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**INDUSTRIAL DEVELOPMENT REVIEW
SERIES**

QATAR

**Towards Industrial Diversification
of an Oil-based Economy**

Prepared by the
Regional and Country Studies Branch

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QATAR

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PREFACE

This Industrial Development Review is one of a series of country studies prepared by the Regional and Country Studies Branch of the United Nations Industrial Development Organization (UNIDO).

The Reviews present brief factual and analytical surveys of industrial development in developing countries. Such industry-specific Reviews are in demand for a variety of purposes: to provide an information service to relevant sections within UNIDO and other international organizations and aid agencies concerned with technical assistance to industry; to be used as a reference source for financial organizations, public and private industrial enterprises, and economic research institutes in developed and developing countries; and to serve as a handy, useful information source for policy-makers in developing countries. The Reviews do not represent in-depth industrial surveys. With an exclusive focus on industry the Reviews present information and analyses on the broad spectrum of the industrial development process in the countries concerned in a condensed form.

The Reviews draw primarily on information and material available at UNIDO headquarters from national and international sources as well as data contained in the UNIDO data base. Generally, specific field surveys are not undertaken. The presentation of up-to-date information on sub-sectoral manufacturing trends is usually constrained by incomplete national data on the industrial sector. To supplement efforts under way in UNIDO to improve the data base and to monitor industrial progress and changes on a regular basis, it is hoped that the relevant national authorities and institutions and other readers will provide comments and further information. Such response will greatly assist in updating the Reviews.

The present Review was prepared on the basis of information available at UNIDO headquarters by mid-1987. It is divided into two rather distinct parts. Chapters 1 and 2 are analytical in character, giving first a brief overview of the country's economy and its manufacturing sector and then a more detailed review of the structure and development of its manufacturing industries. Chapter 3 contains various kinds of reference material on policy statements relevant to industrial development, on the more important governmental and other institutions involved in industrial development and on the country's natural, human and financial resources for industrial development. The Review also contains relevant basic indicators and graphical presentation of manufacturing trends as well as statistical and other annexes.

It should be noted that the Reviews are not official statements of intention or policy by governments nor do the views and comments contained therein necessarily reflect those of the respective governments.

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BASIC INDICATORS 1

The economy

GDP	:	QR21,431 million (1987) ^{a/}					
Population	:	310,000 (1987), ^{a/}					
		- 25 per cent Qatari nationals,					
		- 75 per cent expatriates)					
Area	:	11,000 square kilometres					
Density of population	:	28 persons per square kilometre					
<u>GNP per capita</u>	:	\$20,000 (1987)					
GDP growth rate (per cent)	:	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u> b/
		11.4	0.8	-2.9	-4.1	-12.0	4.0
Sectoral origin of GDP (percentage)	:			<u>1981</u>	<u>1985</u>		
		Oil sector:		63.9	43.2		
		Non-oil sector		36.0	56.8		
		of which:					
		Agriculture		0.6	1.0		
		Manufacturing		5.0	7.1		
		Construction		5.9	6.3		
		Other		24.5	43.3		
Rate of inflation (per cent)	:	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>		
		5.7	2.7	1.1	6.0		
Currency exchange rate (QR equivalents to \$1)	:	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
		3.6	3.6	3.6	3.6	3.6	3.6

a/ Estimate based on projected growth rate for 1987.

b/ Estimate.

EXPLANATORY NOTES

Regional classifications, industrial classifications, trade classifications, and symbols used in the statistical tables of this report, unless otherwise indicated, follow those adopted in the United Nations Statistical Yearbook.

Dates divided by a slash (1986/87) indicate a crop year or a financial year. Dates divided by a hyphen (1986-1987) indicate the full period, including the beginning and end years.

References to dollars (\$) are to United States dollars, unless otherwise stated.

Totals may not add precisely due to roundings.

In Tables:

Three dots (...) indicate that data are not available or not separately reported;

Two dashes (—) indicate that the amount is nil or negligible;

A hyphen (-) indicate that the item is not applicable.

Basic indicators and graphical illustrations of manufacturing trends contained in this Review are based on data sourced from the UNIDO data base, international organizations, commercial and national sources.

The following abbreviations are used in this document:

EEC	European Economic Community
GCC ^{1/}	Gulf Co-operation Council
GDP	Gross domestic product
GNP	Gross national product
IDTC	Industrial Development Technical Centre
ISIC	International Standard Industrial Classification
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
MVA	Manufacturing value added
NGL	Natural gas liquids
OPEC	Organization of Petroleum Exporting Countries
QAFIC	Qatar Fertilizer Company
QAPC	Qatar Petrochemical Company
QASC	Qatar Steel Company
QGPC	Qatar General Petroleum Corporation
SITC	Standard International Trade Classification
QR	Qatari Riyal

^{1/} Member states of GCC consist of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates.

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BASIC INDICATORS 2

Resources

Production of agricultural crops (1985) (in tonnes)	:	Cereals (1,539)						
		Vegetables (17,091)						
		Root beets (54)						
		Fruits and dates (7,681)						
		Forage (50,303)						
Oil reserves (1987)	:	3.3 billion barrels						
Gas reserves (1987)	:	100,000 billion cubic feet						
Crude oil production (million barrels)	:	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
		172.5	151.5	121.2	98.2	119.1	105.9	121.4
Production of petrochemicals ('000 tonnes)	:							
		<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>		
Ethylene		133	127	164	205	185		
Polyethelene		111	120	144	149	153		
Sulphur		9	13	19	32	28		
Water production from desalination plants (1984)	:	43 million gallons a day, with storage capacity of 70 million gallons a day						
Other resources (1987)	:	Gypsums (12 million tonnes) <u>a/</u> , celestite deposits (64,000 tonnes) <u>a/</u>						

a/ New discoveries during the 1985-1986 geological and seismological survey.

BASIC INDICATORS 3

Foreign trade and balance of payments

Exports (1987) ^{a/}	:	\$2,128 million				
Composition of exports (1987)	:	Oil (90 per cent)				
		Non-oil (10 per cent)				
Direction of exports (1985)	:	Japan (60.2)				
(percentage)		France (9.5)				
		Singapore (4.0)				
		Italy (2.3)				
		Netherlands Antilles (2.3)				
		Netherlands (2.2)				
Imports (1987) ^{a/}	:	\$1,100 million				
Composition of imports (1985)	:	Food and live animals (15.2)				
(percentage)		Chemicals (5.2)				
		Machinery and transport equipment (39.0)				
		Other (40.6)				
Origin of imports (1985)	:	Japan (15.8)				
(percentage)		U.K. (15.8)				
		Federal Republic of Germany (9.2)				
		France (9.0)				
		USA (6.1)				
		Italy (5.1)				
		Other (39.0)				
Balance of payments	:	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986^{a/}</u>	<u>1987</u>
(current account: \$ million)		410	830	413	-637	-22

a/ Estimate.

BASIC INDICATORS 4

The manufacturing sector

Value of manufacturing output (1985)	:	QR1,660 million
Share of manufacturing output in non-oil GDP (1985)	:	12.5 per cent
Total GDP (1985)	:	7.1 per cent
Composition of MVA (1984) (percentage)	:	Food, beverages and tobacco (3.1) Textiles, wearing apparel and leather industries (3.2) Paper and paper products (4.7) Chemicals, petroleum, coal, rubber and plastic products (61.4) Non-metallic mineral products (10.9) Basic metal industries (8.0) Fabricated metal products, machinery and equipment (4.4) Other manufacturing (4.3)
Index of manufacturing output (1981 = 100)	:	<u>1983</u> <u>1984</u> <u>1985</u> 120.2 143.6 147.9
Production of major manufactures (1985) ('000 tonnes)	:	Ammonia (744) Urea (640) Organic fertilizer (22) Ethylene (185) Polyethylene (153) Sulphur (28) Steel (513.7) Cement (353.8) Flour (25.7)

BASIC INDICATORS 5

Trade in manufactured goods

Exports (1985):

Condensate gas	1,370,200 barrels
Butane	22,831.5 tonnes
Propane	31,091.5 tonnes
Ammonia	QR116.7 million
Urea	QR332.8 million
Sulphur ^{a/}	QR11.1 million
Low density polyethylene	QR266.6 million
Ethylene	QR29.2 million
Oxide iron ore fines	QR1.0 million
Concrete reinforcing bars	QR395.6 million

Imports (1985):

Machinery and transport equipment	QR1,622.6 million
Beverages and tobacco	QR91.0 million
Chemical and related products	QR214.0 million
Manufactures classified by materials ^{b/}	QR799.5 million

Qatar's trade with GCC countries (as per cent of imports)	:	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
		3.95	3.19	2.99	3.35	3.05

a/ 1984.

b/ SITC 6.

BASIC INDICATOR 6

Inter-country^{a/} comparison of selected indicators

	Unit	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	United Arab Emirates
I. DEMOGRAPHIC INDICATORS^{b/}							
Area	'000 sq.km.	0.669	18	300	11	2,150	84
Population (mid-1985)	millions	0.417	1.7	1.2	0.315	11.5	1.4
Population growth (1973-85) (average annual growth rate)	per cent	4.6	5.7	4.4	6.8	4.8	10.2
II. ECONOMIC INDICATORS^{b/}							
GDP (1985)	\$ million	4,040 ^{c/}	21,710	8,820	5,110 ^{c/}	95,050	28,120
GDP growth rate (1980-85) (average annual growth rate)	per cent	5.2 ^{d/}	0.3	4.0	-9.0	-2.1	-2.8
GDP per capita (mid-1985)	\$	9,420	14,480	6,730	16,270	8,850	19,270
Agriculture (1985)	per cent of GDP	1.0	1.0	3.0	1.0	3.0	1.0
Industry (1985)	per cent of GDP	88.0	58.0	59.0	50.3	56.0	67.0
Manufacturing (1985)	per cent of GDP	21.5	8.0	3.0	7.0	8.0	10.0
Services (1985)	per cent of GDP	11.0	41.0	38.0	41.7	41.0	32.0
Gross domestic investment (1985)	per cent of GDP	27.6 ^{e/}	21.0	30.0	15.6 ^{e/}	31.0	31.0
Exports (1985)	\$ million	2,781	10,992	4,971	3,100	27,917	14,764
Imports (1985)	\$ million	2,796	5,519	3,083	1,152	20,364	6,402
III. Industrial indicators							
NVA (1985) (at 1980 prices)	\$ million	...	1,790	...	...	8,179	2,657
NVA per capita (1985)	\$	...	1,053	...	...	711	1,898
Share of manufactured exports ^{f/} in total exports (1982)	per cent	10.8	21.2	6.3	4.4 ^{g/}	1.0	3.4
Share of manufactured imports ^{f/} in total imports (1982)	per cent	37.2	78.2	74.3 ^{h/}	80.8	77.8	73.2

a/ Member States of the Gulf Co-operation Council (GCC).

b/ Based on the World Bank data presented in the World Development Report 1987 and the World Bank Atlas 1987. It should be noted that the UNIDO data base, United Nations statistics, national statistics and World Bank data base do not always tally precisely and, therefore, discrepancies may be found between Basic Indicators 6, and the text and Tables.

c/ GDP (1985).

d/ GDP growth rate (1973-1985).

e/ 1981.

f/ SITC 5 to 8 less (67 and 68).

g/ 1983.

h/ 1985.

SUMMARY

The economy of Qatar is recovering from the oil price induced recession that severely affected the Gulf economies in recent years. Growth of real GDP was projected at 4 per cent for 1987, compared with a fall of 12 per cent in 1986. It was estimated that oil revenue would rise from \$1,430 million in 1986 to \$1,600 million in 1987. Despite efforts to diversify the Qatari economy, the oil sector continues to be the lynchpin of the economy, accounting for 90 per cent of export earnings and over 80 per cent of government revenues. In the wake of plummeting oil prices, the government's traditional cautious financial management and fiscal policies are currently undergoing a period of austerity.

It is estimated that the oil reserves of Qatar would be depleted by the year 2020. In the face of depleting oil reserves and declining oil revenue, the government is pinning its hopes on the country's abundant gas reserves for expanding the industrial base of energy-intensive heavy industries and for promoting downstream activities. Plans to tap the country's gas reserves took a significant step forward in 1987 with the signing of a contract with Technip of France and Bechtel of the USA to oversee the project on behalf of the Qatar Government Petroleum Corporation (QGPC). The productive life span of the proven gas reserves is expected to last for 200 years.

Qatar Petrochemical Company, Qatar Fertilizer Company (QAFCO), and two National Liquids Gas Plants (NGL₁, and NGL₂) are the major oil and gas-based export-oriented industries. The main manufacturing plants outside the oil and gas sector include the Qatar Steel Company, the Qatar National Cement Factory, and the Qatar Flour Mills Company. The small enterprises specialize in textiles, bakeries, printing, furniture and repair workshops, as well as plastic and general hardware factories. The light industries are geared to meet the local demand. Thus, the industrial sector in Qatar encompasses a small number of giant industrial enterprises and a large number of small quasi-factory type manufacturing activities.

The overall performance of the manufacturing sector in Qatar has been lagging behind the rate at which the country's industrial base expanded along the path of economic diversification. The heavy industries remain vulnerable to the supply of feedstock and to the depressed world demand for their products. Although the financial performance of QAFCO is relatively better, the net profit earned by the Company in 1987 represents a level far below the levels achieved in the preceding years. At present QAFCO is facing difficulties because of the adverse international climate and the glut in the oil market and subsequent reductions in feedstock (as a result of falling oil production in Qatar). In addition to the increased domestic production of fertilizers by Qatar's main importers, India and China, establishment of similar heavy industries in the neighbouring Gulf countries poses a major problem as they try to edge into Qatar's traditional markets.

Feedstock shortages lead to low capacity utilization in the production of ethylene. Sales of ethylene fell by 51.4 per cent in 1985, compared with a 326 per cent increase in sales in 1984. Qatar Petrochemical Company was operating at 55 per cent of its installed capacity in 1985.

Qatar Steel Company sells about 93 per cent of its output to the Gulf region. The Company accumulated loss of \$109 million during 1980-1985; loss in 1985 was estimated at \$13.9 million. Although most of these losses are attributable to interest payments on loans, falling world prices for steel and the slowdown in economic activity in the Gulf region continue to affect the performance of the company.

Qatar Flour Mills Company has a milling capacity of 100 tonnes of wheat per day. The performance of the company during 1980-1985 has been erratic. The automatic slaughterhouse, established at a cost of QR40 million, is primarily intended for meeting local demand for meat. With the exception of slaughtering, preparing and preserving meat and grain mill products, the share of value added in gross output is generally very high, averaging around 60 per cent for the manufacturing sector as a whole. Around 75 per cent of gross addition to fixed assets in manufacturing was in petroleum refineries in 1984 as a result of the establishment of a new 50,000 b/d refinery at Umm Said, giving Qatar a substantial exportable surplus after meeting the domestic consumption requirements of some 20,000 b/d.

Labour productivity (MVA per employee) levels in light manufacturing activities are far below the average for the manufacturing sector. Labour productivity level is the lowest in the manufacture of soap, cleaning preparations and perfumes. The relatively high level of labour productivity in heavy industries reflects the incidence of technical progress and capital intensity that has gone into the productive process in these industries.

One of the operating difficulties, i.e., feedstock shortages, affecting the performance of heavy industries is likely to be removed in the near future as a result of the North Field gas project, which is expected to supply 800 million cubic feet a day of gas to meet domestic demand up to 1989 or 1990; marketed gas output amounting to some 20 million cubic metres a day will be supplied to industrial users. However, Qatar's heavy industries are facing a testing period as the world markets for almost totally export-oriented products continue to be in a state of recession.

Qatari nationals seem to look for long-term potential returns from import-substituting industries and industries producing products for the regional market. Although the current level of inter-regional trade is very low, the regional market seems to open up to products under the terms of the GCC's unified economic agreement, which removes all trade barriers between the member States giving access to an overall market of some 13 million people in the Gulf region.

1. THE ECONOMY OF QATAR

1.1 Recent economic trends

The economy of Qatar is recovering from the shock waves of plummeting oil prices and the resultant sharp fall in oil revenues. Growth of GDP in real terms was forecast at 4 per cent for 1987 against a fall by 12 per cent in 1986. It was estimated that oil revenues would rise to \$1,600 million in 1987, compared with \$1,430 million in 1986.^{1/} Despite the Government's determined efforts to develop a broader industrial base through the establishment of energy-intensive heavy industries, the oil sector continues to be the lynchpin of the Qatari economy, accounting for 90 per cent of export earnings and over 80 per cent of government revenues, and the level of economic activity in general is dependent on the buoyancy of oil exports.

Since 1982, government budgeting has been based on expectations as to how the international market for oil would perform in the coming year. When the budget for 1985/86 was announced in April 1984, the Government opted for a deficit Budget for the third consecutive year rather than cutting back on development projects deemed vital for the long-term economic strategy. The real test of the strategy surfaced when the cushion of surplus oil revenue was threatened to be removed by a dramatic fall in oil revenue in 1986, leading to no formal announcement of the Budget for the fiscal year 1986/87. The Government which has traditionally adopted a cautious approach to economic development and strict monetary control currently faces a period of austerity, the pinch of it falling heavily on expatriate workers and their salaries. A deficit of \$687 million is planned in the 1987/88 Budget. Spending has been set at \$3,356 million, 22 per cent down on the 1985/86 budget. The Budget has been drawn up on the basis of an \$18-a-barrel oil price. The Government is determined to follow a balanced economic path despite the deficit between income and spending.

Qatar is embarking on its most ambitious development project to bring its giant North Field gas into production. It is one of the largest accumulations of non-associated gas in the world, whose productive life span could stretch for as long as 200 years. After more than a year of negotiations, the Government of Qatar signed a contract worth \$70-80 million in May 1987, providing for Technip of France and Bechtel of the United States to oversee the whole project on behalf of the Qatar General Petroleum Corporation (QGPC), including assistance in the commissioning of installations comprising Phase I of the field's development programme. It represents a total investment of

^{1/} This forecast is based on Qatar's OPEC quota of 300,000 b/d and a price of \$18 a barrel (as agreed by OPEC members in June 1987). Qatar has been unable to achieve its OPEC quota since January 1987, when production totalled 289,000 b/d. Output in February averaged 185,000 b/d and in March 180,000 b/d. Qatar is one of the smallest OPEC producers, contributing around 1 per cent of the Organization's output.

\$950 million and is designed to provide the capacity to produce 23 million cubic metre/day of gas. Marketed gas output amounting to some 20 million cubic metre/day will be supplied to industrial users within Qatar.^{1/}

The diversification of the Qatari economy has become a necessity rather than an option as the country's 3.3 billion barrels of proven oil reserves could be exhausted in less than 30 years. Natural gas is Qatar's major asset and the development of gas-based industries turned out to be the country's great hope. The Government is trying to create an economy less susceptible to fluctuations in the oil market.

1.2 Economic structure

The population of Qatar is estimated at around 310,000, of whom about 25 per cent are Qatari nationals. The rest are expatriates. About 80 per cent of the population is concentrated in Doha and its environs. The unprecedented growth of the Qatari economy boosted by increased oil production and prices in the 1970s made Qatar one of the richest countries in the world in terms of GNP per capita which was estimated at over \$20,000 in 1987.

During 1978-1981 rising oil revenues financed an average annual increase of about 30 per cent in budgetary spending, mainly on construction and infrastructural investments. The tempo of economic activity was reflected in an increase of about 18 per cent a year in the nominal value of non-oil output during these years. The rising level of economic activity led to strong inflationary pressures, leading to an average annual increase of about 8 per cent in the cost of living index in the early 1980s. Subsequently, the fall in oil revenues fuelled a huge budget deficit of \$756 million in 1986/87, resulting in a period of difficult economic adjustment for Qatar.

Table 1.1 presents details pertaining to the sectoral contributions of GDP during 1981-1985. The table vividly shows the marked decline in the share of the oil sector, falling consecutively from 63.9 per cent in 1981 to 43.2 per cent in 1985. The value of oil production, measured in current prices, registered a sharp decline in every succeeding year except in 1984 when there was a temporary upsurge. The falling value of oil production reflected a reduction in the volume of crude oil exports which absorbed over 95 per cent of total production in 1985. The falling crude oil flow represents partly difficulties related to falling reservoir pressure. However, the most important explanation is the sustained fall in the world demand for oil, resulting in lower spot market prices and a drift of long-term and direct-deal buyers away from Qatar's offer of crude oil at relatively high prices dictated by OPEC. In 1981, Qatar adopted a production ceiling of 400,000 b/d as part of the OPEC effort to curtail world oil supplies. Production of oil averaged only about 346,500 b/d. Output fell by 19 per cent in 1982 and the downward trend continued uninterrupted except in 1984. The June 1987 OPEC agreement set Qatar's production quota at 300,000 b/d, but actual liftings seem to be below that ceiling.

^{1/} The surplus will be injected into the onshore Dukhan oilfield.

Agriculture and fishing together contribute less than 1 per cent of GDP. Natural vegetation and sheep grazing are confined to the northern part of the country during winter months. Around 13,000 hectares are presently under cultivation which represents a sizeable increase from 6,000 hectares under cultivation in 1973. Fish production amounting to 3,124 tonnes in 1984 met about 75 per cent of the local fish consumption.

In the wake of the decline in oil revenues there have been cuts on government spending on the non-oil sector. A drastic decline of economic activity in the building and construction sector during 1981-1985 reduced the sector's contribution to non-oil GDP from 14.4 per cent in 1981 to 10.7 per cent in 1985. The construction sector's share of GDP (oil and non-oil) seems to have increased from 5.1 per cent in 1981 to 6.6 per cent in 1982, and again 5.8 per cent in 1984 to 6.1 per cent in the following year as the oil sector's share of GDP declined more rapidly than that of the construction activities.

Since 1982 both the number of licences issued and the areas covered for residential buildings declined by 70 per cent. It contrasts with huge investments in construction work during the 1979-1981 period owing to increased oil revenues and budgetary capital.

Qatar's manufacturing sector accounted for 7.1 per cent of GDP and 12.5 per cent of non-oil GDP in 1985. Table 1.1 shows the steady increase in the manufacturing share of GDP in the first half of the 1980s, with the exception of a marginal decline in 1985. It is the reflection of a drastic fall in the oil sector's share of GDP. The manufacturing sector's contribution to non-oil GDP fell from 13.1 per cent to 12.5 per cent over a five-year period ending in 1985, despite a 6 per cent increase in manufacturing output in real terms during 1983-1984 as a result of high production levels in the main downstream oil processing facilities and in the steel and cement plants. The value of manufacturing output fell from QR1,829 in 1984 to QR1,660 in 1985, representing a 9.24 per cent fall (in current prices). Low prices for the heavy industrial products on the world market and a number of operating difficulties have affected the growth of Qatar's heavy industries in recent years. The declining oil production in 1985 reduced the availability of associated gas, with the effect of lowering production capacity in energy dependent industries.

The Government's traditionally cautious financial management has maintained a sound external position even in periods of falling income. The proportion of non-oil exports is rising; it stood at 10 per cent of export earnings in early 1987. As the level of imports is largely related to public sector spending, the fall in imports is expected to continue at 20 per cent in 1987.^{1/} A sizeable proportion of Qatar's cumulative overall balance-of-payments surpluses is held as general reserves of the State. A substantial increase in oil receipts until 1981 resulted in a large building of foreign assets as well as an increase in the Government's deposits with the banking system. Finance, insurance and real estate services accounted for 7.8 per cent of GDP in 1985.

^{1/} External balance projections reported in Table A-2 are consistent with recent estimates. Projections contained in Table A-2 were made in 1985 by the Qatar Monetary Agency.

Table 1.1: Gross domestic product by economic sectors, 1981-1985
(value in millions of QR at current prices)

Economic Sectors	1981			1982			1983			1984			1985			1981 - 1985			
	Value	Share %	Change %	Value	Share %	Change %	Value	Share %	Change %	Value	Share %	Change %	Value	Share %	Change %	Value	Share %	Change %	
1. Oil Sector	20,125	92.92	4.82	15,001	54.22	-23.65	10,790	45.82	-28.02	10,792	44.24	9.06	10,108	43.17	-6.38	51,222	51.22	-15.87	
2. Non-Oil Sectors	11,322	34.01	20.92	12,521	42.72	11.44	12,722	52.17	9.82	12,502	52.74	6.70	12,292	54.82	-2.12	48,777	48.77	4.06	
- Agriculture and fishing	172	0.55	14.67	190	0.69	10.47	195	0.83	2.63	206	0.84	5.64	230	0.98	11.65	7.76	7.54		
- Manufacturing industries	1,491	4.73	58.11	1,391	5.03	-6.71	1,464	6.22	5.25	1,829	7.50	24.93	1,660	7.09	-9.24	6.00	2.72		
- Electricity & water	83	0.26	29.69	89	0.32	7.23	133	0.56	49.44	165	0.68	24.06	173	0.74	4.85	0.49	20.16		
- Building and construction	1,632	5.18	4.88	1,829	6.61	12.07	1,395	5.93	-23.73	1,411	5.78	1.15	1,428	6.10	1.20	5.89	-3.28		
- Trade, restaurants and hotels	1,858	5.89	43.70	1,775	6.42	-4.47	1,587	6.74	-10.59	1,506	6.17	-5.10	1,484	6.34	-1.46	6.29	-5.46		
- Transport and communications	409	1.30	2.51	458	1.66	11.98	450	1.91	-1.75	480	1.97	6.67	478	2.04	-0.42	1.74	3.97		
- Finance, insurance and real estate Services	2,022	6.41	18.59	2,308	8.35	14.14	2,031	8.63	-12.00	1,919	7.86	-5.51	1,830	7.81	-4.64	7.75	-2.46		
- Other services	3,685	11.69	12.48	4,611	16.67	25.13	5,497	23.35	19.21	6,091	24.96	10.93	6,026	25.73	-1.07	19.85	13.06		
TOTAL	31,527	100.00	10.11	27,652	100.00	12.29	23,542	100.00	-14.86	24,404	100.00	3.66	23,417	100.00	-4.04	100.00	100.00	-7.16	

Sources: Central Statistical Organisation.

3/ Qatar Monetary Agency Estimates.

Qatar's economic development in the first half of the 1980s has highlighted the Government's endeavour to reduce the country's dependence on oil. Efforts to develop the massive reserves of non-associated gas in the offshore North Field are under way in order to reduce the country's reliance on oil. Most development has concentrated on downstream oil activities and on the development of capital- and energy-intensive heavy industries in order to boost the manufacturing value added components of exports.

1.3 The manufacturing sector: An overview

The manufacturing sector in Qatar is dominated by downstream oil processing as well as steel, fertilizer and cement production. The manufacturing sector also encompasses a large number of small establishments specializing in textiles, bakeries, printing, furniture and repair workshops, as well as a few food processing, plastic and general hardware factories which account for about one third of manufacturing output. The light industries are geared to meet the local demand for products.

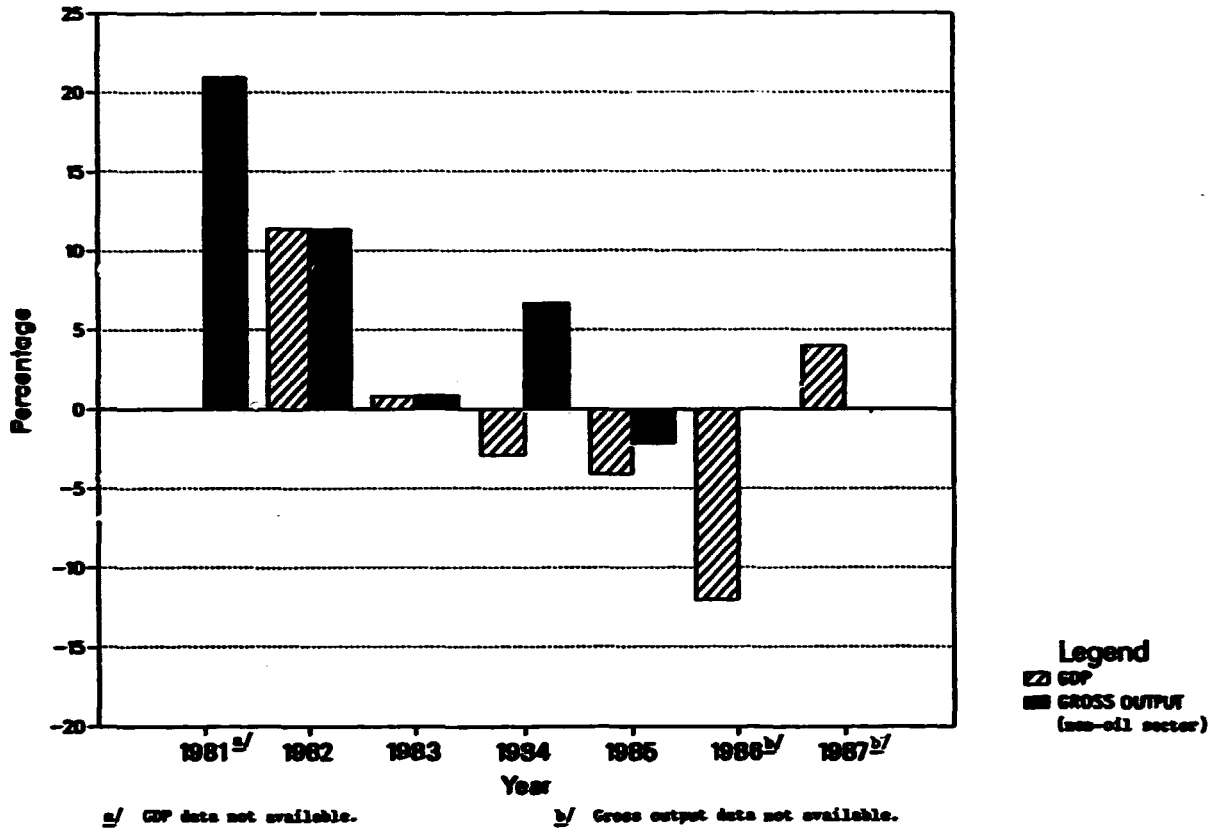
The policy of economic diversification pursued since independence in 1971 has given Qatar one of the most advanced heavy industries in the Gulf. The principal manufacturing industries are based at Umm Said which has now become the country's industrial centre. The majority of small industries are also located there.

The main manufacturing plants outside the oil and gas sector include the Qatar Steel Company, the Qatar National Cement Factory and the Qatar Flour Mills Company. In pursuit of the Government's endeavour to diversify and to expand the country's manufacturing base and to increase the involvement of Qatari nationals in the industrialization process, a technical and advisory authority, the Industrial Development Technical Centre (IDTC) was set up in 1981 to monitor the development of the country's industrial sector. It is presently engaged in promoting the development of import-substituting light- and medium-sized industries. A new law relating to industrialization was enacted in March 1985 with a view to limiting foreign ownership to certain specific industrial projects. Non-Qataris are allowed to own only small businesses and light repair facilities which do not employ more than one person. However, foreign participation is welcomed in industrial projects, with the general provision that the local partner holds at least 51 per cent of the company's capital.

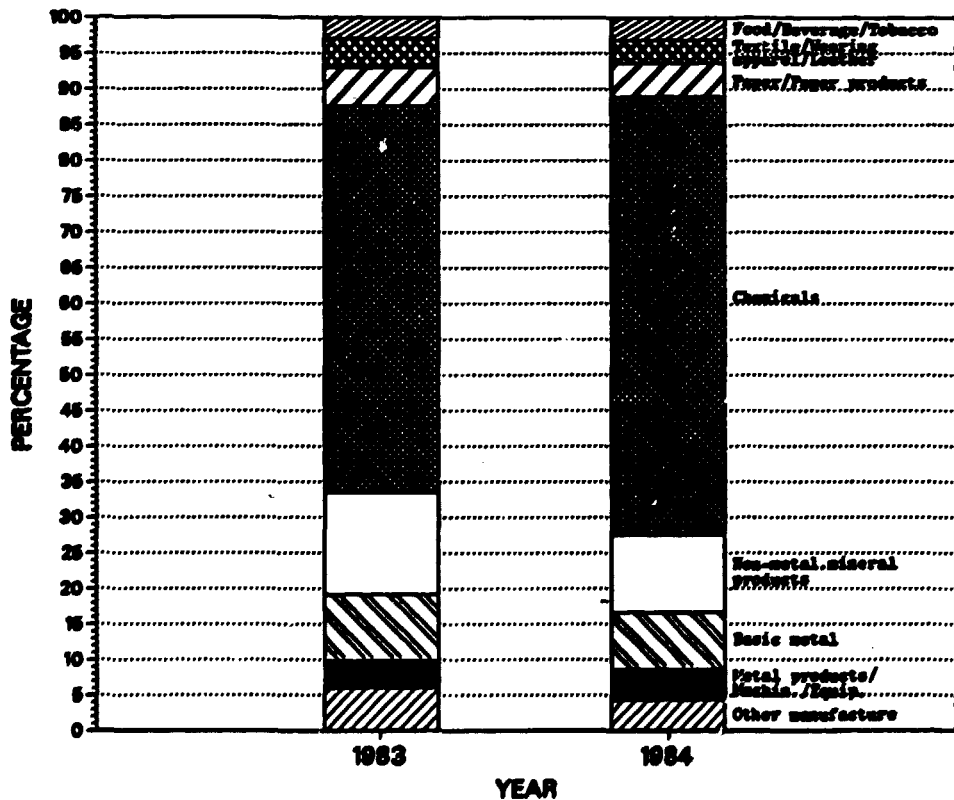
Incentives such as tax relief and extremely low rents in specified industrial zones are offered in addition to free infrastructure and subsidized utilities to enterprises favourably considered by the Industrial Development Technical Centre for fostering the process of industrialization in Qatar.

Two employment surveys conducted in January 1983 and during October 1984 - February 1985 show that Qatar continues to be heavily dependent on expatriate workers who constituted around 80 per cent of the country's total labour force in 1985. However, about 42 per cent of the government employees were Qatari nationals. The government policy aims at minimizing the need for foreign labour.

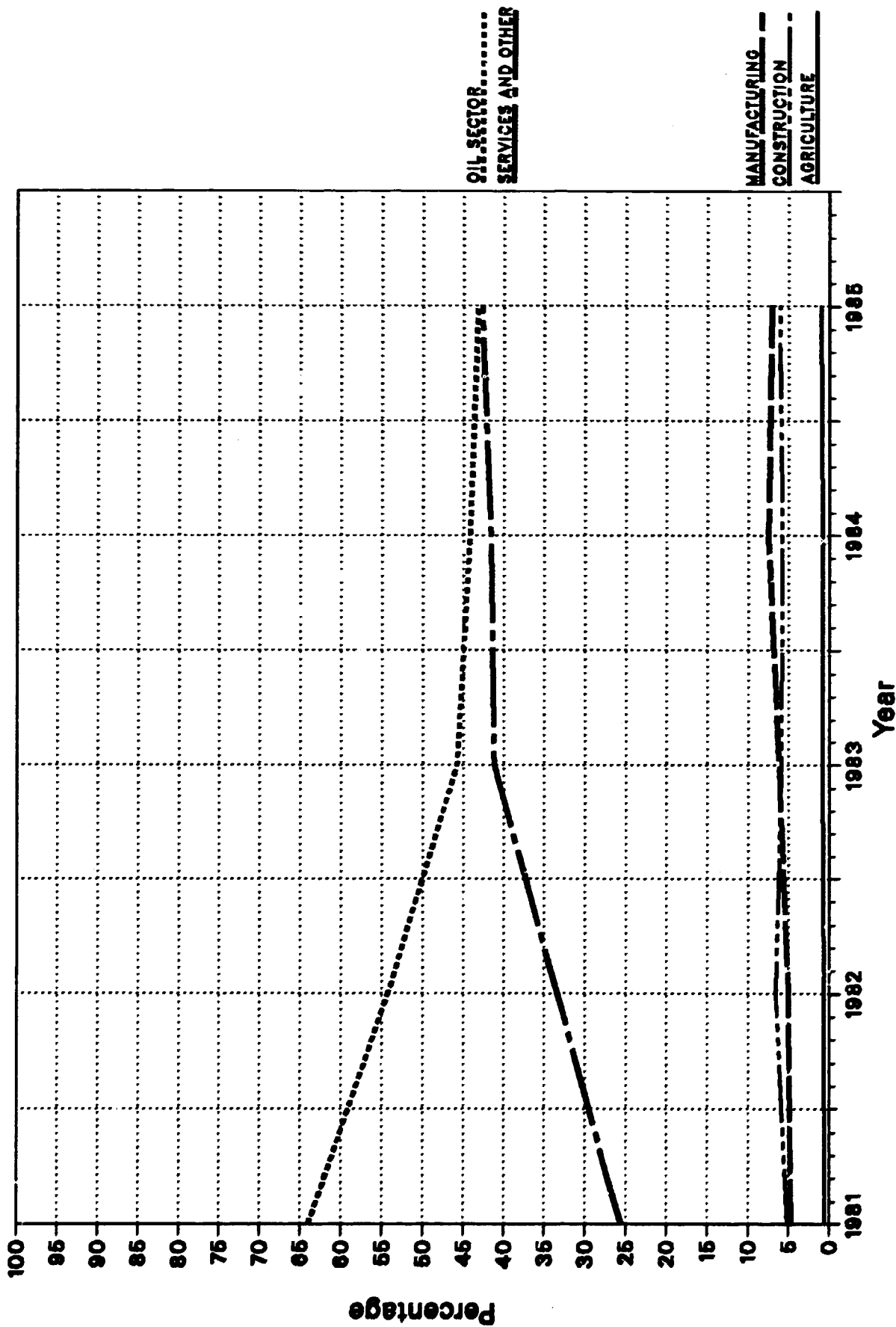
GROWTH RATES OF GDP AND NON-OIL SECTOR GROSS OUTPUT, 1981-1987



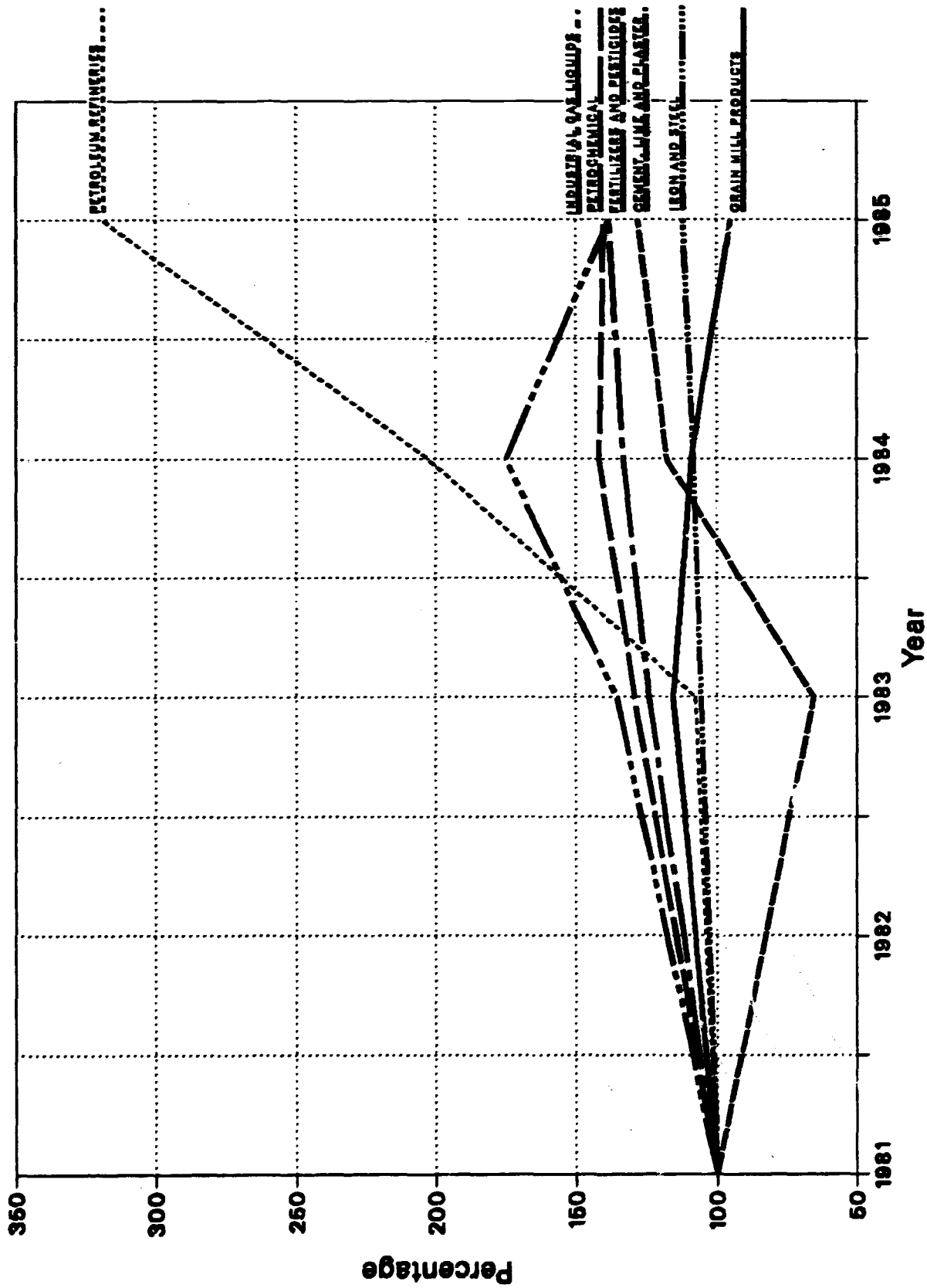
COMPOSITION OF MVA, 1983 AND 1984



DISTRIBUTION OF GDP BY SECTOR OF ORIGIN, 1981-1985 (at current prices)



PRODUCTION INDICES OF PUBLIC AND MIXED ENTERPRISES, 1981-1985 (1981=100)

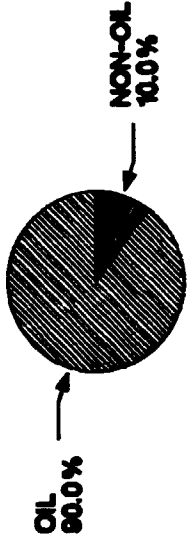


EXPORTS AND IMPORTS

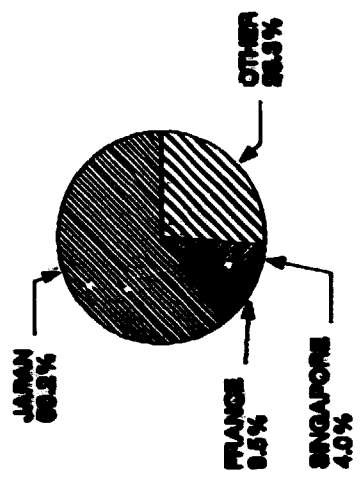
SHARE OF MANUFACTURES IN TOTAL EXPORTS, 1983



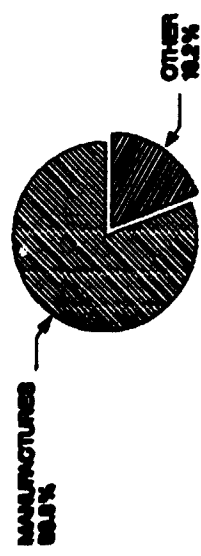
COMPOSITION OF EXPORTS, 1985



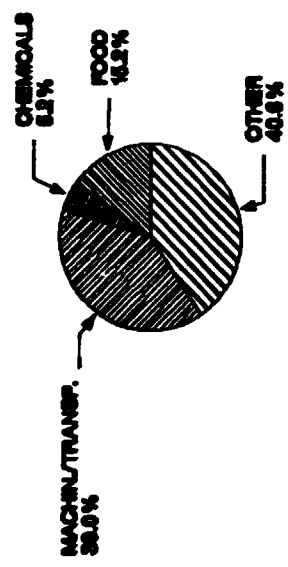
DESTINATION OF EXPORTS, 1985



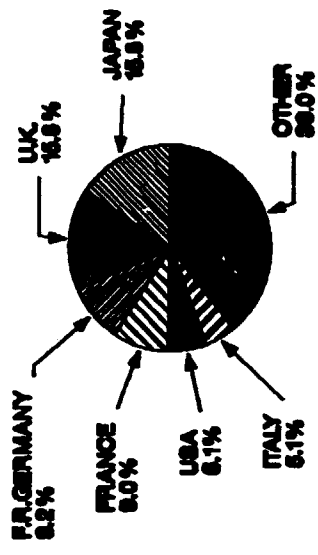
SHARE OF MANUFACTURES IN TOTAL IMPORTS, 1982



COMPOSITION OF IMPORTS, 1985



ORIGIN OF IMPORTS, 1985



2. STRUCTURE AND PERFORMANCE OF THE MANUFACTURING SECTOR

2.1 Growth and structural change

The growth of the manufacturing sector in Qatar is closely linked to a series of comprehensive feasibility studies from which several industrial projects emerged.

Among Qatar's main oil- and gas-based industries, the export-oriented Qatar Fertilizer Company (QAFCO) was established in 1969 with a capital of QR57 million which was increased to QR100 million in 1981. Production began at QAFCO's first plant in 1973. To meet the increased world demand, a new plant was added in 1979 to double production to a daily output of 1,800 tonnes of ammonia and 2,000 tonnes of urea fertilizers. Qatar General Petroleum Corporation (QGPC) owns 75 per cent of the company's shares while the Norwegian Company Norsk Hydro owns the remaining 25 per cent. QAFCO produces high-quality fertilizers with a nitrogen content of more than 46 per cent and exports mainly to Asian markets.

Qatar Petrochemicals Company (QAPCO) was established in 1974 by the Qatar Government and CdF Chimie of France with a capital of QR240 million, which was later increased to QR360 million. QGPC owns 84 per cent of the company's shares, while CdF Chimie owns 16 per cent. The petrochemical complex was officially opened in Umm Said on 22 February 1981. QAPCO uses ethane enriched gas from the NGL plants to produce a capacity of 280,000 tonnes a year of ethylene, 140,000 tonnes of low density polyethylene (LDPE) and 46,000 tonnes of sulphur. An organic fertilizers plant was set up in 1977 in association with IDTC.

Table 2.1 shows the physical volumes of output produced by Qatar Fertilizer Company, Organic Fertilizer Factory and Qatar Petrochemicals Company. Following a drop in 1981, production of ammonia increased consecutively until 1985. The same trend of sustained growth is noticeable in the production of urea until 1984, but physical output of urea fell from 734.0 million tonnes in 1984 to 639.6 million tonnes in 1985. Data pertaining to the production of organic fertilizer show wide fluctuations in production levels during 1981-1985. Fluctuations in the production of fertilizer partly reflect its vulnerability to reductions in oil and gas productions levels. Since the plants use gas drawn from the oilfields, their output depends entirely on the level of crude oil production at any given time. Falling fertilizer prices on the world market, competition from new producers and increased domestic production in export destinations, e.g., India, are other major constraints limiting the volume of fertilizer output. Table 2.1 shows that production of ethylene, polyethylene and sulphur has been on a rising trend for most of the past five years. Ethylene production fell in 1982 to 127,000 tonnes, compared with 133,000 tonnes in 1981, but it recovered strongly in 1983 and 1984 to fall again in 1985. Ethylene production has been held back mainly because of a shortage of feedstock. Production figures pertaining to polyethylene and sulphur show a steady rising trend over the period 1981-1985, with an exception of a fall in the production of sulphur in 1985.

Table 2.1: Production of fertilizer and petrochemical products, 1980-1985
(in thousand tonnes)

Company/Product	1980	1981	1982	1983	1984	1985
<u>Qatar Fertilizer Company</u>						
Ammonia	506	447	528	586	632	744
Urea	622	575	662	685	734	640
<u>Organic Fertilizer Factory</u>						
Organic fertilizer	13	21	15	16	15	22
<u>Qatar Petrochemical Company</u>						
Ethylene	...	133	127	164	205	185
Polyethylene	...	111	120	144	149	153
Sulphur	...	9	13	19	32	28

Source: Central Statistical Organization, Annual Statistical Abstract, 6th Issue, July 1986.

The two Natural Liquids Gas Plants (NGL₁ and NGL₂) began production at the end of 1980, marking a new phase in the commercial use of the country's associated gas from onshore and offshore fields. The plants can produce a daily output of 2,370 tonnes of propane, 1,750 tonnes of butane, 1,750 tonnes of natural gasoline and 2,495 tonnes of ethane enriched gas. Since the plants use gas drawn from the oilfields, their output depends entirely on the level of crude oil production at any given time. Natural gas production fell far less sharply than oil production between 1979 and 1983. In 1984, total gas output increased by 17.5 per cent. Towards the end of 1984 the Qatar Liquefied Natural Gas Company (GALINGAS) was set up. Annex Table A-3 shows a marginal decline in the production and marked decline in the utilization of natural gas. Intermittent fluctuations in the production levels are explained by the fluctuations in the supply of inputs to the NGL plants.

Feed to the NGL plants fell by 21 per cent in 1985, leading to an overall reduction of 22.9 per cent in GNL production and a 27.7 per cent reduction in LPG exports.^{1/} If North Field development plans, recently brought on stream, could be completed soon a number of downstream projects could be reactivated. The country currently requires about 600 million cubic feet a day of gas, worth about half of that being used in power/desalination plants where demand is rising at some 10 per cent a year. Other downstream activities are growing, and the the demand is estimated at 500 million cubic feet a day of gas by the year 1990. This poses the question of the practical implementation of development schedule and a three-phase programme planned for the North Field project.

^{1/} See Petroleum Economist, December 1986.

At the beginning of 1984 Qatar had a daily throughput capacity of 62,000 b/d of refined petroleum products following the commissioning of the new 50,000 b/d refinery in Umm Said. The opening of the new refinery halted the imports of petroleum products. QGPC is currently employed in a major programme to set up new distribution facilities both for domestic distribution and exporting surplus products. The programme is to be completed in 1987.

Annex Table A-4 reveals that local consumption of petroleum products, which grew at an annual average of 12 per cent during 1981-1982, rose by only 4 per cent in 1983 when there was a downturn in economic growth. In 1984 and 1985 both production and consumption of most of the petroleum products rose sharply but most of the increase reflected a rise in the new refinery's fuel oil output which was partly reabsorbed into the crude oil flow. Table A-4 indicates the very high proportion of domestic consumption of refined petroleum products.

In addition to oil-related and gas-based industries like fertilizers and petrochemicals, which use hydrocarbons as feedstock, Qatar has developed a broader industrial base by establishing the Qatar Steel Company, the Qatar National Cement Factory and the Qatar Flour Mills Company.

Qatar became the third Arab country to enter the steel industry after Egypt and Algeria, and the Qatar Steel Company is the first integrated factory of its kind in the Middle East; the plant includes units for reception of raw materials, direct reduction, electric arc furnace smelting, continuous pouring, rolling and other facilities. The plant markets its products locally to meet domestic demand of construction industry and exports to the Gulf States. Table 2.2 indicates that the QASCO produced well above its design capacity of 400,000 tonnes a year during 1980-1985.

Among the medium and light industries the Qatar National Cement Company was the first national industry to be established in Qatar. It was formed in 1965 with a capital of QR35 million as a joint venture between the government and private sector interests to exploit local resources of limestone and gypsum. The plant is now capable of producing 300,000 tonnes a year of cement as well as 30,000 tonnes a year of lime. In 1984 the plant produced 259,500 tonnes of cement and 19,100 tonnes of lime. The entire production was sold in Qatar. Table 2.2 shows that physical volume of output of both cement and lime fell to 239,000 tonnes and 17,800 tonnes respectively in 1985 due to increased competition from the United Arab Emirates and Saudi Arabia.

The Qatar Flour Mills Company (QFMC), located in Umm Said, was set up in 1969 with a capital of QR5 million to meet the local demand for flour. The mills include sections for discharge, cleaning, grinding, silos, transport, chemical analysis and packing. The company's facilities have been expanded to include both European and Arab style bakeries with a total production of 3,500 loaves an hour as well as an automatic packing station. The products are distributed in Qatar at subsidized prices. Table 2.2 also gives production levels between 1980 and 1985.

Since the early 1970s the Government of Qatar pursues a policy of determined support for the development of medium and light industries, with considerable success. Among the light industries, an automatic slaughterhouse and Qatar Detergents Company are of particular importance. The results of the industrial survey of 1983 carried out by the Central Statistical Organization were published in 1985. The survey indicated that there were 1,185 manufacturing enterprises in 1983, of which 536 were in textiles, wearing apparel and leather industries and 102 industrial units were engaged in the manufacture of food, beverages and tobacco. Most of the light manufacturing enterprises were in the private sector.

Table 2.2: Production of steel, cement and flour, 1980-1985
(in thousand tonnes)

Company/Products	1980	1981	1982	1983	1984	1985
<u>Qatar Steel Company</u>						
Concrete reinforcing steel bars	453.0	471.8	484.6	467.5	475.4	503.7
Oxide iron refines	37.0	37.2	15.2	65.0	13.5	10.0
<u>Qatar National Cement Company</u>						
Ordinary cement	150.0	188.0	172.0	119.8	243.5	227.7
Sulphate resisting cement	58.0	69.0	57.0	42.3	69.8	107.5
Quick lime	19.0	20.8	20.0	18.4	19.1	18.6
<u>Qatar Flour Mills Company</u>						
Flour No. (A)	17.0	17.0	18.5	17.6	17.8	17.9
Flour No. (B)	5.0	4.0	6.6	7.1	5.7	2.1
Bran	6.0	6.0	5.5	5.4	5.7	5.7

Source: Central Statistical Organization, Annual Statistical Abstract, 6th Issue, July 1986.

Having analysed the emergence of industrial enterprises in Qatar, with particular reference to the physical volume of individual industry's output, the growth trends of industrial products in recent years are examined. Table 2.3 presents the index of industrial production during 1983-1985 (1981 = 100). The production indices cover only government and mixed sectors. The general index of industrial production rose significantly from 120.2 in 1983 to 147.9 in 1985, reflecting the rapid growth of downstream activities in the oil- and gas-based industries. Manufacturers of fertilizers and pesticides, refined petroleum products, cement and iron and steel recorded a steady upward trend during 1983-1985. However, a fall in the physical volume of output of cement and lime as indicated in Table 2.2 is not corroborated by production indices presented in Table 2.3. It is assumed that the discrepancy is on account of the inclusion of sulphate resisting cement, which recorded a 54 per cent increase in volume terms in 1985, under the category of cement in Table 2.3.

After a steep rise in 1984, the index of industrial gas liquids fell sharply in 1985, while that of petrochemicals fell marginally in the same year. Production of grain mill products fell consecutively during 1983-1985.

Table 2.3: Production indices of public and mixed enterprises 1983-1985
(1981 = 100)

Industrial activity	1983	1984	1985
General index number	120.16	143.60	147.88
Grain mill products	115.42	109.16	94.96
Petrochemical manufacturing	129.26	141.83	140.08
Manufacture of industrial gas liquids	135.56	174.99	138.15
Manufacture of fertilizers and pesticides	124.18	133.32	138.30
Petroleum refineries	107.73	202.72	319.07
Manufacture of cement, lime, and plaster	65.54	117.78	127.87
Iron and steel basic industries	105.61	108.59	112.14

Source: Central Statistical Organization.

It is difficult to make an analytical exposition of structural change in Qatari manufacturing as time-series data pertaining to manufacturing value added at the subsectoral level are not available. The Industrial Survey of 1983 reports the value added components of manufacturing sub-sectors according to ISIC two-digit and four-digit industries for the year 1983, while the Annual Statistical Abstract published by the Central Statistical Organization presents value added figures for the same ISIC categories for 1984. Table 2.4 shows that the share of chemicals, petroleum, coal, rubber and plastic products accounted for 54.2 per cent of MVA in 1983 and 61.4 per cent in 1984. Among these categories manufacture of fertilizers and pesticides accounted for 41.0 per cent of MVA in ISIC 35 (two-digit) categories in 1984. In fact, the share of rubber products in MVA is meagre to the extent of being negligible. The major contributing industries under ISIC 35 category are fertilizers and petroleum products. Among other industries, with the exceptions of food, beverages and tobacco (ISIC 31) and fabricated metal products, machinery and equipment (ISIC 38) the share of other industries in MVA declined in 1984. The MVA share of food, beverages and tobacco increased from 2.9 per cent in 1983 to 3.1 per cent in 1984, reflecting the Government's endeavour to promote light manufacturing activities in Qatar. The Government has already implemented a number of vital projects to increase domestic production, with a view to reducing the country's dependence on imported food items. Although there is still a huge gap between local food production and consumer demand, the gap is closing gradually. The Government has implemented a number of projects of which the most important are Qatar National Fishing Company, Qatar General Poultry Establishment, Abu Sarnya Sheep Farm and Qatar Dairy Company. In 1984 meat production increased by 18.4 per cent, dairy production by 6 per cent and fish production by 47.7 per cent. Following a 56.9 per cent rise in 1983, egg production increased by a further 18.1 per cent in 1984.

Table 2.4: Composition of manufacturing value added, 1983 and 1984
(percentage)

ISIC two-digit categories	1983	1984
31 Food, beverages and tobacco	2.9	3.1
32 Textile, wearing apparel and leather industries	4.2	3.2
34 Paper and paper products, printing and publishing	5.2	4.7
35 Chemicals, petroleum, coal, rubber and plastic products	54.2	61.4
36 Non-metallic mineral products except coal and petroleum products	14.3	10.9
37 Basic metal industries	9.4	8.0
38 Fabricated metal products, machinery and equipment	3.8	4.4
39 Other manufacturing industries	6.0	4.3

Source: Industrial Survey 1983, Central Statistical Organization, Annual Statistical Abstract, July 1986.

2.2 Performance and efficiency

The overall performance of the manufacturing sector in Qatar does not seem to have matched the rate at which the country's industrial base expanded along the path of economic diversification. The performance of Qatar's heavy industries remains vulnerable to the supply of feedstock and to world demand and prices for its products. Table 2.5 reports the sales figures of major industrial companies during 1980-1985.

The sales of ammonia and urea manufactured by Qatar Fertilizer Company fell consecutively during 1980-1983, and a turnaround in 1984 was not sufficient to meet the 1980 level. Sales fell by 16.9 per cent in 1985. QAFCO made a profit of QR136 million in 1980, which fell to QR75 million in 1981. Net profit of around QR30 million in the first half of 1985 represented a 4.9 per cent fall over the same period in 1984. Net profits were estimated to have fallen sharply in 1986 because of a drop in products prices on the world market. At present QAFCO is facing difficulties because of the adverse international climate and the glut in the oil market and subsequent reductions in feedstock. With a hope that North Field gas can be used as a feedstock QAFCO is considering the addition of a third plant which would come on stream in 1989. Although QAFCO feels confident about competition from other producers, given the advantages of cheap gas, the company's two basic markets, India and China, set up their own fertilizer industries and this trend looms as a big challenge for QAFCO to find new markets for its products.

Table 2.5: Sales by major industrial companies, 1980-1985
(million QR)

Company and Products	1980	1981	1982	1983	1984	1985
<u>Qatar Fertilizer Company</u>						
Ammonia and urea	592.3	498.6	439.8	416.8	541.7	450.0
<u>Organic Fertilizer Factory</u>						
Organic fertilizer	1.3	0.719	0.661	0.732	0.600	0.9
<u>Qatar Petrochemical Company</u>						
Ethylene	...	37.3	13.2	14.1	60.2	29.2
Low density polyethylene	...	233.6	265.3	336.0	364.2	266.6
Sulphur	...	3.0	3.0	9.8	11.1	15.3
<u>Qatar National Cement Company</u>						
Ordinary cement and sulphate	55.3	75.0	67.7	38.9	52.8	43.3
Quick lime	7.0	7.8	7.2	6.3	6.5	6.0
<u>Qatar Steel Company</u>						
Concrete reinforcing steel bars	536.8	507.3	490.5	457.1	417.2	429.6
Oxide iron ore fines	1.9	5.2	2.0	10.0	2.0	1.0
<u>Qatar Flour Mills</u>						
Flour No. (A)	12.1	12.5	13.3	12.5	12.8	13.5
Flour No. (B)	2.9	2.4	4.0	5.6	6.3	2.1
Bran	2.7	3.8	3.2	3.3	3.4	3.4

Source: Central Statistical Organization, Annual Statistical Abstract, 6th Issue, July 1986.

Table 2.5 shows that sales of ethylene produced by QPCO have been volatile. A drastic fall in its sales in 1982 and 1983 was a reflection of the fact that feedstock shortages have kept gas to the Umm Said facility limited capacity utilization to about 50 per cent and the situation worsened as associated gas supplies declined in 1982 and 1983. Around 73 per cent of the designed capacity was utilized in 1984, leading to a 25 per cent increase in the production of ethylene. The rise in production in 1984 was more than offset by a 30 per cent drop in ethylene prices on the world market. Sales of ethylene soared in 1984, but fell by 51.4 per cent in 1985, compared with a 326 per cent increase in sales in 1984. QAPCO was operating at 55 per cent of its installed capacity in 1985. The fall in output was due to Qatar's decision to bring crude oil production into line with its OPEC quota of 280,000 b/d in 1985 which resulted in reduced supply of feedstock to QAPCO. Most of the ethylene output has been absorbed until now in the manufacture of low density polyethylene, mostly for use in the plastic and packaging industries in the neighbouring countries. Sales of low density polyethylene rose consecutively during 1981-1984. The long-term advantage of QAPCO is that

the plant is designed to run on gas, while most petrochemical plants run on naphtha. With abundant cheap gas available in the near future as a result of the North Field project, QAPCO is expected to be competitive even in a depressed market.

The reason for the divergent trends in the sales of Qatar National Cement Company was a series of price cuts that the company introduced in order to compete with cheap imports, mainly from the United Arab Emirates and Saudi Arabia. The lower prices enabled the company to capture around 60 per cent of the domestic market by 1985, a year in which QNCC operated at 101 per cent of its designed capacity.

Sales of concrete reinforcing steel bars manufactured by Qatar Steel Company (QSCO) fell at an average annual rate of 4.4 per cent during 1980-1985, leading to an overall accumulated loss of \$109 million. The financial loss in 1985 was estimated at \$13.7 million. Although most of these losses are attributable to interest payments on loans, which reached \$19.2 million in 1985, falling world prices for steel and the slowdown in economic activity in the Gulf region continue to offset the performance of QASCO which sells around 93 per cent of its output in the Gulf region at prices that tend to be \$5-\$10/tonne below world prices. Sales of Qatar Flour Mills Company were erratic during 1980-1985. The company has a milling capacity of 100 tonnes of wheat per day.

Annex Table A-5 presents selected manufacturing indicators for 1984. Gross addition to fixed assets in manufacturing totalled QR775.5 million in 1984, of which around 75 per cent was in petroleum refineries. Such a huge addition to fixed assets in refining was due to the establishment of Qatar's new 50,000 b/d refinery in 1984 at Umm Said alongside the older plant, giving Qatar a substantial exportable surplus after meeting the domestic consumption requirement of some 20,000 b/d. With the exception of slaughtering, preparing and preserving meat and grain mill products, the share of value added in gross output is generally very high, averaging around 60 per cent for the manufacturing sector as a whole. The share of MVA in gross output is the highest in the manufacture of fabricated metal products (106.7 per cent), followed by jewellery (87.6 per cent), fertilizers and pesticides (84.7 per cent), etc. The high share of MVA in gross output in most of the heavy industries partly reflects the incidence of technical progress that has gone into the productive process. The relatively low share of MVA in gross output (23.3 per cent) in the manufacture of food, beverages and tobacco is a reflection of the high cost of imported raw material and services. The country is almost totally dependent on imports for manufactured food items; imported food items constitute almost 100 per cent of apparent consumption.

The Industrial Survey of 1983, published by the Central Statistical Organization in 1985, attempted to measure productivity levels in the sub-sectors of manufacturing. The results (MVA per employee and gross output per employee) are presented in Annex Table A-6. In 1983 15,558 persons were engaged in manufacturing industries, of which 4,058 were employed in non-metallic mineral products and 2,557 persons were absorbed in chemical and petroleum industries. MVA per employee was the highest in petroleum refineries (QR480,000 in 1983), followed by industrial chemicals other than fertilizers (QR360,000) and fertilizers and pesticides (QR316,000). Labour productivity (MVA per employee) was the lowest in the manufacture of soap, cleaning preparations and perfumes (QR10,000). Data pertaining to MVA per employee and gross output per employee presented in Table A-6 seem to be

corroborated by selected manufacturing indicators given in Table A-5, though they were for different years. For example, MVA per worker in light manufacturing activities are far below the average for the manufacturing sector (Table A-6) as it is the case with the MVA share of gross output (Table A-5) in light manufacturing industries. Negative value added figures are reported in Table A-6 for slaughtering, preparing and preserving meat and for grain mill products in 1983. The automatic slaughterhouse and Qatar Flour Mills Company underwent modernization resulting in a plant with relatively high fixed costs. Although they operate under economies of scale, their working costs are quite high as a result of the high cost of raw materials. Besides, products are sold at low prices amidst cheap imports. Given a relatively large increase in the price of inputs to the price of outputs, products generated negative value added in 1983. However, Table A-5 shows that the situation improved in 1984 as slaughtering, preparing and preserving meat and grain mill products generated positive value added totalling QR9.214 million and QR1.671 million respectively.

2.3 Trade in manufactures

Qatar's exports other than crude oil consist mainly of natural gas liquids, fertilizers, petrochemicals, steel and refined petroleum products. The share of non-oil exports in the country's total export earnings is around 10 per cent. The expansion of non-oil exports depends crucially on the secure supplies of gas for the petrochemicals and fertilizer plants and on the world demand for these products.

Table 2.6 shows export volumes of natural gas liquids during 1982-1985. Full capacity utilization in the existing gas-based facilities would require an estimated average gas flow of some 500 million cubic feet per day, which would imply maintenance of oil production at a level well above the OPEC quota. In contrast to the rapid growth of export volumes of condensate, butane and propane during 1982-1984, exports of these products fell sharply in 1985 (Table 2.6). The two natural gas liquids (NGL) plants at Umm Said rely on associated gas from Dukhan and the three offshore fields to the east of the peninsula. Supply of feedstock to these plants fell by 21 per cent in 1985, resulting in an overall reduction of 22.9 per cent in NGL production and a 27.7 per cent reduction in LPG exports.

Table 2.6: Export volumes of natural gas liquids, 1982-1985

Year	Exports		
	Condensate Qty. ('000 US barrels)	Butane Qty. (tonnes)	Propane Qty. (tonnes)
1982	1,385.0	144,000	224,000
1983	1,670.4	202,955	314,785
1984	2,578.6	321,215	423,689
1985	1,370.2	228,315	310,915

Source: Qatar General Petroleum Corporation.

Potential exports of Qatari gas to Western Europe via a pipeline through Turkey is under consideration. The volume of LNG to be destined for France and Federal Republic of Germany in the 1990s is 2 million tonnes a year. Qatar plans to export gas to other Gulf Co-operation Council (GCC) countries as well. Amidst positive signs in the gas-market destinations, there are a few disturbing trends on the world market. The upheavals in the oil markets are bound to have disturbing repercussions in the gas trade. In the wake of plummeting oil prices on the world market, buyers of gas either tend to reduce their purchases or demand price concessions. The commercial response to such a challenge is exemplified when the cost structure is not very different from that of petroleum products and spot market transactions are common. In 1986, the four Arab Gulf exporters of liquefied petroleum gas (LPG) - Saudi Arabia, Kuwait, the United Arab Emirates and Qatar - have, in fact, reduced their prices for propane from \$207 to \$100 a tonne and for butane from \$207 to \$95.^{1/} This trend is particularly disturbing to Qatar which is pinning its hopes on gas for future development.

The first export shipment of Qatari refined petroleum products was made in October 1984 under an 18-month contract with British Petroleum which committed itself to buy around 6,600 b/d of fuel oil. Lack of demand has so far kept capacity utilization in the new refinery at about 60 per cent and operations stopped at the old plant. Exports of refined products amounted to about 14,440 b/d in 1984. Prospects for boosting the export of refined products are clouded by a glut on the world market. Unless the upturn in consumption accelerates and Qatari finds new markets, it is likely that even the marginal profit the country earns now will be short-lived.

Table 2.7 shows the value and volume of exports of ammonia and urea manufactured by Qatar Fertilizer Company. In value terms exports of ammonia grew significantly from QR77.4 million in 1980 to QR116.7 million in 1985, representing an average annual growth rate of 8.6 per cent, while that of urea fell from QR514.2 million in 1980 to QR332.8 million in 1985. The market destinations are shown in Annex Tables A-7 and A-8. Around 53 per cent of Qatar's ammonia exports and about 29 per cent of urea exports were destined for India in 1985. China buys about 22 per cent of Qatar's urea exports. Although prices have varied, the volume of sales has remained close to capacity levels in most years. If India and China set up projects to increase their domestic output, QAFCO would face intense competition on the world market, particularly from the neighbouring countries.

^{1/} For further details, see Petroleum Economist, "Uncertainties in the gas trade", October 1986.

Table 2.7: Exports of Qatar Fertilizer Company, 1980-1985

Year	Ammonia		Urea	
	Value (Mil. QR)	Qty. ('000 MT)	Value (Mil. QR)	Qty. ('000 MT)
1980	77.4	137.5	514.2	697.7
1981	82.9	124.0	414.9	551.7
1982	93.2	145.1	346.0	619.7
1983	90.0	164.4	323.2	717.3
1984	138.9	201.6	402.2	715.8
1985	116.7	192.1	332.8	700.8

Source: Qatar Fertilizer Company.

Table 2.7 also shows that exports of petrochemicals rose sharply in 1983 and 1984. Exports of ethylene recorded a 326 per cent increase in value terms in 1984. Exports of sulphur, low density polyethylene and ethylene suffered marked declines in 1985, against a steady upturn during 1983-1984 (see Table 2.8). Saudi Arabia and China are the biggest markets for polyethylene, while Italy and Greece are the major markets for ethylene and sulphur respectively. QAPCO is wholly dependent on the supply of ethane-rich associated gas feedstock, and the plant's capacity utilization rate and fluctuations in exports are indicative of the levels of feedstock supplies. QAPCO's low-density polyethylene is mostly used in the plastic and packaging industries of the neighbouring countries.

Table 2.8: Exports of Qatar Petrochemical Company, 1982-1985

Year	Sulphur		Low Density Polyethylene		Ethylene	
	Value (Mil. QR)	Quantity ('000 MT)	Value (Mil. QR)	Quantity ('000 MT)	Value (Mil. QR)	Quantity ('000 MT)
1982	3.0	6.3	265.3	126.5	13.2	8.1
1983	9.8	25.0	334.0	138.5	14.1	11.5
1984	11.1	28.0	361.7	152.1	60.2	57.4
1985	...	...	266.6	136.8	29.2	31.1

Source: Qatar General Petroleum Corporation.

The total quantity of oxide iron ore fines and concrete reinforcing bars in 1985 was 10 million tonnes and 503.7 million tonnes respectively. While export volumes of oxide iron ore fines registered significant fluctuations during 1980-1985, that of concrete reinforcing bars recorded an upward trend during the same period, except in 1982 (Table 2.9). In value terms the 1985 export value of oxide iron ore fines (QR1.0 million) was far below what was achieved in 1983 (QR10.0 million), and exports of concrete reinforcing bars in 1985 (QR395.6 million) could not reach its 1980 level (QR482.0 million) despite a rise in its exports since 1983. The fall in value terms, despite significant increase in volume of QASCO's exports is explained by a slump in world prices of steel. Most of QASCO's products are exported to the Gulf States, i.e., Saudi Arabia, Kuwait and the United Arab Emirates.

Table 2.9: Exports of Qatar Steel Company, 1980-1985

Year	Oxide Iron Ore Fines		Concrete Reinforcing Bars	
	Value (Mil. QR)	Quantity ('000 MT)	Value (Mil. QR)	Quantity ('000 MT)
1980	1.9	12.6	482.0	400.7
1981	4.1	27.7	429.7	416.8
1982	1.6	11.7	373.9	402.5
1983	10.0	65.0	371.0	407.0
1984	2.0	15.1	375.2	439.4
1985	1.0	10.0	395.6	503.7

Source: Qatar Steel Company.

QASCO is facing the problem of lower prices on the world market. QASCO has always obtained its full requirement of fuel gas and rolling mill production and ran at above 100 per cent of its rated capacity. However, the company's financial performance does not match its rate of capacity utilization due to a slump in steel prices on the world market. World prices for steel have dropped by almost a third since 1980.^{1/} The company faces stiff competition from countries such as Brazil, the Republic of Korea and Japan. Although QASCO's products tend to be more expensive, the relatively high quality of products and easy access to the neighbouring markets are to the advantage of QASCO. It is hoped that a 20 per cent tariff on non-GCC steel imports proposed by the GCC countries will be a big boost to Qatar's steel exports to the Arab countries. To survive the low prices for its products, QASCO has embarked on a cost-cutting scheme, including reduction in operating and fixed costs and cuts in salaries. Plans for an annual production increase of 100,000-150,000 tonnes have also been shelved.

^{1/} Gulf steel prices are at present about \$220 a tonne, compared with \$350 a tonne in the early 1980s. See Middle East Economic Digest, 4 April 1987, p. 19.

Imports of manufactured goods have generally remained at relatively low levels in line with the less expansionary stance of fiscal policy adopted since late 1982. Table 2.10 reveals the sharp declines in the imports of manufactured goods in 1985, with the exceptions of machinery and transport equipment, manufactured goods classified by materials (SITC 6) and animal and vegetable oils, fats and waxes. Imports were expected to be 20 per cent less in 1986, and the declining trend seems to continue in 1987. About 40 per cent of imports in 1985 comprised machinery and transport equipment, while food products accounted for 17.4 per cent of total imports in the same year.

Table 2.10: Composition of imports according to SITC categories, 1983-1985
(million QR)

SITC	Products	1983	1984	1985
0	Food and live animals	673.3	791.8	630.1
1	Beverages and tobacco	103.6	94.6	91.0
2	Crude material, inedible except fuels	144.0	138.8	124.2
3	Mineral fuels, lubricants and related materials	48.2	36.3	32.9
4	Animal and vegetable oils, fats, & waxes	22.2	34.6	35.0
5	Chemicals & related, Products N.E.S.	261.1	246.5	214.0
6	Manufactured goods classified mainly by materials	1,038.8	772.3	799.5
7	Machinery and transport equipment	2,328.8	1,493.1	1,622.6
8	Miscellaneous manufactured articles	678.6	621.6	597.2
TOTAL		5,298.6	4,229.6	4,146.5

Source: Ministry of Economy and Commerce, Economic Survey of Qatar, 1985, October 1986.

Annex Table A-9 looks at the composition of imports by end-use. In 1982 around 47 per cent of imports comprised capital goods imported for a number of development projects in progress. Subsequently, however, the share of consumer goods has risen to about 37 per cent in 1984, compared with only 24 per cent in 1982. The share of intermediate goods averaged 30 per cent of total imports during 1982-1984. The increase in domestic refining capacity in

1984 led to a steady fall in Qatar's imports of refined petroleum products from QR64 million in 1980 to QR36 million in 1984. The 1987 production figures show an exportable surplus, but prospects are clouded by the current glut on the world market.

The geographical distribution of Qatar's import sources has remained broadly unchanged over the years. The EEC accounted for 44.4 per cent of Qatar's imports in 1985 (see Annex Table A-10) followed by Asia (27.9 per cent) and Arab countries (7.3 per cent). The GCC countries supply around 5 per cent of Qatar's total import requirements. Japan has remained the largest single source providing about 20 per cent of total imports. Fluctuations in import payments since 1980 have reflected primarily the varying stance of fiscal policy.

Table 2.11 suggests that trade among the six GCC economies is almost insignificant. Qatar imports less than 4 per cent of its import requirements from the GCC States. Since the GCC countries are dependent to a large extent on the export of oil, the volume of trade between them is relatively limited. With the exceptions of Bahrain and Oman, the volume of imports by other countries from the GCC States is limited. When the GCC States set up factories, they tend to be in roughly the same sectors which fail to promote intra-GCC trade. An industrial complementation scheme for the GCC region could increase the scope for intro-regional trade.

Table 2.11: Trade between the GCC States, 1981-1985
(as per cent of imports)

	1981	1982	1983	1984	1985
Saudi Arabia	1.36	1.37	1.30	1.30	1.78
Kuwait	0.82	0.95	1.42	1.53	1.75
United Arab Emirates	9.80	6.36	6.40	7.58	6.69
Oman	24.50	21.60	17.90	18.70	16.60
Qatar	3.95	3.19	2.99	3.35	3.05
Bahrain	61.18	49.50	44.40	48.50	51.80

Source: Financial Times, Friday, 24 July 1987.

2.4 Ownership and investment patterns

The manufacturing sector in Qatar encompasses two distinct segments: on the one hand there is a handful of energy-intensive heavy industrial installations which are primarily joint ventures between the government and foreign partners, and there are a number of relatively small-scale industries owned by the Qatari private sector on the other. The two sets have also tended to locate in separate industrial areas: the large enterprises at Umm Said and Umm Bale and the small factories at the Salwa Industrial Estate in Doha.

Annex Table A-11 shows that of the 1,203 manufacturing enterprises in 1984 three were in the government sector, three enterprises were in mixed sectors and 1,187 industrial units were in the private sector. Of the three government sector enterprises, one is engaged in slaughtering, preparing and preserving meat. The automatic slaughterhouse was established in 1979 after accepting the feasibility study conducted by the Industrial Development Technical Centre (IDTC). The slaughterhouse, established at a cost of QR40 million, provides larger supplies of fresh, as distinguished from frozen, meat in accordance with consumer preferences in Qatar.

The National Oil Distribution Company (NODCO) is a wholly-owned subsidiary of the Qatar General Petroleum Corporation (QGPC). The paid-up capital of the company was QR40 million. The three mixed enterprises in which the Government of Qatar, the national private sector and foreign nationals participate are the Qatar National Cement Company, the Qatar Fertilizer Company (QAFCO) and the Qatar Steel Company (QASCO). QAFCO was incorporated in 1969 as a limited liability company with an initial authorized capital of QR56,714,000. The State of Qatar holds 70 per cent of ordinary share capital of the company. QASCO originated from an agreement signed on 14 July 1974 between the State of Qatar and two Japanese companies. The State of Qatar holds 70 per cent of the authorized capital and the remainder by the two Japanese companies (Kobe Steel Ltd., 20 per cent and Tokyo Boeki Limited, 10 per cent).

It can also be seen from Table A-11 that of the 102 private sector enterprises in 1984, 88 enterprises were engaged in the manufacture of bakery products. Of the 88 bakeries, about 20 are believed to be of the modern, automatic type, producing over 40 types of bread, pastries and sweets. Although Table A-11 lists 536 private sector enterprises in textiles and apparel and leather products, most of them are tailoring establishments and a few of them are of a quasi-factory type. The output of the latter concentrates on the manufacture of uniforms for school children and the requirements of the police and defence forces. In 1984 there were 239 establishments in wood and wood products (see Table A-11). By the end of the 1970s these enterprises are believed to have utilized raw materials worth more than QR35 million.

The manufacturing activities of 1,203 firms listed in Table A-11 range from the simple traditional crafts to some of the most modern, sophisticated plants. At one end, it includes a host of small quasi-artisan establishments, and at the other end, it includes the production of nitrogenous fertilizers, the manufacture of steel and major world-scale operations in the petrochemical and NGL industries. In the early 1980s more than one half of total manufacturing employment was in establishments employing less than five employees. Thus, the industrial development scene in Qatar represents an unusual combination of a few giant enterprises and a large number of small enterprises.

3. POLICIES, INSTITUTIONS AND RESOURCES FOR INDUSTRIAL DEVELOPMENT

3.1 Policies and institutions for industrial development

The State of Qatar follows a determined policy of encouraging and supporting the industrial sector, despite the fact that oil continues to dominate the national economy. The aim of the State policy has been to create a strong industrial base and to diversify manufacturing activities - through effective co-operation between the public and private sectors. The State's endeavour in the sphere of industrialization is facilitated by vital infrastructural facilities created during the oil-boom years of the 1970s.

The Industrial Development Technical Centre (IDTC), established in 1973, plays a vital and pioneering role in organizing and directing the pattern of industrialization in Qatar. The Centre prepared the First Five-year Industrial Development Plan for 1974-1978, all elements of which were successfully put into effect. The projects conceived under the Plan were all operational by the end of 1982, including the setting up of a number of huge projects such as the manufacture of steel, chemical fertilizers, petrochemicals, refined petroleum products, natural gas liquids, cement, as well as important domestic and socially necessary projects such as an organic fertilizer plant and a modern abattoir to meet the local demand for fresh meat. The Centre played a pivotal role in the development of the industrial part of Umm Saïd and the conversion of Umm Saïd to a major industrial centre. Projects being undertaken by the Centre at present include a scheme for the development of medium and light industries. In 1985 the IDTC carried out studies on a number of industrial projects, including a sheet glass factory, production of silicone and ferro silicone, expansion of the cement factory, extraction of argon gas from the by-products of QAFCO, manufacture of acetylene, production of calcium carbide, production of medical compounds, manufacture of benzoic salts and recycling of waste paper.

Incentives for potential investors

A unique aspect of industrial development policy in Qatar is the assistance provided by the Government in the pre-investment phase. This involves two forms of assistance: first, a specialized government agency prepares investment feasibility studies on industries and offers them to the private sector as potential investment opportunities; and second, the Government supplements the efforts of private investors in preparation of economic and technical feasibility studies on new ventures selected as possible targets for investments. It proved to be a useful way to overcome one obstacle to industrial growth.

The Government set up the Doha Industrial Estate at a site on the Salva Road for the use of light and medium industries while other industrial zones have been provided in Umm Saïd for medium and heavy industries. In these zones land and services are offered at subsidized prices. Land required for industrial projects at the Doha Industrial Estate are provided on long-term lease at token rents according to the size and nature of the project. Plots range from 1,500 sq. m. to 3,000 sq.m. while rents range from QR25 per sq.m. to QR50 per sq.m. per annum. In Umm Saïd ground rent is set at QR1.00 per sq.m. per annum. Given the increase in land prices and ground rent outside the industrial areas, these prices are a considerable incentive. Leases are normally offered for 30 years, which are renewable. Essential utilities such as water, electricity and gas are provided to industrial ventures in the industrial zones.

Under the terms of Article 1 of Law No. 3/66 the Minister of Finance and Petroleum is empowered to exempt national joint stock companies from payment of tax on net profits provided that the companies concerned establish and operate permitted industries in the interests of the national economy. The exemption is valid for five years from the date of establishment of the company and may be renewed for a further period of five years.

Government spending is the main catalyst for economic activity in Qatar and priority is given to national products by State purchasing departments. This policy provides a major incentive for local industries. But preference is only given provided that the local product is similar in quality, specifications and price to rival imported products. This limit is to ensure that new industries grow on a healthy competitive basis and are attuned to the reality of world market conditions.

Under the Industry Law No. 11 of 1980, the following incentives are granted to new manufacturing establishments:^{1/}

1. Customs tariffs may be increased for limited periods on goods imported that are similar to those produced locally. There is however a requirement that the quality of the local production is satisfactory, and that the discouragement of imports is in the interest of consumers.
2. Holidays from income tax may be granted for five years as from the commencement of production.
3. Holidays from customs duties may be granted on the following imports needed by industrial firms:
 - Machinery, equipment and spare parts
 - Raw materials, semi-finished goods and packing materials.
4. Exports of goods produced locally are exempted from export taxes, should these be imposed. At present no duties are levied on exports.
5. Goods produced locally are given priority for government purchases, provided they are similar in quality and kind to imported equivalents. The priority still prevails even if the local price is up to 5 per cent higher than the imported one.
6. The establishment of new industry is encouraged by the supply of land and utilities at reduced rates.
7. The Ministry of Industry and Agriculture may participate in the costs of studies and research carried out by the owners of proposed industrial projects to ensure the feasibility of such projects.
8. Loans may be granted to any industrial firm with a capital of less than QR20 million at low interest - currently 3 per cent.

^{1/} Saba and Co., Touche Ross International, Tax and Investment Profile: Qatar, Restricted activities, July 1986.

Law 3 of 1985 controls the participation of foreigners in commerce and industry in Qatar.

Restricted activities

Under this law non-Qataris (individuals or companies) are not allowed to:

- i) practice trade (that is, buy merchandise for resale);
- ii) import goods (other than for personal use);
- iii) work as trade agents, contractors, or engage in any other trade activities; or
- iv) carry out small or medium-sized industrial or agricultural projects. Projects are deemed to fall into this category where all the raw materials and power supplies required are available locally and foreign companies supplying the project's machinery and equipment or owning patented processes used in the project would not usually insist on owning an equity interest in it.

Non-Qatari individuals who are engaged in any of the business activities mentioned above are required to liquidate their investment within four years from 9 May 1985 (the date the law came into force). Similarly, non-Qatari members of companies engaged in any of these activities are required to liquidate their shares in the company within the same period. The Ministry of Economy and Trade is authorized to enforce liquidation through the Civil Court where non-Qatari holdings are not voluntarily liquidated before 9 May 1989.

Permitted activities

Large industrial and agricultural projects. Subject to the provisions of the law banning foreign ownership of real estate, Law 3 of 1985 allows non-Qataris to carry out heavy industrial and agricultural projects provided they have Qatari partners who own at least 51 per cent of the capital of the enterprise undertaking the project and the project ranks as "large". Although the word 'large' is used in the law, "large" projects are not distinguished primarily by their size. Rather they are defined as projects where the company supplying the equipment and machinery or owning the patents or know-how used in the project is in a position to insist on participation in the capital of the project as a condition for supplying the essential technology. In other words, they are highly technical projects requiring special expertise. For an industrial project to be classified as "large" a further condition must be satisfied: the cost of raw materials of local origin, local labour and other local production costs involved in the manufacturing process must not be less than 40 per cent of the total production cost.

In the public interest, specific types of projects may be designated as "large" or withdrawn from the list by a decree of the Minister of Economy and Commerce.

It should be noted that despite the rules requiring Qatari ownership of businesses, it is possible for foreign enterprises to enter into management contracts that provide for profit-sharing to be in a different proportion from equity ownership.

Small businesses. A non-Qatari may carry on a small business such as tailoring, hairdressing or light repairs, but he will be permitted to employ only one person and then only when the need arises. He is not allowed to change the nature of his business and must obtain both a legitimate residence permit and a Qatari sponsor for all his business activities. The law provides that the sponsor must be financially capable of bearing the liabilities of the sponsored foreigner.

Temporary labour. Non-Qataris are also permitted to work as self-employed "temporary labourers" if licensed by the Ministry of Labour and Social Affairs.

Other permitted projects. Under Law 3 of 1985 non-Qataris may be individually authorized by decree, on a case-by-case basis, to invest in specific projects contributing to economic development, projects to do with the running of public services, and projects for the public benefit relating to industry, agriculture, minerals, manpower, tourism or contracting. Where such a decree is issued, the non-Qatari interest in the project will not necessarily be limited to 49 per cent as in the case of a "large" industrial or agricultural project. The percentage permitted will depend on the terms of the decree.

Excluded activities. Law 3 of 1985 does not apply to:

- i) companies or individuals who extract, exploit or manage natural resources either by virtue of a concession granted by the Government or in accordance with a special agreement concluded with the government;
- ii) companies wholly or partly owned by the Government, and public establishments or agencies jointly owned by the Government and non-Qataris;
- iii) banks and insurance companies (as their activities are controlled by separate laws); and
- iv) importation of goods for personal use.

3.2 Resources for industrial development

Human resources

The present population in Qatar is estimated at 310,000, of whom 77,500 are Qatari nationals and the rest are expatriates. The present policy of the Government calls for a determined and well-planned programme to equip the individual with knowledge, science and advanced skills to allow the young people of Qatar to take their role in the future industrialization process of the country. Government departments and State-owned industries run carefully prepared in-service training programmes, offering every opportunity to acquire skills and experience. Qatar University conferred degrees on 3,992 men and women who are now working in different sectors of the economy.

The first employment survey in the private sector was conducted in January 1983, and the second covering the mixed enterprises was conducted during October 1984 - February 1985. These two surveys indicate that the Qatari economy continues to be heavily dependent on expatriate workers from mostly other Arab countries and Asia who account for around 80 per cent of the total labour force. In 1984 the mixed sector employed 3,916 workers, of whom 10 per cent were Qatari nationals. The private sector's estimated labour

force was 67,758 in 1984, of whom Qatari nationals constituted just 3 per cent. According to recent estimates, some 10,000 expatriate workers left Qatar in consequence of low oil-price-induced recession in recent years. Official manpower policy continues to aim at minimizing the need for foreign labour through measures such as the compulsory provision of training facilities for local employees by foreign companies and government efforts to develop educational facilities. During 1972-1985 1,898 Qataris obtained certificates from the Regional Vocational Training Centre.

Table 3.1 presents information pertaining to the number of students enrolled in courses at Qatar University and number of Qatari students studying abroad in 1985.

Table 3.1: Number of students at Qatar University and number of students studying abroad, 1985

A. Number of students at Qatar University

Faculty	Males	Females	Total
Education	655	1,439	2,094
Science	162	196	358
Humanities	321	193	514
Islamic Studies	138	230	368
Engineering	139	...	139
TOTAL	1,799	2,822	4,621

B. Number of students studying abroad

Type of Studies	Males	Females	Total
Postgraduate	168	153	321
Undergraduate	573	127	700
Other courses	131	3	134
TOTAL	872	283	1,155

Source: Ministry of Education and Qatar University.

Agricultural resources

Arable land is estimated at around 33,000 hectares, or less than 3 per cent of Qatar's land area. Presently nearly 13,000 hectares are under cultivation, representing a sizeable increase from 1973 when only 6,000 hectares were cultivated. Natural vegetation and sheep grazing are confined to the areas around wells in the basins of streams that form mostly in the north during the winter months. The agricultural potential is constrained by limited underground water resources, scant rainfall and soil salinity.

Despite these constraints, the Government endeavours to encourage agricultural development through experimental farms, rationing of water usage, advisory and extension services and financial aid. Besides an average annual subsidy of about QR15,000, each farmer receives seeds, fertilizers and pesticides free of charge from the Government. Annex Table A-12 reports data related to production, area and yield per hectare of different crops for the year 1985. Despite a virtual self-sufficiency in vegetables, it is estimated that some 50 per cent of calories in the average Qatari diet is provided by cereals, and this, together with the low level of local livestock breeding, means that overall food self-sufficiency is probably only 20 per cent.

Qatar National Fishing Company was restructured in 1980 to become entirely State owned. In 1985 it operated three fishing vessels of which two are devoted to prawn freezing factory with a production capacity of 10 tonnes a day. The feasibility of reactivating the plant on a large scale could be examined.

Energy resources

It is estimated that the oil reserves of Qatar would be depleted by the year 2020. To make up this loss the Qatari Government is pinning its hopes on a huge gas field for future prosperity. The North Field has proven reserves of at least 100,000 billion cubic feet and probable reserves that will last more than 200 years at the expected production rate of two billion cubic feet a day.

Plans to tap the country's gas reserves took a significant step forward in 1987 with the signing of a contract with Technip of France and Bechtel of the USA to oversee the project on behalf of the Qatar General Petroleum Corporation (QGPC). According to recent estimates, marketed gas output amounting to some 20 million cubic metres a day will be supplied to industrial users within Qatar. This would pave the way for expanding downstream manufacturing activities.

The production of electricity increased by nearly one half in 1983 as a result of the implementation of several major projects. Work is now in progress to upgrade Doha's power transmission system and to link the Abu Nakhlah and the Al Semiriyah power stations to the main supply units.

Financial resources

The financial system in Qatar consists of the Qatar Monetary Agency (QMA), 15 commercial banks, 17 money exchange dealers, and a number of insurance companies. Annex Table A-13 indicates that there has been a steady increase in credit facilities granted to various sectors of the Qatari economy

during 1977-1984. General trading activities received the major share of these facilities with an average of 57.4 per cent in 1977 and 41.1 per cent in 1984. Following in importance were the housing, construction and real estate sectors with an average share of 16.6 per cent of total credit. It can be seen from Table A-13 that the industrial sector received only 6.0 per cent of credit facilities granted by the commercial banks in 1984. This low share was largely due to the meagre demand for credit by the industrial sector. Moreover, the industrial sector in Qatar received continuous attention from the Government including long-term financial support. This subsequently diminished their need to resort to commercial banks for credit.

3.3 Manufacturing problems and prospects

The Government of Qatar endeavours to expand the country's industrial base and to diversify manufacturing activities. One of the operating difficulties affecting the heavy industry is the industry's heavy reliance on associated gas to provide feedstock. In the face of the North Field gas project fast coming into operation, this constraint would cease to exist in the near future. During Phase I of the project it is envisaged that it would supply 800 million cubic feet a day of gas to meet domestic demand up to 1989 or 1990, although this Phase of the development programme will only start up in 1988. Phase 2 will entail the installation of a second production complex for producing an additional 800 million cubic feet a day of gas, and will be piped to gas treatment facilities at Umm Said. However, Qatar's heavy industries are facing a challenging period as the world markets for almost totally import-oriented products continue to be in recession. While the Qatar Fertilizer Company continues to earn profit, the Qatar Steel Company and Qatar Petroleum Company are running at a loss. A potential threat to the country's heavy industries is the emergence of heavy industries in the neighbouring Gulf countries that edge into traditional Qatari markets.

One half of the total number of establishments identified in a 1983 survey could be described loosely as manufacturing units, though the extent to which manufacturing processes create value added varies considerably. Several enterprises are little more than mechanics' or tailors' workshops. Some 75 licences have been awarded for modern industries using automated rather than labour-intensive processes, of which 30 are now operational producing paint, detergents, dairy products, industrial gases, polythene and paper bags, household utensils and furniture.

Since the profit margins from trade have fallen in recent years, Qatari nationals seem to look for long-term potential returns from well-planned and virtually guaranteed import-substituting industries and industries producing products for the regional market. The regional market seems to open up to products under the terms of the GCC's unified economic agreement, which removes all trade barriers between the six member States giving access to an overall market of some 13 million people. The Doha-based Gulf Organization for Industrial Consulting attempts to make Qataris involved in regional projects to achieve economies of scale. Qatari investors are already involved in two of the first joint Gulf private sector ventures, namely the Gulf Consolidated Fibreglass Company in Jubail, Saudi Arabia and the Gulf Tyre Company in Bahrain.

As part of an industrialization programme in Qatar, the search for raw materials goes on. A comprehensive programme of geological and seismological investigation conducted by the IDTC during 1985-1986 has proved the existence of 12 million tonnes of readily extractable gypsum, clay loam useful for the brick industry, a range of mineral salts which could prove viable for an integrated salt industry. Deposits of celestite, used in electronics, are estimated at 64,000 tonnes, while celestite gravel could be used in the glass industry. A well-defined programme to seize these opportunities could bring many industrial establishments into existence in the near future.

3.4 The role of technical co-operation in industrial development

The main agencies providing technical assistance are UNDP and other UN Agencies, with activities totally funded by the State of Qatar under 100 per cent cost sharing and trust fund arrangement. Some departments of the government receive a few short-term technical missions from the USA, UK and France to exchange views and experiences. UNIDO technical co-operation projects hitherto included establishment and operations of industrial statistics and data system for monitoring industrial development, and consultancy and advisory services on matters pertaining to industrial development and environmental protection.

A market survey for the emerging gas-based industries is one of the crucial areas requiring technical assistance. The Gulf Organization for Industrial Consulting (GOIC) could play a significant role in looking for markets. Technical assistance is also required for conducting pre-feasibility studies with a view to identifying technically feasible, economically viable and ecologically beneficial projects.

In view of the current endeavour of the government to reduce foreign labour, human resource development seems to be a priority area as the lack of adequate national supply of technicians and supporting middle and supervisory staff would appear to create a human resource gap in the near future. Technical assistance could be produced to institutions which are expected to fill in many human resource gaps. Prospects for industrial development depend on the identification of market opportunities with the aid of external technical co-operation and assistance and on developing the national skills to cope with the challenging needs of industrial diversification of an oil-based economy.

Several project ideas have been identified with a view to diversifying Qatar's industrial structure. These ideas relate to: recovery of argon gas at fertilizer plants; manufacture of writing, printing, kraft paper and board by partial recycle of waste paper; manufacture of alkylbenzene sulphonate utilizing the waste sulphur coke from Qatar Steel Co.; manufacture of sodium tripolyphosphate; and manufacture of aluminium and fluorocarbon refrigerant gases. New project ideas under study include improvement in manufacturing of graphite electrodes and acrylonitrile butadiene; manufacture of LPG odorants, sulphur dust for agriculture sprays and recycling of lubricating oils. These project ideas which are currently under study could promote the process of industrial diversification in Qatar.

ANNEX A
STATISTICAL TABLES

Table A-1: Budgetary revenue and expenditure, 1984-1988
(in millions of \$)

	1984/85 Actuals	1985/86 ^{a/}	1986/87 ^{a/}	1987/88 ^{c/} Budget
REVENUES				
Oil and gas	...	...	...	1,374
Investment income	...	...	...	330
Taxes and customs etc.	...	...	...	151
Total	3,289	...	...	1,853
EXPENDITURE				
Current, inc. defence	3,214	...	...	2,597
Projects	1,443	...	...	759
Total spending	4,657	...	...	3,356
Deficit	1,368	...	...	1,503

Source: Financial Times, Friday, 24 July 1987.

a/ The 1985/86 budget was suspended in mid-year.

b/ No budget in fiscal year 1986/87.

c/ Budget year commences from 1st Rajab, equivalent in 1987 to 1 March.

Table A-2: External balances of Qatar, 1984-1987
(in millions of \$)

	1984	1985	1986 ^{a/}	1987 ^{a/}
Exports	3,364	3,100	1,650	2,128
Imports	-1,162	-1,152	-1,037	-1,100
Trade balance	2,202	1,948	613	1,028
Services & transfers	-1,372	-1,535	-1,250	-1,050
Current account	830	413	-637	-22

Source: Financial Times, "Gulf Co-operation Council", Friday, 24 July 1984.

a/ Projections.

Table A-3: Production and utilization of natural gas, 1980-1985
(billion cubic feet)

Year	Utilized Gas	Produced Gas
1980	111.0	124.0
1981	162.0	222.0
1982	178.0	212.0
1983	188.6	193.5
1984	279.0	215.9
1985	187.4	214.5

Source: Qatar General Petroleum Corporation.

Note: Billion cubic feet, adjusted to equal gas of one Million B.T.U/Cubic feet.

Table A-4: Production and consumption of petroleum products, 1980-1985
(thousands of barrels)

Year	1980		1981		1982		1983		1984		1985								
	Production	Consumption in per cent of production	Production	Consumption in per cent of production	Production	Consumption in per cent of production	Production	Consumption in per cent of production	Production	Consumption in per cent of production	Production	Consumption in per cent of production							
Liquefied petroleum gas	87.5	117.2	74.7	82.9	129.2	64.2	69.9	155.5	45.0	82.2	179.2	45.8	424.3	415.7	102.1	458.3	466.9	98.1	
Super petrol	105.8	382.5	27.7	16.4	418.7	3.9	42.4	496.5	8.5	3.2	563.3	0.6	664.5	625.9	106.2	758.6	728.0	104.2	
Premium petrol	1,004.5	1,031.5	97.3	1,127.8	1,209.3	93.3	990.0	1,402.1	70.6	1,093.6	1,428.8	76.5	1,342.4	1,278.9	105.0	1,344.2	1,257.7	106.9	
Jet fuel	492.6	537.5	91.6	480.7	517.5	92.9	490.8	521.0	94.2	442.1	573.2	77.1	859.4	653.0	131.6	573.3	594.1	96.5	
Kerosene	34.5	33.1	104.2	33.0	33.8	97.6	33.5	32.9	101.8	68.9	30.9	223.0	2.8	28.5	9.8	27.5	27.5	100.0	
Diesel oil	1,110.1	1,181.6	93.9	1,110.6	1,343.1	82.7	1,092.6	1,523.3	71.7	1,359.4	1,555.8	88.5	1,333.8	1,383.6	96.4	1,625.5	1,618.3	100.2	
Fuel oil	1,008.7	759.2	132.9	3,646.2	3,639.1	100.1
TOTAL	2,835.0	3,283.4	84.3	3,253.7	3,651.6	89.1	2,719.3	4,131.4	65.8	3,049.4	4,311.2	70.7	5,635.9	5,144.8	109.5	8,433.6	8,331.6	103.2	

Source: Qatar General Petroleum Corporation.

Table A-5: Selected manufacturing indicators, 1984
('000 QR)

ISIC Code	Industry	Gross addition to fixed assets	Change in stocks	Value added	Input (material and services)	Gross output of goods and services at producer's price	Share of value added in gross output (percentage)
3	Total manufacturing industries	775,547	26,198	1,830,188	1,258,081	3,088,269	59.3
31	Manufacture of food, beverages and tobacco	6,526	-2,401	57,143	187,695	244,838	23.3
3111	Slaughtering, preparing and preserving meat	...	...	9,214	108,316	117,530	7.8
3112	Manufacture of dairy products	1,529	-817	10,762	23,940	34,702	45.0
3116	Grain mill products	429	-1,087	1,671	22,733	24,404	6.8
3117	Manufacture of bakery products	308	8	22,281	18,862	41,143	54.6
3119	Manufacture of cocoa, chocolate and sugar confectionery	...	...	1,328	778	2,106	63.1
3121	Manufacture of food products not elsewhere classified	...	...	2,432	2,176	4,608	52.8
3134	Soft drinks and carbonated waters industries	4,260	-505	9,455	10,890	20,345	46.5

Table A-5 (Continued)

ISIC Code	Industry	Gross addition to fixed assets	Change in stocks	Value added	Input (material and services)	Gross output of goods and services at producer's price	Share of value added in gross output (percentage)
32	Textile wearing apparel and leather industries	60	-1,003	59,362	11,496	70,858	83.8
3220	Manufacturing of wearing apparel, except footwear	60	-1,003	59,362	11,496	70,858	83.8
33	Manufacture of wood and wood products, including furniture	5,979	-4,401	85,525	71,546	160,671	53.2
3311	Sawmills, planing and other wood mills	5,867	-788	4,872	59,420	124,292	52.2
3312	Manufacture of wooden and cane containers and small cane ware	...	...	653	547	1,200	54.4
3319	Manufacture of wood and cork products not elsewhere classified	8	62	1,813	600	2,413	75.1
3321	Manufacture of furniture and fixtures, except primarily of metal	104	-3,605	16,153	13,229	29,382	54.9
3322	Upholstering	...	-70	2,034	1,350	3,384	60.1
34	Manufacture of paper and paper products, printing and publishing	10,228	-3,945	67,500	41,507	109,007	61.9

Table A-5 (Continued)

ISIC Code	Industry	Gross addition to fixed assets	Change in stocks	Value added	Input (material and services)	Gross output of goods and services at producer's price	Share of value added in gross output (percentage)
3411	Manufacture of pulp, paper and paperboard	3,754	-362	1,579	2,500	4,079	38.7
3412	Manufacture of containers and boxes of paper and paperboard	3,754	-362	1,579	2,500	4,079	38.7
3420	Printing, publishing and allied industries	2,720	-3,221	64,342	36,507	100,849	63.8
35	Manufacture of chemicals, and of chemicals, petroleum coal, rubber and plastic products	698,676	14,571	1,123,667	351,169	1,474,836	76.2
3511	Manufacture of basic industrial chemicals except fertilizers	114,474	-6,576	353,507	103,046	456,553	77.4
3512	Manufacture of fertilizers and pesticides	3,273	1,922	460,854	83,221	544,075	84.7
3523	Manufacture of soap and cleaning preparations, perfumes and other toilet preparations	27	1,009	1,070	4,820	5,890	18.2
3530	Petroleum refineries	579,365	20,345	276,715	116,294	393,009	70.4

Table A-5 (Continued)

ISIC Code	Industry	Gross addition to fixed assets	Change in stocks	Value added	Input (material and services)	Gross output of goods and services at producer's price	Share of value added in gross output (percentage)
3540	Manufacture of miscellaneous products of coal and petroleum	566	-347	11,993	21,229	33,222	36.1
3559	Manufacture of rubber products not elsewhere classified	211	-211	1,608	2,960	4,568	54.3
3560	Manufacture of plastic products not elsewhere classified	760	-1,571	17,920	19,599	37,519	47.8
36	Manufacture of non-metallic mineral products except coal petroleum products	6,089	3,139	199,350	192,117	391,467	51.0
3692	Manufacture of cement, lime and plaster	2,401	-3,022	51,937	16,349	68,286	76.1
3699	Manufacture of non-metallic mineral products not elsewhere classified	3,688	6,161	147,413	175,768	323,181	45.6
37	Basic metal industries	14,158	23,614	145,808	308,636	454,444	32.1
3710	Iron and steel metal basic industries	14,158	23,614	145,808	308,636	454,444	32.1

Table A-5 (Continued)

ISIC Code	Industry	Gross addition to fixed assets	Change in stocks	Value added	Input (material and services)	Gross output of goods and services at producer's price	Share of value added in gross output (percentage)
38	Manufacture of fabricated metal products, machinery and equipment	4,801	-3,176	18,074	86,278	169,352	106.7
3811	Manufacture of cutlery, handtools and general hardware	756	419	15,742	13,510	29,252	53.8
3812	Manufacture of furniture and fixtures primarily of metal	12	87	1,050	1,229	2,279	46.1
3813	Manufacture of structural metal products	3,310	-3,536	53,679	67,474	121,153	44.3
3819	Manufacture of fabricated metal products not elsewhere classified except machinery equipment	313	88	601	175	776	77.4
3823	Manufacture of metal and woodworking machinery	...	-75	1,269	1,241	2,510	50.1
3829	Machinery and equipment except electrical N.E.C.	...	-101	317	321	638	49.7
3841	Shipbuilding and repairing	410	-58	8,416	4,328	12,744	66.0

Table A-5 (Continued)

ISIC Code	Industry	Gross addition to fixed assets	Change in stocks	Value added	Input (material and services)	Gross output of goods and services at producer's price	Share of value added in gross output (percentage)
39	Other manufacturing industries	29,030	-200	10,759	2,037	12,796	84.1
3901	Manufacture of jewellery and related articles	...	...	10,613	1,497	12,110	87.6
3909	Manufacturing industries not elsewhere classified	29,030	-200	146	540	686	21.3

Source: Central Statistical Organization.

Table A-6: Indicators of manufacturing productivity by product, 1983
('000 QR)

ISIC Code	Industry	Value added per person (1)=(3)+(5)	Productivity (2)=(4)+(5)	Value added (3)	Gross output of goods and services at producer's prices (4)	No. of persons engaged (5)
3	Total manufacturing industries	94	171	1,464,028	2,662,101	15,558
31	Manufacture of food, beverages and tobacco	30	157	42,958	226,070	1,437
3111	Slaughtering, preparing and preserving meat	...	394	-25,051	65,071	165
3112	Manufacture of dairy products	53	151	8,909	25,550	169
3116	Grain mill products	...	204	-971	23,811	117
3117	Manufacture of bakery products	48	100	28,522	59,544	595
3119	Manufacture of cocoa, chocolate and sugar confectionery	34	75	977	2,102	28
3121	Manufacture of food not elsewhere stated	85	168	3,649	7,228	43
3134	Soft drinks and carbonated water industries	84	134	26,923	42,764	320

Table A-6 (Continued)

ISIC Code	Industry	Value added per person (1)=(3)+(5)	Productivity (2)=(4)+(5)	Value added (3)	Gross output of goods and services at producer's prices (4)	No. of persons engaged (5)
32	Textile wearing apparel and leather industries	33	41	61,312	76,034	1,865
3222	Tailor shop	33	41	61,312	76,034	1,865
33	Manufacture of wood and wood products, including furniture	45	88	81,424	161,200	1,824
3311	Sawmills, planing and other wood mills	50	94	57,312	107,513	1,145
33i2	Manufacture of wooden and cane containers and small cane ware	16	22	319	444	20
3319	Manufacture of wood and cork not elsewhere stated	78	159	2,420	4,919	31
3321	Manufacture of furniture and fixtures, except primarily of metal	34	77	19,788	44,762	580
3322	Upholstery	33	74	1,585	3,562	48
34	Manufacture of paper and paper products, printing and publishing	64	127	76,557	151,048	1,187

Table A-6 (Continued)

ISIC Code	Industry	Value added per person (1)=(3)+(5)	Productivity (2)=(4)+(5)	Value added (3)	Gross output of goods and services at producer's prices (4)	No. of persons engaged (5)
3412	Manufacture of containers and boxes of paper and paperboard	42	104	1,478	3,633	35
3420	Printing, publishing and allied industries	65	128	75,079	147,415	1,152
35	Manufacture of chemicals, petroleum coal, rubber and plastic products	310	410	793,604	1,048,141	2,557
3511	Manufacture of basic industrial chemicals except fertilizers	36	451	289,614	363,083	805
3512	Manufacture of fertilizers and pesticides	316	423	301,846	403,419	954
3523	Manufacture of soap and cleaning preparations, perfumes and other toilet prep.	10	73	518	3,855	53
3530	Petroleum refineries	480	584	177,200	215,646	369
3540	Manufacture of miscellaneous products of coal and petroleum	216	653	7,330	22,207	34

Table A-6 (Continued)

ISIC Code	Industry	Value added per person (1)=(3)+(5)	Productivity (2)=(4)+(5)	Value added (3)	Gross output of goods and services at producer's prices (4)	No. of persons engaged (5)
3559	Manufacture of rubber products not elsewhere classified	69	154	1,715	3,852	25
3560	Manufacture of plastic products not elsewhere classified	48	114	15,381	36,079	317
36	Manufacture of non-metallic mineral products except coal petroleum products	52	101	209,241	410,617	4,058
3692	Manufacture of cement, lime and plaster	129	169	58,134	76,043	449
3699	Manufacture of non-metallic mineral products not stated elsewhere	42	93	151,107	334,574	3,609
37	Basic metal industries	113	366	137,830	447,050	1,223
3710	Iron and steel metal basic industries	113	366	137,830	447,050	1,223
38	Manufacture of fabricated metal products, machinery and equipment	45	105	55,977	132,743	1,259
3811	Manufacture of cutlery, handtools and general hardware	25	37	7,673	11,280	303

Table A-6 (Continued)

ISIC Code	Industry	Value added per person (1)=(3):(5)	Productivity (2)=(4):(5)	Value added (3)	Gross output of goods and services at producer's prices (4)	No. of persons engaged (5)
3812	Manufacture of furniture and fixtures primarily of metal	9	50	331	1,898	38
3813	Manufacture of structural metal products	49	122	47,973	119,565	982
39	Other manufacturing industries	61	110	5,125	9,198	84
3901	Manufacture of jewellery and related articles	112	212	4,630	8,268	39
3909	Manufacturing industries not elsewhere stated	11	21	495	930	45
4	Electricity gas and water	16	36	150,988	334,580	9,295
4101	Electricity light and power	14	51	55,913	206,247	4,060
4200	Water works and supply	18	25	95,075	128,333	5,235
Total Division (3,4)		65	121	1,615,016	2,996,681	24,823

Source: Industrial Survey, 1983, March 1985.

Table A-7: Destination of ammonia exports, 1983-1985
 ('000 tonnes)

Country	1983	1984	1985
India	94.7	122.6	101.4
Philippines	13.5	18.1	...
Jordan	19.3	21.0	15.0
Taiwan	...	19.4	10.5
United Kingdom	...	5.7	...
Rep. of Korea	13.0	13.6	3.9
U.S.A.	...	...	20.4
Greece	...	...	18.0
France	...	...	8.0
Tanzania	3.5	...	...
Turkey	20.4	...	14.9
Others	...	1.2	...
Total	164.4	201.6	192.1

Source: Ministry of Economy and Commerce, Economic Survey of Qatar, 1985, October 1986.

Table A-8: Destination of urea exports, 1983-1985
('000 tonnes)

Country	1983	1984	1985
India	134.2	292.9	200.3
China	199.4	200.0	156.2
U.S.A.	19.7	...	98.2
Iran	70.2	57.1	68.3
Bangladesh	...	...	12.6
Malaysia	60.2	70.7	3.8
Philippines	98.5	...	12.0
Thailand	31.8	5.9	30.4
Australia	21.5	42.0	20.5
Singapore	...	...	1.1
Turkey	6.6	...	...
Viet Nam	64.9	47.2	10.4
United Arab Emirates	0.8	...	...
Zambia	9.5	...	...
Argentina	...	...	22.3
Sudan	...	...	47.2
Sri Lanka	...	...	17.6
Total	717.3	715.8	700.9

Source: Ministry of Economy and Commerce, Economic Survey of Qatar, 1985, October 1986.

Table A-9: Composition of imports by end-use, 1981-1984

	1981	1982	1983	1984
	<u>(in millions of Qatar riyals)</u>			
Consumer goods	1,633.2	1,719.1	1,591.5	1,542.9
Intermediate goods	1,771.8	2,031.0	1,632.3	1,323.5
Capital goods	2,119.4	3,337.4	2,074.9	1,363.1
Total	<u>5,524.4</u>	<u>7,087.5</u>	<u>5,298.7</u>	<u>4,229.5</u>
	<u>(in per cent)</u>			
Consumer goods	29.6	24.2	30.0	36.5
Intermediate goods	32.1	28.7	30.8	31.3
Capital goods	38.3	47.1	39.2	32.2
Total	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

Source: Central Statistical Organization.

Table A-10: Imports by region, 1983-1985
(million QR)

Region	1983		1984		1985	
	Value	%	Value	%	Value	%
Arab countries	261.6	4.9	314.2	7.4	303.7	7.3
GCC States	172.9	3.2	177.2	4.2	203.7	4.9
Other Arab countries	88.7	1.7	137.0	3.2	100.0	2.4
EEC	2,195.0	41.4	1,624.3	38.4	1,839.8	44.4
Other Western European countries	256.2	4.8	186.4	4.4	205.1	4.9
European Socialist countries	52.7	1.0	47.4	1.1	33.3	0.8
American countries	574.4	10.9	471.4	11.2	366.9	8.9
Asia	1,613.9	30.5	1,272.7	30.1	1,157.4	27.9
Oceania	166.0	3.1	144.9	3.4	110.6	2.7
Africa	4.9	0.1	6.6	0.2	4.6	0.1
Other countries	173.9	3.3	161.7	3.8	125.1	3.0
Total	5,298.6	100.0	4,229.6	100.0	4,146.5	100.0

Source: Ministry of Economy and Commerce, Economic Survey of Qatar, 1985, October 1986.

Table A-11: Industrial establishments by type of industry, 1984

ISIC Code	Industry	Total	Private sector	Mixed sector	Government sector
3	Total manufacturing industries	1,203	1,197	3	3
31	Manufacture of food, beverages and tobacco	103	102	-	1
3111	Slaughtering, preparing and preserving meat	1	-	-	1
3112	Manufacture of dairy products	4	4	-	-
3116	Grain mill products	1	1	-	-
3117	Manufacture of bakery products	88	88	-	-
3119	Manufacture of cocoa, chocolate and sugar confectionery	4	4	-	-
3121	Manufacture of food products not elsewhere classified	2	2	-	-
3134	Soft drinks and carbonated waters industries	3	3	-	-
32	Textile wearing apparel and leather industries	536	536	-	-
3220	Manufacturing of wearing apparel, except footwear	536	536	-	-
33	Manufacture of wood and wood products, including furniture	239	239	-	-
3311	Sawmills, planing and other wood mills	139	139	-	-
3312	Manufacture of wooden and cane containers and small cane ware	6	6	-	-
3319	Manufacture of wood and cork products not elsewhere classified	7	7	-	-
3321	Manufacture of furniture and fixtures, except primarily of metal	74	74	-	-

Table A-11 (Continued)

ISIC Code	Industry	Total	Private sector	Mixed sector	Government sector
3322	Upholstering	13	13	-	-
34	Manufacture of paper and paper products, printing and publishing	18	18	-	-
3411	Manufacture of pulp paper and paperboard	1	1	-	-
3412	Manufacture of containers and boxes of paper and paperboard	1	1	-	-
3420	Printing, publishing and allied industries	16	16	-	-
35	Manufacture of chemicals, and of chemicals, petroleum coal, rubber and plastic products	22	19	2	1
3511	Manufacture of basic industrial chemicals except fertilizers	5	4	1	-
3512	Manufacture of fertilizers and pesticides	1	-	1	-
3523	Manufacture of soap and cleaning preparations, perfumes and other toilet prep.	1	1	-	-
3530	Petroleum refineries	1	-	-	1
3540	Manufacture of miscellaneous products of coal and petroleum	4	4	-	-
3559	Manufacture of rubber products not elsewhere classified	2	2	-	-
3560	Manufacture of plastic products not elsewhere classified	8	8	-	-
36	Manufacture of non-metallic mineral products except coal petroleum products	116	116	-	-

Table A-11 (Continued)

ISIC Code	Industry	Total	Private sector	Mixed sector	Government sector
3692	Manufacture of cement, lime and plaster	1	1	-	-
3699	Manufacture of non-metallic mineral products not elsewhere classified	115	115	-	-
37	Basic metal industries	2	1	1	-
3710	Iron and steel metal basic industries	2	1	1	-
38	Manufacture of fabricated metal products, machinery and equipment	152	152	-	-
3811	Manufacture of cutlery, handtools and general hardware	46	46	-	-
3812	Manufacture of furniture and fixtures primarily of metal	2	2	-	-
3813	Manufacture of structural metal products	100	100	-	-
3819	Manufacture of fabricated metal products not elsewhere classified except machinery equipment	1	1	-	-
3823	Manufacture of metal and woodworking machinery	1	1	-	-
3829	Machinery and equipment except electrical N.E.C.	1	1	-	-
3841	Shipbuilding and repairing	1	1	-	-
39	Other manufacturing industries	15	14	-	-
3901	Manufacture of jewellery and related articles	14	14	-	-
3909	Manufacturing industries not elsewhere classified	1	-	-	-

Source: State of Qatar, Central Statistical Organization, Annual Statistical Abstract, July 1986.

Table A-12: Production, area and yield of different crops, 1985

Crops	Yield (tonnes per hectare)	Area (hectare)	Production (tonnes)
1. Cereals	...	477	1,539
Wheat	0.235	59	140
Barley	0.335	417	1,399
2. Vegetables	...	1,407	17,091
Tomatoes	1.796	310	5,574
Sugar Melons	0.839	189	1,586
Watermelon	0.977	93	912
Cucumber	0.890	58	522
Marrows	1.217	137	1,673
Pumpkin	2.532	17	443
Sweet Pumpkin	1.913	8	160
Carrots	1.026	55	570
Eggplant	1.190	67	808
Lettuce	1.363	51	696
Cabbage	1.285	50	654
Cauliflower	1.185	36	437
Green pepper	0.513	20	103
Onions	1.000	59	599
Mulokhia	1.236	22	282
Radish	1.390	45	628
Peas	0.400	1	5
Spinach	0.986	10	106
Beans	0.793	1	8
Okra	0.409	48	196
Turnip	1.044	19	205
Snake-cucumber	1.289	7	90
Others, ^{a/}	0.883	94	834
3. Other plants crops			
Root beets	1.033	5	54
4. Fruits and dates	...	1,661	7,681
Citrus fruits	0.461	165	763
Grapes	0.398	32	128
Guavas	0.405	33	135
Figs	0.295	49	146
Pomegranates	0.428	43	186
Mulberries	0.296	8	25
Dates	0.974	505	4,921
Kanar	0.429	280	1,201
Almond	0.398	32	127
Other	0.411	11	49
5. Forage (Clover)	10.430	482	50,303

Source: State of Qatar, Ministry of Industry and Agriculture.

^{a/} Including potatoes.

Table A-13: Distribution of credit facilities of commercial banks by sector, 1977-1984
(percentage)

Purpose/Year	1977	1978	1979	1980	1981	1982	1983	1984	Period Average
1. Govt. & Govt. agencies	...	...	...	8.7	10.9	7.8	6.1	5.9	4.9
2. Merchandise	57.4	43.9	42.4	49.3	47.8	47.7	41.6	41.1	46.4
3. Industry	5.5	6.2	14.7	3.9	3.3	4.2	4.0	5.0	5.9
4. Agriculture	0.1	0.2	0.1	...	...	0.2	0.1	...	0.1
5. Housing and construction	16.6	18.3	16.3	12.7	16.0	13.2	13.4	16.2	15.3
6. Lands	1.4	1.3	1.7	3.8	0.9	0.6	0.2	0.1	1.3
7. Banks and financial institutions	...	...	...	0.5	0.9	0.5	0.5	1.3	0.5
8. Transport	1.7	1.7	1.4	3.1	3.0	1.7	1.8	2.3	2.0
9. Personal	8.6	5.9	13.5	13.8	10.7	19.4	27.7	23.6	15.4
10. Professionals	1.5	1.0	2.4	1.0	1.9	1.9	0.1	0.2	1.3
11. Other	7.2	21.5	7.5	3.2	4.6	2.8	4.5	4.3	6.9
Total (%)	100	100	100	100	100	100	100	100	100
Total (in millions of QR)	2,463.6	2,889.2	3,278.4	3,693.0	4,507.3	5,575.8	6,056.3	5,439.5	

Source: Qatar Monetary Agency, The Banking and Financial System in Qatar, December 1985.

ANNEX B
TECHNICAL CO-OPERATION PROJECTS OF UNIDO

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

State of QATAR

Backstopping

<u>Responsibility</u>	<u>Progr.Element</u>	<u>Project Number</u>	<u>Project Title</u>
IO/IIS/PLAN	J12413	TF/QAT/77/002**	Industrial consultancy services (continuation of DP/QAT/74/004)
IO/T/CHEM	J13425	DP/QAT/83/016*	Industrial pollution (phase II) (see also DP/QAT/79/001)

* Large-scale project (= total allotment \$150,000 or above)

** Total allotment \$1 million or above

UNIDO's Completed Technical Co-operation Projects

State of QATAR

since 1972

Backstopping Responsibility	Spec.Act.Code/ Progr.Element	Project Number	Project Title
IO/IIS/INFR	31.3.M	TF/QAT/78/002	Industrial legislation and licensing experts
IO/IIS/INFR	31.3.N	TF/QAT/78/003	Industrial information and statistics
IO/IIS/PLAN	00.0	TF/QAT/71/001	Industrial development
IO/IIS/PLAN	31.2.A	CS/QAT/74/004	Industrial consultancy services (multifund to DP/QAT/74/004)
IO/IIS/PLAN	31.2.A	DP/QAT/74/004	Industrial consultancy services (multifund to CS/QAT/74/004)
IO/T/CHEM	30.5.03	CS/QAT/71/503	Industrial advisory services (multifund to DP/QAT/71/503)
IO/T/CHEM	30.5.03	DP/QAT/71/503	Industrial advisory services (multifund to CS/QAT/71/503)
IO/T/CHEM	32.1.J	DP/QAT/83/015	Advisory services in environmental protection
IO/T/CHEM	J13425	DP/QAT/79/001	Assessment and control of industrial pollution (see also DP/QAT/83/016)

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* Also available in French.