumpers/trippers	4 600	5 000	8 200	400	3 600	—	—	—	—	—	—	—	—	—	—
Construction sector															
Concrete mixers	9 050	9 200	10 200	150	1 150	30	40	40	10	10	1 880	1 880	1 880	—	—
Machine tools	2 875	5 230	6 340	2 355	3 465	—	—	—	—	—	—	1 180	1 920	1 180	1 920
Construction sector															
Concrete mixers	9 050	9 200	10 200	150	1 150	30	40	40	10	10	1 880	1 880	1 880	—	—
Machine tools	2 875	5 230	6 340	2 355	3 465	—	—	—	—	—	—	1 180	1 920	1 180	1 920

Agricultural machinery															
Harvesters/threshers	2 500	5 400	5 530	2 900	3 030	—	210	210	210	210	—	770	760	770	760
Ploughs	16 400	24 000	26 400	7 600	10 000	—	4 000	5 800	4 000	5 800	—	—	—	—	—
Sprinkler irrigation systems	—	1 000	1 000	1 000	1 000	—	60	68	60	68	—	320	470	320	470
Electrical equipment															
Motors	110 000	1 002 000	1 117 000	892 000	1 007 000	200 000	200 000	300 000	—	100 000	—	322 000	410 000	322 000	410 000
Industrial/domestic fans	96 000	235 000	270 000	139 000	174 000	—	—	—	—	—	103 000	240 000	280 000	137 000	177 000
General engineering machinery															
Pumps	81 000	264 150	317 550	183 150	236 550	10 000	82 750	102 750	72 750	92 750	143 000	71 800	98 700	57 500	84 400
Compressors	2 600	3 100	3 100	500	500	—	—	—	—	—	—	—	—	—	—
Valves	9 000	610 600	694 800	601 600	685 800	—	200 000	200 000	200 000	200 000	164 000	164 000	164 000	—	—
Industrial fasteners	38 100	84 700	116 000	46 600	77 900	—	9 000	10 000	9 000	10 000	11 000	15 000	20 000	4 000	9 000
Hand tools	6 400	10 000	13 300	3 600	6 900	—	685	685	685	685	300	600	1 000	300	700
Diesel engines	53 000	119 400	147 500	68 400	94 500	5 000	23 200	32 000	18 200	27 000	—	11 000	33 500	11 000	33 500
Metal products															
Manhole covers	8 000	25 400	29 360	17 400	21 360	8 500	7 700	10 000	-800	1 500	21 900	27 650	29 300	5 750	7 400
Pipes and pipe fittings	34 000	235 800	285 100	201 800	251 100	5 000	12 600	15 500	7 600	10 500	41 350	60 400	91 900	19 050	50 550
Gas bottles	2 933	2 939	3 045	6	112	—	100	120	100	120	550	550	550	—	—
Gas ovens	300	456	503	156	203	20	20	20	—	—	385	406	517	21	132
Washing machines	326	450	484	124	158	50	50	55	—	5	30	40	50	10	20

Table 18. Production of capital and engineering goods and projected shortfalls
(Pieces of equipment)

	Existing capacity	*Shortfall*	
Category of equipment	*1989*	*1995*	*2000*
Transport equipment	736 098	887 755	1 214 863
Material handling and equipment	50 282	181 358	68 203
Earth-moving and road-making equipment	12 600	1 550	6 100
Construction sector (concrete mixers)	10 960	160	1 160
Machine tools	2 875	3 535	5 385
Agricultural machinery	18 900	16 860	21 338
Electrical equipment	509 000	1 490 000	1 868 000
General engineering machinery	523 400	1 275 285	1 560 185

Source: AIDMO, Seventh Arab Industrial Development Conference, 1989.

Table 19. Arab trade in capital goods, 1980 and 1992
(Millions of dollars)

	Imports		*Exports*		*Gap*	
Product group	*1980*	*1992*	*1980*	*1992*	*1980*	*1992*
Total manufactures	86 516	83 441	19 122	32 035	66 394	51 406
Metal products excluding machinery	7 139	4 536	247	319	6 892	4 217
Non-electrical machinery	13 445	10 229	310	324	13 135	9 905
Electrical machinery	9 261	6 058	256	607	9 005	5 451
Transport equipment	11 234	13 315	732	323	10 502	12 992
Professional and scientific equipment	1 757	1 930	23	75	1 734	1 855

Source: UNIDO, *Global Database*, 1994.

Table 20. Production of iron and steel in Arab countries
(Thousand tonnes per year)

Metal	*1980*	*1985*	*1991*
Iron and steel (rolled products)			
Production	1 933	8 570	5 727
Consumption	11 000	14 000	18 500
Aluminium			
Production[a]	281	525	809
Consumption	286	605	950

Source: *Joint Arab Economic Reports*, 1993, 1994.
[a]Actual production accounts for 72 per cent of installed capacity.

One of the main characteristics of the iron and steel industry is its energy-intensive nature. European Union countries, for example, use up 12-18 per cent of the energy they produce to manufacture iron and steel. An adequate surplus of energy would give a country comparative advantage in this area. Following on the expansion of the direct reduction method to produce sponge iron, natural gas has become the second largest energy input after coke (it also acts as the reducing agent). It is worth mentioning that the cost of the reducing agent accounts for 30 per cent of the total cost of producing one tonne of sponge iron. Reserves of natural gas in Arab countries are estimated at 29.57 trillion cubic metres in 1993, accounting for 20 per cent of total world reserves (Malheese, 1994). What this implies is that Arab countries are endowed with both abundant raw material inputs and the needed energy source, and if the right policies for augmenting existing installed capacities are put in place, self-sufficiency will significantly improve and reliance on imports will decline (in 1992, iron and steel imports reached $5.8 billion, while exports reached $695 million).

One of the problems of the iron and steel industry in Arab countries is the low level of capacity utilization, 38 per cent in 1980 and 68 per cent in 1985 (figure 4). Highest utilization rates were reached in Qatar (155 per cent) and Saudi Arabia (124 per cent).

Another critical characteristic of the iron and steel industry is its human skill base. The standard division of technical skills for this industry should run along the following lines: engineers, 3 per cent; technicians, 17 per cent; skilled labour, 68 per cent; unskilled labour, 12 per cent. In Arab countries there is an imbalance in these skills, for example, in the Helwan complex in Egypt, engineers account for 4.4 per cent, supervisors and technicians 10.9 per cent, skilled labour 44.9 per cent and unskilled labour 39.8 per cent. This is no exception, and the

general observation is that there is a deficiency in the number of skilled labour and technicians across the board in Arab countries (AIDMO, 1989d).

Another problem facing the iron and steel industry is the scarcity of raw materials in the Arab Mashrek and the scarcity of capital in the Arab Maghreb. Investment flows from the former to the latter, along with a viable transportation network capable of linking importers and exporters in the two regions, should resolve this impediment. Candidate lines of production include flat products for the transport and military industries (Egypt) and piping for the countries of the Cooperation Council for the Arab States of the Gulf (GCC).

Figure 3. The production of steel products

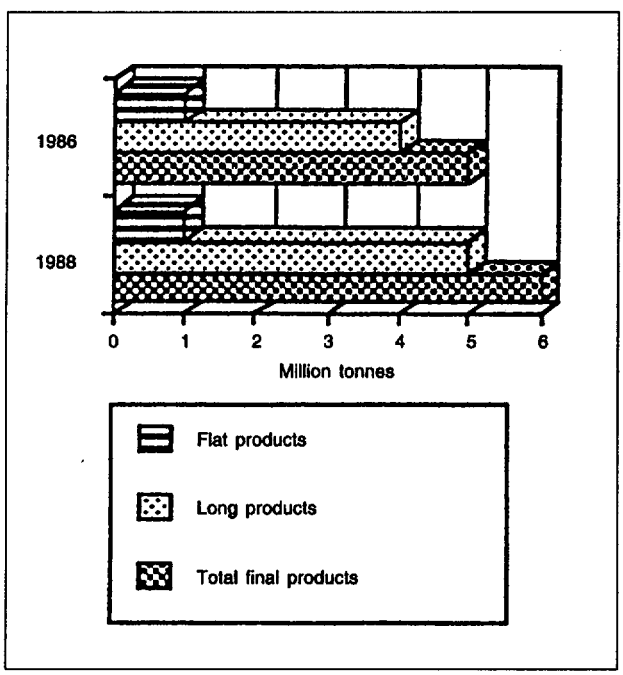
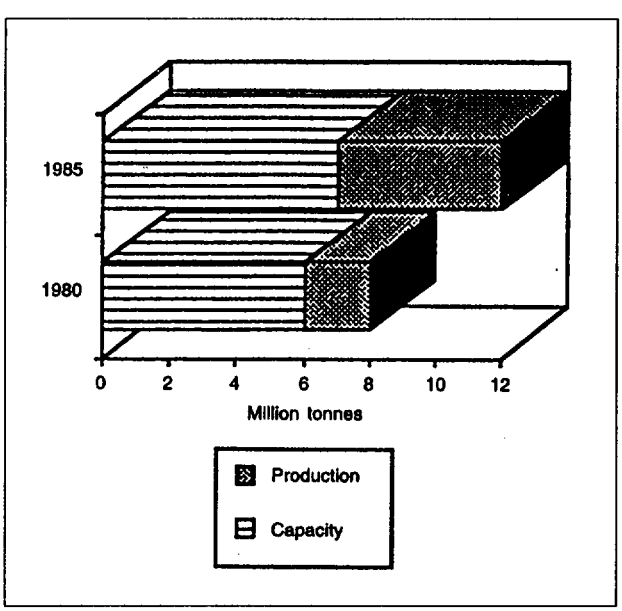


Figure 4. Installed capacity and actual production of rolled products



By the year 2000, demand for final steel products is expected to reach 52 million tonnes: of which, reinforcement bars and wire rods, 23 million tonnes; sections, 37 million tonnes; flat products, 14 million tonnes; and tubes and pipes, 10 million tonnes. (An expansion of the existing regional railway network is liable to stimulate the demand for iron and steel products.)

World demand for aluminium is expected to increase by the end of the 1990s, particularly in European markets, which means it would be feasible to develop downstream aluminium industries in Egypt, Bahrain and United Arab Emirates, which are the largest aluminium producers in the region. Major importers are Europe, Japan, the Republic of Korea and Taiwan Province. While plans for the expansion of aluminium smelters were endorsed by GCC countries, the falling world price for aluminium has slowed the process. At present, the industry is shifting slightly, particularly in GCC countries, towards the production of final products with more value added content such as cans (through recycling metals), high-tension cables, the production of which reached 55 thousand tonnes per year and the aluminium frames (AIDMO, 1989d).

Petrochemical industries

In 1992, 152 petrochemical projects were producing 35 different products, amounting to 12,952 million tonnes. Basic petrochemicals dominate the production process, accounting for 52.9 per cent of existing installed capacities, while intermediate and final products account for 26 per cent and 21 per cent, respectively (AIDMO, 1989g).

Petrochemicals are produced in 13 Arab countries, with Saudi Arabia being the largest Arab producer (60 per cent of total Arab production). Saudi Arabia exports 95 per cent of its output of petrochemicals and fertilizers, 25 per cent of which is marketed in the European Union. The production of petrochemicals in Arab countries is characterized by dependence on ethylene, which is derived from natural gas. Though natural gas is a cheap input, its use limits the potential for increasing the diversity of petrochemical products. The lack of product diversification at the intermediate stage of production is being reflected in the limited product lines of the final stage. This in turn affects the scope of final products feeding the various manufacturing industries that rely on petrochemical inputs.

Existing capacity for the production of final petrochemical products amounts to 6 million tonnes: plastic products account for 70 per cent; methyl, 17.8 per cent; paints, 8 per cent; detergents,

3 per cent; synthetic fibres, 0.9 per cent. Rubber is not produced at all in the Arab region (imports of rubber products reached $1.4 billion in 1992) (AIDMO, 1989g).

Too much concentration on the production of basic petrochemicals (52.9 per cent of total production) has limited not only product diversification at the final stage but also the value added component, which remains relatively low. While value added in refining a barrel of petroleum has been estimated at $3, moving forward into the production of basic petrochemicals raises value added to $36, and moving to intermediate and final production stages for petrochemicals raises it to $132. Furthermore, the production of manufactured products that use petrochemicals as their main input could increase the value added to $2,600 for the same barrel (figure 5) (Malheese, 1994).

In 1992, imports of chemicals* reached $9.7 billion, while exports reached $5.8 billion. The commodity composition of petrochemical imports is highly diversified, with major imports from the European Union, Japan and the United States. The structure of Arab exports, on the other hand, is very limited in terms of product diversification. Despite the fact that Arab countries account for 25.9 per cent of total world production of petroleum and 11.3 per cent of natural gas, they produce only 3-5 per cent of total world production of petrochemicals (Malheese, 1994), making the petrochemical sector a prime candidate for Arab cooperation. The main reason for further developing the petrochemical industry and diversifying products would be to support the production of manufactures utilizing final petrochemical products, particularly plastic products (plastics is one of the fastest-growing industries), synthetic fibres, synthetic rubber and tires and specialized chemicals.

One important problem facing the petrochemical industry is the poor performance following the drop in global demand and the associated marketing difficulties confronting producers. Saudi Arabia, for example, faces considerable difficulties in marketing its products, particularly in the European Union and Japan, where they are subject to QRs. In 1990, the European Union eliminated the preferential treatment that was given to Saudi Arabia under the GSP and is imposing anti-dumping duties on urea imports. Another equally important problem is the technology-intensive nature of the industry. The high degree of dependency on imported technology raises the cost of production, and proper investment in R&D should reverse this situation. This is particularly important since GATT has enforced the trade-related intellectual property rights (TRIPS), which is bound to reinforce the monopolistic position of technology exporters.

*According to the Standard International Trade Classification, petrochemical products fall in category 5, chemical products.

Summary

Four observations can be made concerning the industrial structure of all three groups of Arab countries: the first is that there is a considerable complementarity (i.e. each group is relatively specialized in its own subset of manufacturing activities) across the three Groups of economies. This complementarity can be exploited to their mutual advantage if industrial policies and strategies are coordinated so to encourage deepening along each group's comparative advantage while promoting a parallel growth in intragroup trading. A second observation is that all groups are still concentrating on the extractive or primary processing stages of their raw materials (petroleum and basic chemicals and metals in Group One, cotton and other agricultural products, phosphates and other ores in Groups Two and Three). The opportunity to raise value added (wages and profits) by further processing these intermediates is substantial (e.g. downstream petrochemicals, synthetic fibres, rubber, plastics, metal products, specialized chemicals and clothing), and a more open trading system among the members of the Arab region would enable a better dispersal and allocation of investments to take advantage of locational advantages and economies of scale.

A third observation is that all Arab countries have neglected the enormous potential and importance of further building up a viable capital goods industry. A fourth and final observation is that the export performance of Arab country manufacturing sectors has been very poor and that except for a few of the oil-rich economies, the trade deficits from the industrial sector are extremely high and could be easily remedied with appropriate export promotion policies.

Arab intraregional trade: past trends and future prospects

The value of Arab intraregional trade reached $19.8 billion in 1992, with intraregional exports increasing from $661 million in 1970 to $9.9 million in 1992. A group of factors have interacted to limit the prospects for trading opportunities among Arab countries, foremost among them the similarity of their manufacturing profiles. Similar manufacturing profiles mean similar products for export, which face a lot of tariff and non-tariff barriers, leaving very few products for tariff exemptions which are applied in a selective manner. The composition of intraregional trade is shown in figure 6.

Figure 5. Increase in value added at various stages of processing

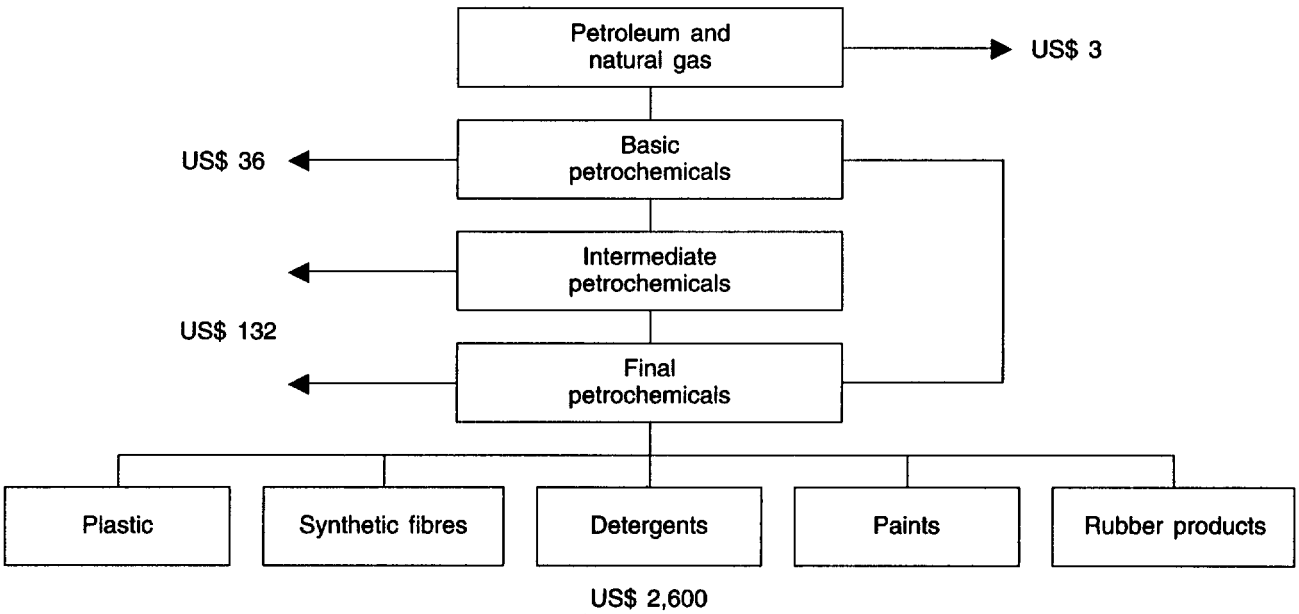
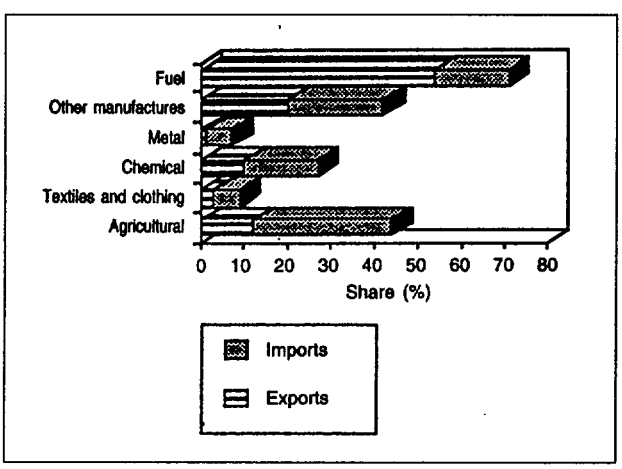


Figure 6. Composition of intraregional trade, 1991



Although intra-Arab trade preference agreements cover a wide range of raw materials and agricultural products, most manufactured goods are excluded and continue to be subject to escalated tariff barriers. On average, levels of tariff protection in industrial countries are much lower than for Arab countries on both primary goods and manufactures (see tables 21 and 22). Efforts to promote trade between Arab countries began as early as the establishment of the Arab League in 1945 and up until the Agreement for the Facilitation and Promotion of Trade among member States of the Arab League, signed in 1981. The 1981 agreement fully liberalized intraregional trade in raw and processed agricultural and food products, together with the products of joint Arab industrial projects established within the framework of the Arab League and its affiliated organizations. Its rules of origin specify that for a product to be considered "Arab", the value added content should be at least 40 per cent of output value and 20 per cent for assembling industries. A host of bilateral trade agreements were signed between individual Arab countries and between regional trading blocks, resulting in a higher than average share of intraregional trade for particular countries and between particular blocks. Trade among GCC countries accounts for more than 70 per cent of their total intraregional trade and is 63 per cent for the Maghreb Arab Union. Two other distinct features of intraregional trade stand out: firstly, some countries have a higher than average share in total intraregional exports (Saudi Arabia, Syrian Arab Republic and United Arab Emirates); secondly, the importance and weight of intraregional exports in total exports is not uniform across the region (table 23). What this implies is that the Arab market is relatively more important for the exports of Egypt, Jordan, Lebanon and the Syrian Arab Republic (non-oil exporters) than for those of other Arab countries (Yeats, 1995).

The most important implication of the variance in the levels of intraregional trade, is that the elimination of tariffs and NTBs impeding the flow of goods is the determinant of the size of trade between countries. A well-structured and gradual phasing out of trade barriers facing manufactured goods will inevitably boost intraregional trade, particularly now that manufacturing industries are undergoing major reforms that are meant to make them more responsive to demand in external markets. It has been estimated that a 50 per cent tariff reduction on manufactures would result in a net increase of $198 million in intraregional trade, while a 100 per cent tariff reduction would result in

Table 21. Tariff escalation on imports of Arab countries

Country or area	Foodstuff and agricultural material		Chemicals		Processed food		Textiles and clothing		Machinery and equipment	
	Low	High	Low	High	Low	High	Low	High	Low	High
Group One										
Algeria	0.0	40.0	0.0	25.0	5.0	100.0	5.0	100.0	40.0	50.0
Bahrain	0.0	5.0	0.0	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Iraq										
Kuwait	0.0	4.0	4.0	20.0	15.0	25.0	0.0	15.0	0.0	20.0
Libyan Arab Jamahiriya										
Oman	0.0	5.0		5.0		5.0		5.0		5.0
Qatar	0.0	4.0	4.0	20.0		4.0		4.0		4.0
Saudi Arabia	0.0	12.0	12.0	20.0	12.0	20.0	12.0	12.0	12.0	20.0
United Arab Emirates	0.0	4.0		4.0		4.0		4.0		4.0
Group Two										
Egypt	0.0	30.0	0.0	30.0	10.0	100.0	7.0	80.0	7.0	30.0
Jordan	0.0	23.0	0.0	28.0	20.0	85.0	20.0	85.0	0.0	25.0
Lebanon	0.0	50.0	0.0	28.0	18.0	90.0	18.0	90.0	7.0	90.0
Morocco	0.0	25.0	0.0	17.4	34.9	45.9	2.5	45.0	12.5	23.6
Palestine										
Syrian Arab Republic	1.0	30.0	1.0	40.0	50.0	100.0	50.0	100.0	1.0	40.0
Tunisia	0.0	25.0	6.5	25.0	10.0	75.0	10.0	75.0	6.5	25.0
Group Three										
Djibouti										
Mauritania	0.0	5.0	5.0			175.0		175.0		175.0
Somalia	2.0	10.0			20.0	30.0	20.0	30.0		
Sudan	15.0	125.0	10.0	80.0	20.0	200.0	10.0	80.0	75.0	175.0
Yemen	0.0	40.0	0.0	25.0	50.0	100.0	50.0	100.0		50.0
Average developing countries	0.0	75.0	0.0	100.0	50.0	150.0	8.7	150.0	0.0	34.0
Average developed countries	0.8	9.4	0.1	4.9	4.4	20.0	1.7	75.6	0.4	11.5
Average European Union	0.0	12.4	0.0	17.5	...	24.0	0.0	17.0	0.4	15.0

Source: Jamal Eddine Zarrouk, "Intra-Arab trade: determinants and prospects", in Said El-Naggar, ed., *Investment Policies in the Arab Countries* (IMF, 1990).

an increase of $407 million (Zarrouk, 1992). Similar to the impact of trade liberalization on the global front, dynamic gains will turn out to be more significant and will depend on the degree to which various industries respond favourably to the opportunities presented by the liberalization of regional trade.

Joint Arab projects: hindsight and future outlook

Joint Arab industrialization efforts, mostly pursued by governments, date back to 1956, when the first joint Arab project was initiated by the Economic and Social Council of the Arab League. The number of joint Arab industrial projects (including those with foreign capital) reached 244, worth $9.8 billion, with cement and building materials ($1.5 billion) and petrochemicals ($2.4 billion) being the two largest sectors, as shown in table 24. The construction boom that has taken place in the majority of Arab countries, and the capital-intensive nature of the petrochemical industry explain the relatively large size of investments accounted for by these two sectors. Joint Arab projects already operating in all sectors, and with strictly Arab capital, number 252, of which 135 are bilateral and 117 are multilateral. Total investments reached $17.8 billion, with the finance sector being the largest recipient of joint Arab capital ($6 billion), followed by manufacturing and mining, which together account for 24 per cent of total capital invested in joint projects ($4 billion) (table 25). The number of joint projects with foreign capital is 269, with $12 billion of capital investments.

Joint government cooperation efforts have functioned, either by establishing holding companies or directly by establishing industrial productive units. Major Arab holding companies include the Arab Mining Company, the Arab Pharmaceutical Company (ACDIMA), the Arab Petroleum Investment Company, the Arab Investment Company, the General Arab Investment Company and Arab Industrial Investment Company.

Table 22. Ranking of Arab countries according to tariffs on imports

Tariffs on processed food				*Tariffs on textiles and clothing*				*Tariffs on machinery and equipment*			
Low (%)			*High (%)*	*Low (%)*			*High (%)*	*Low (%)*			*High (%)*
5.0	Bahrain	1 United Arab Emirates	4.0	0.0	Kuwait	1 United Arab Emirates	4.0	0.0	Kuwait	1 United Arab Emirates	4.0
5.0	Algeria	2 Qatar	4.0	2.5	Morocco	2 Qatar	4.0	0.0	Jordan	2 Qatar	4.0
10.0	Tunisia	3 Oman	5.0	5.0	Bahrain	3 Oman	5.0	1.0	Syrian Arab Republic	3 Oman	5.0
10.0	Egypt	4 Bahrain	10.0	5.0	Algeria	4 Bahrain	10.0	5.0	Bahrain	4 Bahrain	10.0
12.0	Saudi Arabia	5 Saudi Arabia	20.0	7.0	Egypt	5 Saudi Arabia	12.0	6.5	Tunisia	5 Saudi Arabia	20.0
15.0	Kuwait	6 Kuwait	25.0	10.0	Tunisia	6 Kuwait	15.0	7.0	Lebanon	6 Kuwait	20.0
18.0	Lebanon	7 Somalia	30.0	10.0	Sudan	7 Somalia	30.0	7.0	Egypt	7 Morocco	23.6
20.0	Jordan	8 Morocco	45.9	12.0	Saudi Arabia	8 Morocco	45.0	12.0	Saudi Arabia	8 Jordan	25.0
20.0	Somalia	9 Tunisia	75.0	18.0	Lebanon	9 Tunisia	75.0	12.5	Morocco	9 Tunisia	25.0
20.0	Sudan	10 Jordan	85.0	20.0	Jordan	10 Egypt	80.0	40.0	Algeria	10 Egypt	30.0
34.9	Morocco	11 Lebanon	90.0	20.0	Somalia	11 Sudan	80.0	75.0	Sudan	11 Syrian Arab Republic	40.0
50.0	Syrian Arab Republic	12 Algeria	100.0	50.0	Syrian Arab Republic	12 Jordan	85.0			12 Algeria	50.0
50.0	Yemen	13 Syrian Arab Republic	100.0	50.0	Yemen	13 Lebanon	90.0			13 Yemen	50.0
		14 Egypt	100.0			14 Algeria	100.0			14 Lebanon	90.0
		15 Yemen	100.0			15 Syrian Arab Republic	100.0			15 Mauritania	175.0
		16 Mauritania	175.0			16 Yemen	100.0			16 Sudan	175.0
		17 Sudan	200.0			17 Mauritania	175.0				

Source: Ranking is based on Jamal Eddine Zarrouk, "Intra-Arab trade: determinants and prospects", in Said El-Naggar, ed., *Investment Policies in the Arab Countries* (IMF, 1990).

Note: 1 = least restrictive tariffs, 17 = most restrictive.

Table 23. Global and intraregional exports of selected Arab countries, 1990

Country	Intraregional exports		Global exports	
	Value (million $) (1)	% of total	Value (million $) (2)	(1) as % of (2)
Bahrain	202	3.5	2 843	7.1
Egypt	376	6.6	2 568	14.6
Jordan	192	3.4	922	20.8
Lebanon	245	4.3	493	49.7
Libyan Arab Jamahiriya	636	11.1	10 777	5.9
Oman	274	4.8	5 508	4.9
Qatar	250	4.4	3 529	7.0
Saudi Arabia	1 609	28.2	44 416	3.6
Syrian Arab Republic	854	15.0	4 217	20.2
United Arab Emirates	1 072	18.8	23 533	4.5
		100.0		

Source: Compiled from Yeats (1995) and *Joint Arab Economic Report* (1993).

Table 24. Joint Arab industrial projects (operating and being established)

Subsector	Number of projects	Total invested capital (thousand $)	Average investment per project (thousand $)	Percentage of total
Cement and building materials	52	1 744 150	33 541	17.7
Chemicals	50	675 060	13 501	6.9
Petrochemicals	15	2 389 000	159 266	24.3
Pharmaceuticals	14	701 315	50 093	7.1
Fertilizers	13	463 880	35 683	4.7
Refining	7	345 900	20 347	3.5
Metals	26	1 078 815	41 492	11.0
Food	19	926 150	48 744	9.4
Spinning and weaving	24	458 565	19 106	4.7
Wood	4	29 000	7 250	0.3
Engineering	20	1 023 000	51 650	10.4
Total	244	9 834 835	40 307	100.0

Source: "Commercial trade development between Arab countries" and "Developing the transportation network", Seventh Arab Industrial Development Conference, Tunis, 20-25 October 1989.

Table 25. Distribution of Arab joint projects in operation

(Thousands of dollars)

Sector	Joint Arab projects				Arab international joint projects			
	Bilateral		Multilateral		Bilateral		Multilateral	
	Number	Capital	Number	Capital	Number	Capital	Number	Capital
Extractive industries	10	73 040	12	1 369 500	11	358 011	5	103 176
Manufacturing industries	33	1 596 109	20	1 090 922	44	2 864 138	32	2 490 926
Agriculture	19	354 990	9	1 392 156	21	282 200	3	25 556
Finance	28	1 265 681	41	4 987 175	22	457 124	75	4 807 032
Tourism	16	227 500	8	286 600	7	298 800	8	138 000
Transportation	11	277 375	13	3 128 550	8	94 400	3	64 700
Construction	11	217 170	10	324 000	14	85 400	1	2 530
Services	7	42 949	4	147 900	4	12 000	11	179 400
Total	135	4 054 814	117	12 726 803	131	4 452 073	138	7 811 320

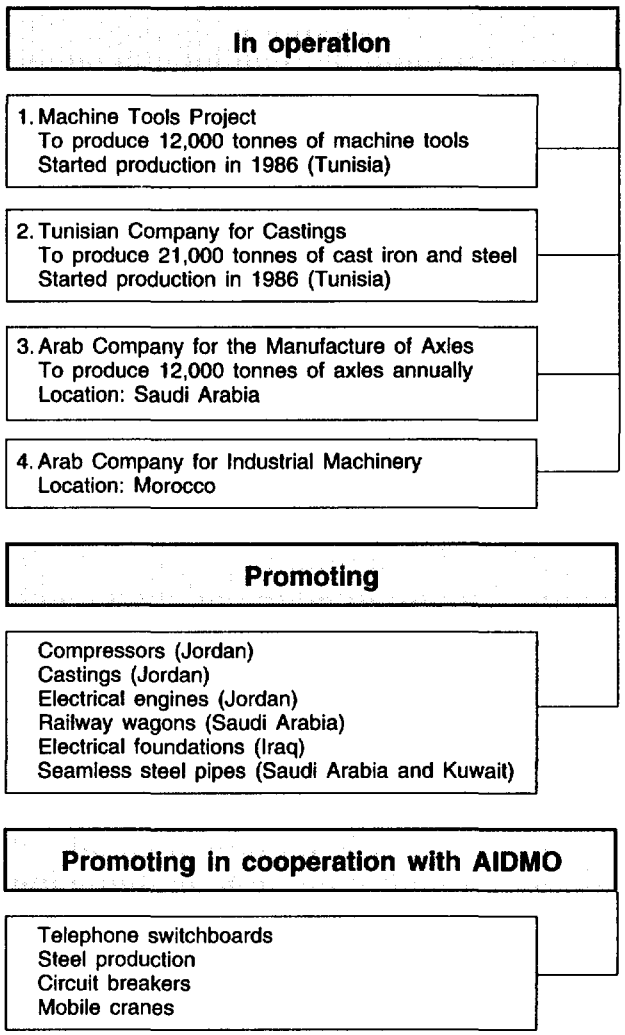
Source: AIDMO, 1989.

Holding companies provide a framework for promoting joint projects in each sector and coordinating production and marketing activities. For example, the Arab Industrial Investment Company is responsible for 4 productive units in 3 countries and is promoting 10 other projects, 4 of them in cooperation with AIDMO (figure 7).

National and regional finance plays as important a role as finance provided through major Arab holding companies in supporting joint Arab cooperation efforts. The Arab Fund for Economic and Social Development (AFESD) and the Islamic Development Bank are the major regional institutions supporting country industrial programmes as well as drives for joint cooperation. AFESD has contributed 106 million Kuwaiti dinars towards the establishment of joint projects and has provided technical assistance by conducting pre-feasibility studies for candidate projects. One criticism is that AFESD finance has favoured projects at the country level over joint projects. The focus of the Islamic Development Bank has been on the provision of finance to support development-oriented projects, with loans and contributions to equity capital in the productive sectors reaching $2.9 billion. Between 1976 and 1987, industry alone has accounted for 35 per cent of total finance to set up projects and to provide technical assistance. Unlike AFESD, the Islamic Development Bank is governed by a mandate that allows it to become a partner in funded projects. The Arab Monetary Fund also plays an important although indirect role in promoting joint Arab economic effort, by promoting harmonized financial and monetary policies across the Arab region and by supporting efforts to develop viable financial markets, a prerequisite for a good investment climate, particularly for the success of joint regional investment efforts (AIDMO, 1989c).

While Arab experience in joint venture projects, whether public or private, has been encouraging, judging by the untapped potential of regional capital reserves, Arab countries could significantly expand the size and number of such projects. As mentioned earlier, Arab countries have invested $17.8 billion in the establishment of joint projects, which is only 6.5 per cent of Arab capital invested outside the region, estimated at $275 billion (AIDMO, 1989c). The region is evidently not capital-scarce, yet the size of capital actually channelled into productive investments within regional boundaries is limited. Opportunities for industrial (and other) investment have been identified (tables 26-28) and need to be promoted. What is needed is to strengthen the link between sources of capital and opportunities for investment by activating capital markets in the region, giving a large boost to cooperation between public and private sectors and domestic and foreign enterprise, especially at the regional level (AIDMO, 1989c).

Figure 7. The Arab Industrial Investment Company



The Unified Agreement governing Arab investment was signed by 19 Arab States in the late 1970s; the most significant arrangement is that Arab investment in the host country is treated indiscriminately, enjoying the same legal rights and privileges enjoyed by national capital and having access to special incentives within particular sectors. The Agreement has, however, had limited results in terms of accelerating the pace of intra-regional capital flows, probably because it does not provide a single consistent framework to be uniformly applied in all countries. Rather, it overlaps with existing laws and regulations that vary in degree of restrictiveness.

Besides problems of finance, joint Arab efforts stumble on the length of time that elapses between promoting a project and implementing it. The Arab Maritime Company was initiated by the Economic and Social Council in 1953, the agreement was signed 1963 and the company started activities in 1974 (AIDMO, 1989b). For 20 years to elapse between initiation and execution implies that all of

the assumptions on which the feasibility study was based have changed. While this case is exceptional, the dynamic nature of market means that even a delay of three to five years significantly changes the climate in which a project is implemented.

Once a joint project manages to overcome these obstacles, it is confronted with a multitude of operational problems. At the country level, inadequate physical infrastructure, instability of financial, monetary and exchange rate policies, inadequate local supply of material inputs and changing levels of protection add to the cost of production and transactions, negatively affecting competitiveness. Problems facing joint Arab holding companies include the low levels of finance available relative to the amounts cited in the initial agreements. In addition, the large gap between authorized capital and paid capital reflects the sometimes hesitant attitude of investors. Some Arab holding companies place capital in banks or in financial investments, so it does not directly serve the initial purpose of the project. An example is ACDIMA, which according to the company's financial statements (1981) did not invest more than 3 per cent of its total capital in projects for the production of pharmaceuticals (AIDMO, 1989c). Another important problem related to the performance of holding companies is the absence of a division of responsibility between management and ownership. Agreements governing joint Arab projects fail to draw clear lines, and it is government ownership that prevails, which has affected the process of decision-making in holding companies, particularly decisions related to investment, reflecting a strictly conservative attitude.

Table 26. Completed feasibility studies

	Annual capacity	*Demand*	*Investment cost (million $)*	*Internal rate of return (IRR) (%)*	*Location*
Telephone switchboards	900 000 lines	1.5 million lines (1995-2000) 2.0 million lines (2000-2005)	40	19.20	Algeria Egypt Arab Mashrek
Cotton yarn	25 000 tonnes	655 000 tonnes (1995) 764 000 tonnes (2000)	136	17.70	Sudan Morocco Oman Djibouti
Steel	110 000 tonnes	389 000 tonnes (1995) 588 000 tonnes (2000)	138	16.60	Egypt Saudi Arabia Algeria Iraq
Iron pellets	14 million tonnes	9 million tonnes	—	—	Jordan Oman Mauritania Algeria Libyan Arab Jamahiriya
Flat glass	80 000 tonnes	619 000 tonnes (2000) 782 000 tonnes (2005)	129	7.60	Morocco Tunisia Algeria Libyan Arab Jamahiriya Saudi Arabia United Arab Emirates Djibouti
Graphite poles	30 000 tonnes	46 000 tonnes (2000) 75 000 tonnes (2010)	634	—	Saudi Arabia Libyan Arab Jamahiriya
Insecticides	7 000 tonnes	—	29	21.10	Jordan Syrian Arab Republic

Source: AIDMO, 1989.

Table 27. Contracted feasibility studies for polyester fibres

Fibres	*Annual capacity (thousand tonnes)*	*Output*	*Cost (million DM)*
Pure terephthalic acid	75	Pure terephthalic acid	260
Polyester and staple fibres	40	Staple fibre	60
Polyester filament yarn	25	Polyester yarn	128
Melted polyester	85	Melted polyester	100
Acrylic	110	Acrylonitrile and acrylic threads	147 and 220

Source: AIDMO, 1989.

Table 28. Contracted feasibility studies for engines and engine parts

Product	Annual capacity (pieces)	Demand (pieces)		Use	Cost (million $)	IRR (%)	Employment (thousands)
		1997	2005				
Diesel engines	42 000	40 000	92 000	Water cooled diesel engines	274	20	873
Diesel engines	57 000	55 000	126 000	Water and air cooled diesel engines	298	12	2 492
Power starters and generators	517 000	500 000	800 000	Power starters	80	10	455
Gaskets	414 000	1.2 million	1.6 million	Gaskets for diesel engines	15	30	160
Pistons	414 000	1.1 million	1.9 million	Pistons for diesel engines	20	20	160
Piston rings	2.6 million	2.4 million	3.7 million	Piston rings for diesel engines	106	11	298
Valves	1.5 million	4.3 million	6.4 million	Valves for diesel engines	16	13	66
Fuel injection pumps	57 000	530 000	790 000	Fuel pumps for internal blast engines	55	39	335
Injectors	364 000	5.3 million	7.2 million	Injectors for internal blast engines	37	34	323
Water pumps	300 000	179 000	310 000	Water pumps for internal blast engines	18	8	89
Bearings	2.4 million	8 million	1.7 million	Inputs to diesel engines	35	9	126

Source: AIDMO, 1989.

What is needed is a reversal in the structure of ownership in favour of the private sector. At present, government ownership and finance of joint projects accounts for 48.8 per cent of total capital, followed by mixed private/public finance (29.9 per cent) and the private sector (21.3 per cent). Once the enabling environment becomes prevalent at the country and regional levels, the private sector will respond to the stimulus and assume its envisioned role. What is needed is to generate confidence in macroeconomic policies and to establish a strong financial sector with the competence and ability to compete with external financial institutions in mobilizing local and regional funds. When the private sector successfully undertakes joint investment efforts, governments can increase the levels of investment channelled to upgrading the physical infrastructure, which will in turn enhance the performance of the private sector.

Macroeconomic imbalances and implications of adjustment for industry

All Arab countries have experienced to one degree or another an artificial appreciation of their local currencies as a result of the windfall gains that accrued from the petroleum boom between the mid-1970s and the mid-1980s. In response to the sudden inflow of foreign exchange from petroleum exports, workers' remittances or related transfers, the balance of payments of Arab countries became excessively dependent on a few large but volatile sources of income, which created an overvaluation of domestic currencies and a strong bias against tradeables other than petroleum. In practical terms, this meant that the cost of production in domestic manufacturing became too high relative to competitive international prices, discouraging production for the domestic or export markets since it became cheaper to import many commodities and local products lost their competitiveness. A related problem was temporary skill shortages in those Arab countries with a significant manufacturing sector (for example Egypt in 1975-1985) owing to labour migration to the oil-exporting countries and the corresponding increase in real wages, which also raised costs of production in manufacturing and reduced competitiveness.

In spite of the unprecedented flows of foreign exchange from petroleum and labour migration, many Arab economies proceeded to borrow massively to implement ambitious programmes in infrastructure, in heavy industries and in agricultural expansion, expecting that a continuation of the boom in the petroleum market would maintain their creditworthiness. However, the sharp reversal oil prices has multiplied the debt-servicing problem of most Arab countries, with total Arab foreign debt estimated at $140 billion in 1993. Macroeconomic imbalances, which became increasingly serious since the mid-1980s, have forced many governments to implement comprehensive economic reform and structural adjustment programmes. Stabilization has been the easier component of such programmes in most countries, which manipulate exchange rates, interest rates and budget expenditures so as to reduce internal and external deficits and bring down inflation. Structural adjustment is a much more complex process that entails reforms in both the incentives and institutional frameworks and will hopefully bring about a much-needed reorientation of the manufacturing sector, putting it on an efficient and sustainable growth path based on each country's resource balance, on its potential to attract domestic savings into viable investment opportunities and to shift a significant proportion of its industrial output from domestic to export sales.

Liberalization of the incentives structure in each economy involves getting prices right-reflecting international prices and opportunity cost—so that domestic producers restructure their investments and revise their product mix in the face of a lower level of protection, a reduced bias in favour of import-substitution, less distortion in the cost of intermediates, reduced tariffs and more transparency for public enterprise operations. The liberalization and revision of the incentive structure will gradually eliminate those industries that do not enjoy a comparative advantage and were only able to produce behind high levels of protection. Moreover there will be a parallel displacement of such industries by the more competitive export-oriented ones. The elimination of price distortions is equally important in the markets for factors of production: capital, labour and foreign exchange. Domestic interest rates have long been too low (and often negative in real terms), and increasing them will correct the bias that has favoured excessive capital intensity in production techniques and will stimulate the adoption of new technologies that save capital and are more competitive internationally. Economic reform and structural adjustment programmes are also working to reduce real wage rates, especially in labour-abundant economies whose industries will benefit from the restoration of equilibrium wage rates and competitive labour costs. Exchange rate liberalization is perhaps the most important means of solving the problem of overvaluation, shifting the balance of incentives away from non-tradeables and towards tradeables (especially manufacturing investment and output) and in favour of the more competitive manufacturing subsectors both in the import-substituting and export-oriented industries.

As regards institutional structure, many Arab economies suffer from overcentralization and bureaucracy, from the absence of a clear and consistent regulatory framework and from poor enforcement of laws and regulations. Those deficiencies make it harder to attract domestic and foreign investment in the manufacturing sector and place unnecessary burdens on investors, producers and exporters. Institutional reform is an essential component of successful economic reform and structural adjustment programmes and will often need to be complemented with additional measures that are tailored to each country's conditions, including the revision of legislation concerning labour and capital markets, banking and finance, property rights, the regulation of monopolies and the autonomy and accountability of public sector enterprises. Successful decentralization and deregulation is especially important for economies that were once socialist-oriented and is the key to reducing the transaction costs incurred by industry and hence improving their overall performance.

Macroeconomic policy changes imply that industry, as one sector of the economy, will be exposed to new opportunities and challenges, and one of the most consequential variables influencing its future path will be the levels of investment expenditure.

Generally speaking, investment trends have witnessed several fluctuations over the past two decades. During the boom era, the average share of industrial investment in the total investment of Arab countries was 19.5 per cent. The importance of industrial investment varied, from countries with more industrial experience (Egypt, 28 per cent) to countries with less experience (Kuwait, 1.2 per cent). However, following the collapse of oil prices, the ratio of total investment allocated to industry remained constant or decreased, particularly for non-GCC countries. Planned investment in the industrial sector in Jordan, for example, decreased 50 per cent during the second half of the 1980s (UNIDO, 1990).

Economic policy reform measures are expected to alter this downward trend in investment levels. The reduction of government budget deficits, revision of interest rates and efforts to bring down inflation (the average inflation level was 11.6 per cent for Arab countries between 1990 and 1992, excluding Iraq and Kuwait) are expected to increase stability and business confidence and raise investment levels, which reached $112 billion in 1992. For non-GCC countries, domestic savings managed to cover only 55.5 per cent of total investment expenditure, implying that this group of Arab countries has to continuously resort to external sources of finance to cover investment requirements. Egypt, Morocco and the Syrian Arab Republic face the greatest difficulty in meeting their domestic investment requirements, as measured by the domestic savings coverage percentage (Joint Arab Economic Report, 1993), and since the availability of foreign loans and grants is diminishing, attracting FDI becomes crucial (to date TNCs have contributed $2 trillion in FDI).

Liberalizing the trade and exchange rate regimes is expected to facilitate the transformation of protected domestic industries into competitive export industries. Those that fail to restructure will ultimately be displaced by more competitive manufactured imports. The elimination of non-competitive industries is expected to run parallel to the creation of other industrial ventures that utilize the Arab comparative advantages (labour-intensive industries in labour-surplus economies and energy-intensive industries in oil-exporting economies), and benefit from the revision of exchange rates. Such reform measures are expected to enhance the competitiveness of manufactured exports and attract potential investment resources to benefit from a growing market for manufactured exports.

Other reform measures that are expected to have a significant impact on the structure of Arab industry are those relating to an increase in private sector investment and ownership. Privatization efforts, particularly in Arab economies with sizeable public enterprises, have been a key feature of economic reform. Egypt was the first Arab country to experiment with economic liberalization following the inception of its Open Door economic policy in 1974. Privatization in Egypt advanced in a piecemeal manner, starting in 1987 following legislation that allowed for divestiture to progress. In 1991 and 1992, the Government of Egypt privatized more than 2,000 small local government enterprises worth about LE 40 million. Factories and assets of larger public enterprises were sold for LE 1.5 billion. In 1992/93, assets worth LE 1.8 billion were put up for sale and a third batch of privatization candidates, worth LE 9.1 billion, were up for sale in 1993/94. Firms that have been privatized include two bottling companies, one boiler company, a large cement plant and two hotels (Handoussa, 1993).

Parallel to privatization, restructuring efforts intend to retain government ownership of strategic industries, yet within a new institutional context that will allow them more flexibility and autonomy. In 1991, public enterprises in Egypt became subject to a new law (Law 203) subjecting them to the same rules and regulations as private business. This is expected to give public enterprises full autonomy in decisions on output, prices, employment, wages, investment and finance.

One issue that concerns Egypt's privatization programme is whether the absorptive capacity of

the private sector is sufficient to allow divesting at a faster rate. While the book value of Law 203 companies was estimated at LE 77 billion, of which 35 per cent is in industry, by the end of 1990 the capital of large private firms was estimated at only LE 6.9 billion. Another issue is that of the appropriate price tags to be placed when valuing public enterprise assets, with policy makers reluctant to be responsible for valuation decisions. A third issue is whether restructuring and then divestiture is the logical sequence. If internal problems, which include managerial, labour, finance, and debt problems, are to be rectified before the sale of a public venture, this will affect the pace of privatization.

Privatization in Tunisia has been more significant, with most of the assets of large public enterprises in such sectors as metal working, building materials, consumer durables and tourism having been sold off. Additionally, reform measures relating to the public/private divide encouraged the private sector to play a larger role in the economy, reduced the range of price controls and denationalized the cooperatives of the 1960s. The main objective of denationalization has been to disengage the State from as many of the non-strategic industries and businesses as possible. In 1985, new legislation was promulgated, raising the percentage of public ownership sufficient to render an enterprise public from 10 per cent to 34 per cent (Law 85-720), thereby limiting the number of enterprises subject to direct state intervention (Harik, 1992). As in Egypt, the principal obstacle to privatization has been the weakness of the Tunisian entrepreneurial community and the limited financial capacity of the private sector, in addition to the fact that Tunisia has one of the smallest stock markets in developing countries.

In the Arab Mashrek, despite the fact that economies of major Arab oil-exporters have been more liberal and more market-oriented, the role played by the State in the economy in terms of ownership and control has been sizable. For example, the public sector of Saudi Arabia, which has been expanding ever since the oil boom, and entire industries (heavy industry and oil refining) are in the hands of the state. Saudi Arabia, like most oil-exporting countries, has been facing fiscal difficulties owing to the decline in oil revenue so the call for privatization has been gaining ground. The problem of Saudi Arabia is that industries under State control are very skill-intensive, and the Saudi private sector will have to accumulate expertise in this area (Ayubi, 1995).

Privatization as a policy tool is evidently not without problems. Among the factors that hinder such efforts are limited absorptive capacity and entrepreneurial skills, in addition to the only modest ability of Arab financial markets to play the intermediation role for the sale of such ventures. In addition, privatization was at first hampered by the fear of policy reversals: the attitude of the business community was to wait and see. Arab governments have been implementing reforms aimed at creating an investment climate that is stable, predictable and consistent, and the expectation is that once private businesses gain confidence in the system, private investment will pick up at both the country and regional levels. An equally important impediment to privatization has been the government administrative systems. The fact that governments did not take a clear stand on the issue of privatization created debate and resistance within the system itself, reflecting uncertainty and the hesitance of policy makers regarding the pace of privatization. Increased political will and transparency of government policies would promote faster decision-making, both public and private, increasing the speed of ownership changes.

Hopes for increased Arab development aid have limited prospects in the 1990s. GCC countries constitute the core of Arab donors, and their own resource problems will limit their abilities to expand total aid. Arab economic aid worldwide increased from $7.7 billion to $31.9 billion during the 1970s, then declined to $15 billion by the beginning of the 1990s. Recipient Arab countries have received 59 per cent of these amounts, with Egypt, Jordan, Morocco, Sudan and Syrian Arab Republic receiving 75 per cent of the total. Arab industrial sectors received 18 per cent of total Arab aid until the end of 1992 (Joint Arab Economic Report, 1993). Arab aid is directly linked to oil revenues, and whereas it is expected to continue, its magnitude will be highly contingent upon the economic conditions of the donor countries and fluctuations in oil prices.

Major weaknesses of industrial strategies and policies

Non-oil Arab countries have mostly pursued import-substituting industrial strategies and have failed to design effective industrial policies that respond to the rapid pace of technical progress and changing market conditions at the global level. The following are main problems faced by manufacturing industry:

- Weak technological base and full dependence on imported technology and turnkey projects from advanced countries. Education and training have been deficient in the industrial sector. R&D expenditure has been low, fragmented and isolated from industrial sector needs.

- Lack of coordination between the educational system, the labour market and industrial development. Effects on unemployment, the loss of skilled personnel due to emigration and labour productivity.
- Concentration of industrial investments in upstream activities with limited value added that do not benefit employment or revenue generation. Transformation of natural resources (energy, phosphates, cotton) into intermediates with little further use in downstream activities. A side effect is vulnerable position on international markets.
- Little investment in expanding and strengthening industry because of low revenues from public investments and the difficulty of attracting private capital (domestic and foreign).
- Absence of export orientation. Industrial imports far surpass industrial exports. As a result of import substitution strategy, industrial expansion has a negative impact on balance of payments.
- No promotion of selected subsectors as nuclei for future growth. Industrial policy fails to consider dynamic comparative advantage.
- Lack of success in creating regional markets. Neither specialization nor trade nor intrasectoral cooperation exists in, for example, car assembly or computers. Efforts to establish joint ventures have not been successful as measured by growth rates or market share.

The need for reorientation from import substitution to export promotion

Almost all non-petroleum Arab countries have long pursued import substitution investment (ISI) policies, which are now experiencing diminishing returns for a number of reasons:

- Domestic markets cannot grow as fast as the production capacity of new and existing enterprises. In contrast, outward-oriented industry does not suffer constraints from the limitation of markets.
- Expansion of industries along import substitution paths means diversifying into fields that require increasing capital, skill and technology intensities, which are not easily attained.
- The continuation of import substitution beyond the stage where economies of scale and natural advantage (transportation costs) can be reaped means that the country is forgoing the opportunity to specialize in areas in which it has acquired the knowledge and skills with which it can enter foreign markets and is instead diversifying in areas where it has less scope for becoming competitive.
- Persistence of import substitution results in growing import dependency since it means the gradual entry into fields in which the country has less and less domestic resources that are suited to the production of further import substitutes. The experience of several Arab countries shows they have prolonged the import substitution phase beyond the period dictated by economic viability.
- Insulation from global competition has constrained total factor productivity growth, a situation that has very high costs as evidenced by former socialist countries. Not only have most Arab countries pursued import-substitution with vigour until recently, but in many cases import substitution strategies have been combined with a heavy dose of socialist-type central planning, State ownership and bureaucratic control.
- The period of the oil boom is over. Many sectors that are inward-oriented, especially nontradeables such as building materials, and that were expanding rapidly during that period have no further scope for growth. The alternative is reorientation and restructuring.
- Excessive protection leads to serious price distortions, and the greater the departure from a unified level of protection, the greater the relative price distortions. Price distortion, in turn, lead to unintended biases against particular activities, namely those that are oriented to exports and to the production of capital goods and intermediates.

The need for an industrial policy

There is strong evidence that State intervention has played a significant role in the transformation of developing countries that have become NICs. Evidence is also accumulating on the nature of the intervention that has characterized successful growth models and points to special features that are applicable to neither strictly neoclassical nor socialist prescriptions for growth and development. Economists are therefore being forced to reconsider the notion of barriers to competition and comparative advantage and to recognize the role of social and legal institutions in promoting the acquisition and utilization of knowledge and the role of the system of property rights in reducing uncertainty and minimizing transaction costs.

Research is making it clear that dynamic comparative advantage—the key ingredient to successful

industrialization—can only be achieved if enterprises (in the production, trading and other service sectors) can acquire knowledge with sufficient speed and adapt to the rapid change that now characterizes the global economy. Several elements of the structural adjustment and economic reform programmes currently under way in Arab countries will help to redirect industry towards self-sustaining growth. Other elements are needed to enhance technical progress and ensure adequate support to industry during the transition. These can only be provided by a well-designed industrial policy emanating from the government and in consultation with the private sector.

Until recently, governments of advanced market economies believed that State intervention in the industrial sector should be minimal, and they have been against the concept of an industrial policy. Yet as Japan and ASEAN countries have penetrated the global market, even the United States has been instituting new forms of government promotion for technology acquisition, the formation of organizational and management skills and export growth in the manufacturing sector.

In the United States, the Government started industrial extension activities only in 1988. In 1993, Congress passed legislation to appropriate $200 million for industrial extension from the $1.7 billion Department of Defense conversion and reinvestment package. Financial support for the United States Department of Commerce's National Institute of Standards and Technology, which administers industrial extension programmes, is expected to reach $500 million for 1996 and 1997. Federal funding will support over 100 technology extension centres, each equipped with the most modern production tools and providing advanced knowledge of the spectrum of proven manufacturing techniques and technologies, including strategic business planning, total quality management, flexible manufacturing, computer-based production, manufacturing resource planning, statistical process control and just-in-time inventory control.

In the United States also, a group of 19 government agencies, the Trade Promotion Coordinating Committee, chaired by the Secretary of Commerce announced in 1993 a carefully designed National Export Strategy to coordinate export promotion and export financing programmes into a more streamlined, coherent, efficient, responsive and effective government-wide export promotion programme. Key elements of the strategy include locating appropriate agencies (export promotion, trade finance specialists, the Small Business Administration, the Eximbank and others) in one-stop shops, developing a comprehensive export financing counselling/training programme for United States government employees, providing counselling services to exporters and creating strategic commercial plans for each market.

The need to switch from a domestic to a regional orientation

Closely related to Arab countries' import substitution strategies of the past decades is the narrow focus of investment plans on the domestic market in each country at the expense of looking at the larger regional or global market. This strategy has served to proliferate many capital-intensive projects across Arab countries and to increase the dependence of each project on the rest of the world rather than to achieve regional economies, regional interdependence and regional integration. It is not sustainable for a number of reasons:

- The rapid pace of regionalization in the rest of the world means that Arab countries are facing an increasingly aggressive international market, with ever-higher real barriers to entry for non-members of regional blocs.
- Net financial flows to Arab countries from the West (especially Europe and the United States) are declining as a result of the priority placed on responding to the unusually high demand for capital in eastern Europe. Both commercial lending and direct investment are therefore much more limited.
- Arab countries are also threatened with further marginalization in the global market if they do not act cooperatively in response to the ascendancy of exports from the Far East, including the ASEAN countries and China. The share of total developing country exports accounted for by the seven tigers (Hong Kong, Indonesia, Malaysia, Republic of Korea, Singapore, Taiwan Province and Thailand) rose from 21 per cent in 1980 to 46 per cent in 1990.
- The impending peace settlement with Israel will have serious implications for the competitive position of domestic producers even within their own territory. On the one hand, lifting the embargo on foreign firms doing business with Israel means that a large number of multinationals will be tempted to shift their regional base from Arab countries to Israel, diverting significant FDI away from Arab countries and at their expense. Secondly, lifting the embargo on Israeli products means that significant changes in regional trade flows may displace existing intraregional exporters. On balance, it can be expected that Israel's exports to Arab countries will exceed its imports. Although much of this trade diversion may be at the

expense of the ROW exporters to the region, some Arab exporters may also lose part or most of their markets. Thirdly, Israel has expressed an interest in establishing a regional bloc with its immediate neighbours (at least Palestine and Jordan), and whatever the mode of economic integration, this bloc would be stronger than the rest of the Middle East region if the latter remains fragmented. Lastly, one should not ignore the fact that Israel is by far the most advanced economy in the region in terms of its skills and technological base and the sophistication of its industrial structure.

All of the above factors point to the need for Arab countries to pool their resources and take a common stand on a number of issues that concern their industrial development.

The need to adopt a common policy for the protection of the environment

Arab countries have to varying degrees instituted rigorous legislation for the reduction of industrial pollution. In many cases, however, the enforcement of rules on industrial location and relocation and the regulations that require plants to reduce harmful emissions and adopt cleaner production processes have been lax and ineffective. This means, that the environmental burden is inequitably distributed across countries of the region, with the costs of meeting environmental standards carried alone by those who enforce strict standards. Moreover, delays in undertaking environmental investments have negative repercussions not only on human welfare but on the sustainability of a country's natural resources, especially water. Continued neglect of the environment standards in force in developed countries also threatens to result in penalties paid by Arab country exporters to the advanced countries.

Technological progress has recently provided industry with cost-effective capital equipment and management techniques that minimize industrial pollution, and these will only be adopted by individual firms if governments take a firm stand with respect to environmental legislation and support policies to promote investments for a cleaner environment. Training in the application of cleaner production techniques has been shown to result in important reductions in the harmful effects of pollutants in-house (health hazards affecting workers and employees within the factory), reductions in the externalities causing damage to air, soil and water, as well as in significant reductions in unit costs of production as a result of good housekeeping, energy and other raw material savings and decreased waste management costs at the plant level.

A commitment by Arab governments to adopt a common policy package on environmental legislation and its enforcement, opportunity cost pricing of energy and incentives at the national level would lessen degradation of the environment, allocate the burden of waste control fairly among Arab countries and help those industries whose costs of introducing environmental standards are exceptionally high, including large scale energy-intensive industries (e.g. cement and fertilizers) and the small and relatively older plants operating in specific subsectors such as metals and plastics. Incentives could take the form of fiscal measures and direct financial support for enterprises to install cleaner production technologies. On balance, it would seem that the long-term gains to each economy from environmental protection—in the form of higher production efficiency, lower direct and indirect costs of pollution and better access to OECD markets—outweigh the capital costs to entrepreneurs and the financial costs to governments of providing incentives and regulating, monitoring and maintaining the regionally agreed common standards for the protection of the environment.

The achievement of Arab industrial cooperation

Industrial cooperation among Arab countries should not be understood as the flow of grants and financial assistance from the richer countries to finance industrial projects in the poorer countries. Neither should it be seen as a market for selling the surplus output of domestic producers and solving problems of excess capacity on an irregular basis. Nor should it mean the implementation of regional joint ventures that are simply motivated by political consideration and/or by Arab nationalist goals, even though such objectives can boost cooperation. Meaningful and sustainable cooperation starts from the premise that it must serve each and every member's objective of obtaining real economic gains from cooperation, i.e. it should be a non-zero-sum game. Gains include higher commercial profits from equity participation in projects, growing market share for the industry in question, both regionally and internationally, lower costs of operation and technology acquisition and greater leverage in negotiating with transnational corporations.

Where can advantages be reaped by the region and then be distributed among the countries that are members to such regional cooperation? Which industrial subsectors could benefit from regional cooperation?

Lower barriers to intraregional investment flows across Arab countries

The major reason why industrial capital flows among Arab countries have been unusually low is the significant level of institutional barriers, especially in the form of investment licensing, which grants advantages to domestic producers whose technological dependence on the advanced countries naturally tends to favour relations with multinationals from outside the region at the expense of partners in the region. As a matter of fact, the situation has often been one in which it is the multinationals themselves who study Arab markets, identify their choice location and then enter into agreements with individual country partners, public or private.

A large and better-integrated Arab market would mean one in which the tables are turned so that instead of each country competing with its neighbour to attract foreign partners, the multinationals would have to compete among themselves to get a stake in this much larger market where the flow of goods is relatively free. Whatever commercial transactions obtain under this new scenario of competitive cooperation, they are bound to mean lower costs (economies of scale), more competitive prices (in favour of domestic consumers) and larger exports.

The most important gain to be achieved by integration is the higher leverage that any one government or domestic firm would have *vis-à-vis* the rest of the world in its transactions: in purchasing intermediates and technology from giant corporations, in borrowing from the international and national capital markets and in marketing its output in the rest of the world.

Lower barriers to intraregional trade flows across Arab countries

The single most significant constraint to a "normal" flow of trade among Arab markets is the level of tariff and non-tariff barriers, which is presently very high. Although implementation of economic reforms and structural adjustment programmes and the Uruguay Round will result in some tariff reductions by all Arab countries, there is a pressing need for an in-depth evaluation of present structures and levels of protection across Arab countries and their implications, with alternative scenarios that can be proposed to policy makers. This becomes all the more important given the global challenges facing Arab countries on the one hand and attempts by particular Arab neighbours to forge new regional alliances on the other.

As a first step towards regional cooperation in the field of industrial development, Arab countries should strive to give some preferential treatment to

intra-Arab trade, which effectively discriminates in favour of Arab producers in the region. It is often the case that although protocols and agreements have been ratified that give preferential access to Arab manufactures in Arab markets, these agreements have not been enforced. It would therefore be most useful to study the actual implementation status of regional trade agreements and to suggest possible options for expanding the scope of these agreements.

A second step towards regional trade liberalization is to identify a subset of manufactured goods for potential regional coordination/cooperation (see next section). A sequence for trade liberalization that sets a priority on relaxing trade barriers for these goods would then be proposed. In many cases, the existence of tariff and non-tariff barriers in any one Arab country bears no relationship to the operation of domestic industries that require protection and simply discourages the implementation of investment projects that take the larger Arab market as their domestic market.

A third step towards regional trade cooperation is to undertake a sequenced approach in trade liberalization by country group. Analysis of the strengths and prospects of each Arab country *vis-à-vis* each industrial subsector would place that country in a specific category with respect to the speed with which it can undertake trade liberalization. This form of cooperation would be similar to the Flying Geese Model of the successful South-East Asian economies, whereby each country gradually opened up its market for each group of commodities (e.g. processed food, followed by textiles, capital goods, electronics, cars etc.) with respect to its neighbours. This is how ASEAN intra-regional trade grew from a negligible proportion of total international trade to more than one third of it by the early 1990s.

Identification of industrial subsectors for regional cooperation

There are three criteria by which one can judge whether a particular manufacturing subsector is a viable candidate for regional cooperation: opportunities for import substitution with dynamic comparative advantage, opportunities for forward integration into high-value-added products and opportunities for the horizontal integration of existing sectors with a large comparative advantage. The first criterion can be used to select new projects whose feasibility is contingent on taking advantage of the vast Arab market as a single market in situations where economies of scale on the supply side have prevented any one country from making a viable investment in import substitution based on its local market alone. The second criterion can be used to identify new projects whose feasibility relies on exploiting existing manufacturing subsectors whose resource advantage provides the Arab region with low cost intermediates that can be further processed into high-value-added products for the regional and export markets. The third criterion can be used to select existing subsectors for which regional integration along horizontal lines will promote mergers and subcontracting arrangements among firms of different Arab countries; it would enhance productive efficiency, competitiveness and the scope for rapid expansion to meet the demand of a fast-growing regional market, especially in consumer goods.

Import substitution with dynamic comparative advantage

The first criterion is the scope for import substitution at the regional level for products whose import value by the Arab region is significant in both absolute and relative terms to actual and projected levels of regional consumption. In addition, such products must enjoy some of the minimum prerequisite characteristics for medium- and long-term economic viability for production within the region (such as potential for acquiring up-to-date technology, training for appropriate skills). Transport equipment (including passenger cars) is one area where there is great scope for import-substitution industrialization, given the value of total imports (see table 1). Other capital goods that could benefit from expansion are power-generating machinery, office machines and electric power machinery and switch gear (table 29).

Industrial policy at the national and regional levels will be of the utmost importance for successful entry into the regional market of new products and extensive consultation and evaluation will be necessary in choosing specific subsectors within any one sector such as capital goods. Traditional individual-country-based approaches to identifying and planning new projects must be avoided since they focused on such variables as size of the national market, crude estimates of savings for the balance of payments and the employment implications of projects. Instead, evaluation should take a broader view of the prerequisites for efficient operation, and market research should consider the dynamic global aspects and prospects of the market. In addition to the standard variables employed in making project evaluation, careful analysis must be made of the technological, managerial and skill requirements on the supply side, so that investments are not confined to plant and equipment but to human resource development and R&D for

continuous upgrading of skills and sustained technical progress in those areas where the Arab region has decided to concentrate its efforts.

Another traditional bias that must be avoided in selecting the sector most likely to succeed is the notion that backward integration is a necessary condition for successful industrial projects. Economic viability of any one stage of processing is independent of the availability of raw materials and/or processed intermediates used in that process, and this has been empirically verified by the success stories of ASEAN industrialization. The costs and benefits of concentrating on tractors, irrigation equipment or textile weaving machinery will depend far more on the knowledge and skills involved in their production processes and in keeping abreast of innovations and on the value added by these processes than on the domestic production and availability of engines, motors, rubber products, special metals and other components used as intermediates.

Moreover, it will also be important to calculate costs and benefits at international prices and avoid the pitfall of assigning domestic prices that undervalue or overvalue the opportunity cost of inputs and output. This is particularly true of assembly industries in the engineering sector, where a large number of Arab countries have promoted public and private investments based on the high level of tariff protection offered for such products as consumer electronics and passenger cars. In most cases, these projects have negligible or even negative value added and could have been avoided if project evaluation had made use of world prices. In contrast, a large selection of capital goods projects that enjoy considerable value added are ignored because they receive no protection. Appropriate cost-benefit analysis will therefore be essential in identifying from within the category capital goods, transport vehicles and other engineering goods those product groups that lend themselves to Arab cooperative investment for high and sustained rates of return.

Table 29. Imports and exports of selected capital goods by Arab countries, 1992
(Millions of dollars)

Imports/exports	*Non-electrical machinery*	*Electrical machinery*	*Transport equipment*
All Arab imports	10 228	6 057	13 315
Imports from Arab countries	181	120	90
All Arab exports	324	606	322

Note: Countries included are total Near East as defined by UNIDO except for Turkey, Islamic Republic of Iran and Cyprus, which were subtracted from the total. The figures therefore cover all Arab countries except Somalia and Lebanon (where war meant that these figures were not available), Mauritania and Djibouti.

Source: UNIDO, *Global Economic Database*, 1994.

Forward integration into high-value-added products

The second criterion is the scope for vertical forward integration into high-value-added processes for products that enjoy a comparative advantage in both the regional and the international market. Regional cooperation would ensure coordination on the design and size of proposed projects to avoid regional duplication and enhance the advantage such projects can gain from using the larger Arab market as their base for entering world markets. Table 30 illustrates the scope for expanding the production of some selected downstream manufactures, that enjoy the support of a wide resource base, in addition to being energy intensive. A first candidate is the downstream petrochemicals industry, which currently accounts for $9.7 billion of imports into the Arab region, and for which total Arab exports had only reached $5.8 billion in 1992. Likewise, synthetic rubber, iron and steel and other metal products are fields that can benefit from further expansion.

Table 30. Imports and exports of selected downstream industries by Arab countries, 1992
(Millions of dollars)

Imports/exports	*Miscellaneous petroleum and coal products*	*Synthetic rubber*	*Iron and steel*	*Metal products excluding machinery*
All Arab imports	225	1 441	5 846	4 536
Imports from Arab countries	55	54	597	233
All Arab exports	125	58	694	318

Source: Jesus Seade, *The Results of the Uruguay Round: The Uruguay Round and the Arab countries*, Seventh Annual Joint Seminar of the Arab Fund for Economic and Social Development (AFESD) and the Arab Monetary Fund (AMF), 17-18 January 1995.

Many Arab countries, particularly those oil-rich economies that enjoy a comparative advantage in energy-based manufacturing have made vast investments in the primary processing of products from their extractive industries (petroleum and gas) as well as in the secondary stages such as petrochemicals, fertilizers and building materials. This rapid development of the 1980s has created a new physiognomy of the Arab region's industrial structure and paves the way for further successful diversification in the downstream activities of these subsectors. These promise significant value added when undertaken at the optional scale and in conjunction with carefully studied market prospects within the Arab region and in the rest of the world.

As with the first import-substituting category of subsectors proposed for Arab regional cooperation, this second forward integration category offers a broad range of potential candidates for coordinated

investment projects. Again, the two key variables that need to be considered in choosing from among feasible options are the technological and skill requirements on the production side and the rapidly changing configuration of supply and demand conditions on the market side. Several specific proposals for downstream investments have been proposed by specialized bodies, and these proposals should be given careful consideration by Arab governments.

Horizontal integration for competitive expansion

The third criterion is the scope for horizontal integration of existing industries that enjoy current and prospective comparative advantage so as to capture the benefits of restructuring along the regional dimension. The types of benefit to be gained from regionalization are the larger size of market for any one producer, and the related benefits in terms of economies of scale, as well as economies of relocation to take advantage of sourcing for intermediates, labour and industrial services available across the Arab region. Table 31 points to some selected consumer goods that account for significant portions of total imports and that can be expanded so as to allow the existing productive capacities to cater for demand that is currently being met by imports.

Consumer goods industries (food processing, tobacco, textiles and clothing, leather, furniture, pharmaceuticals, cosmetics and various home appliances from the engineering sector) still account for more than half of the Arab region's total value added in the manufacturing sector. Policies of trade protection, price controls and biases that discriminate against small-scale producers (in terms of access to credit, infrastructure, skill formation and training) have all worked to minimize the possibility of raising efficiency, productivity, capacity utilization, rehabilitation, technological catching up and export marketing. Yet all of these industries enjoy a comparative advantage and have good prospects for growth based on a rapidly growing population and incomes within the Arab region as well as prospects for exporting to the rest of the world if policies are put in place to correct for existing biases.

Regional cooperation in this third group of industries will benefit most from the reduction of trade barriers and investment constraints that limit the scope for competition and cooperation among the multitude of firms that operate in these subsectors across the region. By looking at the outcome of regional integration across the European Union, one can estimate that prospects for gains by all members of the Arab regional community would improve in the medium and long term. As trade liberalization proceeds, the process of restructuring and mergers in each subsector is enhanced, raising efficiency in existing production plants and accelerating the growth of competitiveness *vis-à-vis* producers in the rest of the world. This process is especially urgent at a time when the Uruguay Round imposes a strict timetable on the lifting of tariff and non-tariff barriers worldwide.

Table 31. Imports and exports of selected consumer goods by Arab countries, 1992
(Millions of dollars)

Imports/exports	*Pharmaceutical products*	*Processed food*	*Textiles*	*Footwear*
All Arab imports	1 569	26 506	5 233	438
Imports from Arab countries	n.a.	766	266	58
All Arab exports	n.a.	1 161	1 628	245

Source: Jesus Seade, *The Results of the Uruguay Round: The Uruguay Round and the Arab countries*, Seventh Annual Joint Seminar of the Arab Fund for Economic and Social Development (AFESD) and the Arab Monetary Fund (AMF), 17-18 January 1995.

Proposals for regional cooperation

The two most critical constraints to efficient growth of Arab industries have been foreign market access and access to technological advances and innovations. One solution is to insist on the development of indigenous skills and talent to penetrate export markets and to catch up on technology. The other is to take the short cut of inviting transnational corporations that have the most developed marketing networks and that own frontier technologies.

Investment policies

- Arab countries should abandon their now obsolete systems of investment licensing and fully liberalize market entry, except for security-related and other clearly identified sectors, according to a set of commonly agreed criteria. The use of a negative list for sectors that require approval would make the system transparent and reduce the scope for bureaucratic delays and discrimination.
- Arab countries should harmonize their codes to encourage foreign investment rather than compete in matters of tax and other fiscal incentives. Foreign investors should be given the same treatment as domestic investors. The only way in which countries should discriminate against foreign investors is by identifying, according to a clear set of criteria, areas where such investments would be detrimental to indigenous industrial development according to a clear set of criteria.
- Shares of public enterprises should be floated on Arab capital markets so as to activate and develop the region's capital markets, to capture a larger fraction of private savings and to provide enterprises with corporate finance and a measure of market evaluation.
- Each country should combine its privatization scheme while restructuring public enterprises under autonomous management for catching up in growth and development.

Joint venture projects

- Foreign investors should be encouraged to participate in joint ventures with public enterprises. The most suitable organizational structure that can promote the successful establishment of joint ventures is the public or private holding company, which can negotiate from a position of strength the terms of technology acquisition and the plans to penetrate foreign markets. Foreign partners are in fact more likely to prefer to enter joint ventures with public guarantees that reduce risk. TNCs are also known to have become more accommodating to the terms of agreement. Currently, new strategies adopted by TNCs imply greater flexibility in terms of how production is organized across borders. Such strategies allow for stand-alone affiliates engaged in international production to serve a host country or a host region and enjoying a high degree of independence from the parent firm. This allows them to be responsible for most of the activities that comprise their value chain and in some instances to act as self-contained entities. TNCs are also resorting to outsourcing for parts of their value-adding operations and are strengthening their links with their foreign affiliates and with separate firms operating as subcontractors. The popularity of outsourcing is based largely on the cost advantages of a particular host country for a particular component.
- Preparations should be made to launch, in collaboration with a leading transnational, the first pan-Arab product from the engineering industry, perhaps a specially designed car or bus whose specifications meet the needs of the region's climate and terrain. (Poland has entered an agreement with Fiat to produce the first Western car from scratch in eastern Europe, in a joint venture with a Polish public sector car producer). Data show that the Arab imports of transport equipment amounted to $13.3 billion in 1992 (see table 1).

Trade policies

- A comparative study should be undertaken of the trade barriers, tariff and non-tariff, currently imposed by each Arab country on all manufactured products from other Arab countries

and the rest of the world, appraising their impact on intraregional trade and proposing a schedule for the gradual elimination of NTBs and a reduction of tariffs in Arab intraregional trade.

- Arab countries should establish a trade promotion organization that would provide potential exporters and importers with all trade-related services, including producer and product information from a database directory linking up national databases, market trends (regional and international), itemized trade statistics on all Arab countries on a regular basis etc.
- The experience of early successes in establishing Arab trading companies should be evaluated and the prospects studied for creating new ventures, which can take one of the many forms that currently prevail on the global scene.
- The issue of tariffs and taxes on capital goods must be resolved since they discourage investment in the capital goods industry (if tariff protection is low) and pose a significant extra cost to overall investment (if tariff protection is high).

Industrial policy

- Arab countries should together design a plan that develops a number of key industries for which dynamic comparative advantage and growth prospects are expected and in which cooperation would raise the rate of return. Among the industries and subsectors that deserve attention and study are capital goods, downstream petrochemical products, special metals, microelectronics and software. In each of these fields, a number of specific lines can be identified as potential niches.
- Joint R&D programmes with industrial applications can be pursued in such areas as renewable energy, desalinization, building materials, irrigation equipment and biotechnology, which would complement and support the growth of related industrial sectors and provide opportunities for new investments.
- AIDMO's computerized regional reference library should be built up. The library should have information on ongoing R&D throughout the world in all existing industrial subsectors as well as those that have been identified as potential new industries for the future. It should be linked up with national and regional research centres and its use by industry should be promoted.
- Subsectors that qualify for regional integration based on market study (size of domestic markets, regional market and forecast of world demand), regional capacity, world supply forecast and technological aspects should be identified. Various scenarios and time-frames for implementation should be considered.
- Programmes for the development, restructuring and integration of those subsectors that have been identified as deserving regional integration should be designed. Special consideration should be given to the expected life of existing plants and the redeployment of labour. Each programme should include investments for the technical and financial structuring of viable plants, the phasing out of obsolete plants, relocation where necessary and the implementation of expansion projects.
- A computerized directory of regional consultants and consultancy houses by fields of expertise in all services related to industry should be set up.
- The setting up of regional industry-specific state-of-the-art institutes that engage in R&D, training in production, designing, modernization, quality control and market study should be promoted. These institutes would provide consulting services and technical assistance regionally and internationally and would act as a major support for training technical staff in each industry in the region.
- Industrial skills should be upgraded by paying special attention to training. Industrial training is one of the main areas that would benefit from cooperation among Arab countries, at both the regional and sub-regional levels, owing to the large number of specialized training institutions and in-plant training programmes in the region. The occupational categories that are essential to industrial development include managers, scientists, technologists, engineers, supervisors and technicians. At the same time there is also need for trained support personnel in engineering design, production technology, testing and quality control.
- The assessment of human resource capabilities in the region undertaken by AIDMO indicates that there is an urgent need to develop training programmes on a regional or subregional level in a number of areas: training of skilled and semi-skilled workers, training of middle management, short-term training courses for high level management and industrial consultancy and engineering services training programmes. Accordingly, it has been proposed that the special programme will work towards

establishing a network between training centres to facilitate joint training programmes and towards strengthening or expanding the capabilities of existing centres.

Environmental policy

A commitment by Arab governments to adopt a common policy package on environmental legislation and its enforcement, opportunity cost pricing of energy and incentives at the national level would lessen degradation of the environment, would allow for sharing fairly the burden of waste control among Arab countries and would help those industries whose costs of introducing environmental standards are exceptionally high, including large-scale energy-intensive industries (e.g. cement and fertilizers) and the small and relatively older plants operating in subsectors such as metals and plastics. Incentives can take the form of fiscal measures and direct financial support for enterprises to install cleaner production technologies. On balance, the long-term gains to each economy from environmental protection—in the form of higher production efficiency, lower direct and indirect costs of pollution and better access to OECD markets—would outweigh the capital costs to entrepreneurs and the financial costs to governments of providing incentives and regulating, monitoring and maintaining the regionally agreed common standards for the protection of the environment.

Programme of action

The major implication of this report is that while Arab industrial development at the country regional levels has achieved considerable progress, much remains to be done. A coherent and effective action plan should be carefully elaborated by specialized regional institutions and endorsed by the relevant government authorities, after sufficient intergovernmental consultation.

It is proposed that the first action to be taken is to address the trade-related barriers that have limited the scope for expanding production at the scale needed to cater for the regional market. The gradual elimination of tariff barriers among Arab countries, together with the unification of regional tariffs against imports from outside the region, will provide the required environment for expanding production catering for the Arab market. A possible starting point would be continued liberalization of trade among Arab subregional trading blocks, which would eventually merge into one large Arab regional market. The target is to boost regional trade in manufactures, which will in turn provide the demand-pull for manufacturing output, and the idea of promoting subregional integration simultaneously with regional integration is that benefits of each would be mutually reinforcing.

The second proposed action is to address the institutional and policy environment facing joint investment so as to promote this channel of cooperation along lines that enhance the region's comparative advantage in the manufacturing sector and its rate of growth in employment, value added and exports. To date, the experience of joint cooperation in industrial projects has suffered from a number of impediments to efficient operation. Problems faced include the insufficient harmony of legislative and institutional frameworks across Arab countries, the inadequacy of the physical infrastructure, shortages of raw materials and trade barriers between countries of the region that hamper the marketing of output of joint projects.

The third action should aim at creating an enabling environment for increased private investment in industry, by eradicating the difficulties that impede private initiative. A first step towards the achievement of this goal is to follow both a top-down and a bottom-up approach to regional cooperation.

- The top-down approach will focus on regional development organizations that can promote areas with promising potential and make them visible to the private sector. Arab organizations have a comparative advantage in this area, since they can monitor regional capacities, utilize their comprehensive information base and use this knowledge to support private initiative and planning.
- The bottom-up approach is based on revitalizing the role of the private sector, so that national enterprises would engage in joint efforts with their counterparts in other countries and approach regional funds and institutions for financial or technical support. The completion of reform and liberalization programmes in the region is expected to boost private sector confidence in the Arab economies and positively affect the flows of capital that is to be repatriated.

The fourth action that is being proposed is for specialized institutions such as AIDMO to bring their expertise into play in defining technical and economic parameters and determining the critical variables that will guide the choice of fields of cooperation and policy measures for integration. AIDMO should be more active in proposing specific investments to potential private and public investors in sectors and subsectors that deserve further development. It has already identified a number of potential projects* and has prepared detailed feasibility studies and promoted some of them.** The proposed new thrust would attract the capital and entrepreneurship of the private sector to implement the investment projects identified by AIDMO.

*Diesel engines, telephone switchboards, steel, polyester fibres, acrylic fibres, graphite poles, spare parts for the iron and steel industry, cotton yarn glass, engineering structures, power generating machinery, spare parts for the textile industry, iron pellets, textiles, compound fertilizers, fish processing, edible oils, saturated fodder.

**Feasibility studies were completed for nine projects and pre-feasibility studies were completed for synthetic fibres and for diesel engines. For complete coverage of the studies, please refer to AIDMO, Finance of Joint Arab Projects, 1989. For a summary of some selected projects see tables 26-28.

The fifth action is to assign regional specialized institutions such as AIDMO to identify and promote joint projects in areas where there are gaps in supply, as highlighted in this report. Downstream petrochemicals are viable candidates, particularly intermediates used in the production of synthetic fibres and car tires. It has been estimated that by the year 2000, the existing tire industry will need some 158,000 tonnes of synthetic rubber. Another field of production that can benefit from AIDMO's support in promoting joint projects is that of the electricity-related manufacturing industry. Regional production only satisfies 10 per cent of demand for electricity generating, transmission and distribution equipment, which reached $7.1 billion in 1989. Priority candidates are transmission equipment, including intermediate power cables, intermediate power towers, uncovered wires and aerial wire attachments. The production of transformers, distribution panels and generators should also be promoted. Other capital goods can be identified for promotion such as machine tools, where the limited regional production capacity is concentrated in North Africa. More priority should be given to upgrading the potential of the textiles sector to satisfy regional demand, with special attention given to the production of synthetic and blended yarns and fabrics.

The sixth action is the elaboration of a concrete training programme, with existing institutions such as AIDMO playing an important role. Training institutes exist in almost all Arab countries, but what is needed is an evaluation of the training needs of those industries that are earmarked for rapid expansion. This should be followed by making each regional training institute responsible for preparing a well-developed programme in its speciality area, including curriculum development and training of trainers, which could serve the needs of countries in the region.

The seventh action is for regional institutions such as AIDMO to become future-oriented and initiate and propose joint Arab projects in the new growth industries, in skill-intensive and knowledge-intensive fields. With its accumulated knowledge and expertise, AIDMO can assess the situation and compile a package that covers market studies, science and technology and training needs, with the objective of promoting a clear strategy for the region to enter these new areas of production.

In conclusion, the key to promoting enhanced joint regional effort will depend upon the ability to develop new approaches to regional cooperation, within the framework of reform and restructuring, and thus improve the ability of the private sector to assume the lead and push forward the process of regional industrialization.

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