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INDUSTRIAL DEVELOPMENT REVIEW SERIES

SAUDI ARABIA

Prepared by the
Regional and Country Studies Branch

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Preface

This series of industrial development reviews on developing countries is prepared within the framework of UNIDO country studies by the Regional and Country Studies Branch. The reviews provide a survey and brief analyses of the respective country's industrial sector, as an information service to relevant sections within UNIDO and other international agencies as well as aid agencies in developed countries concerned with technical assistance to industry. It is expected that the reviews will prove a handy, useful information source also for policy-makers in the developing countries as well as for industrial entrepreneurs, financiers and economic researchers.

The reviews draw primarily on information provided by the UNIDO data base and material available at UNIDO headquarters from national and international statistical publications. Since up-to-date national statistical data usually are not complete, it is evident that the reviews will need to be updated and supplemented periodically. 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 appropriate national authorities and institutions in the respective countries and other readers will provide UNIDO with relevant comments, suggestions and information. Such response will greatly assist UNIDO in updating the reviews.

The present Review was prepared on the basis of information available at UNIDO headquarters in mid-1986. 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. Chapters 3 and 4 contain various kinds of reference material on national plans and 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 presentations of manufacturing trends as well as statistical and other appendices.

It should be noted that the reviews are not official statements of intention or policy by Governments nor do they represent a comprehensive and in-depth assessment of the industrial development process in the countries concerned.

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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 (1984/85) indicate a crop year or a financial year. Dates divided by a hyphen (1984-85) indicate the full period, including the beginning and end years.

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

In tables:

Three dots (...) indicate that data are not available or are not separately reported;
A dash (-) indicates that the amount is nil or negligible;
A blank indicates that the item is not applicable;
One dot (.) indicates that there is insufficient data from which to calculate the figure.

Totals may not add precisely because of rounding.

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

The following abbreviations are used in this document:

ARAMCO	Arab-American Oil Company
b/d	barrels per day
Btu	British thermal unit
EEC	European Economic Community
GDP	gross domestic product
GNP	gross national product
MVA	manufacturing value added
NIC	National Industrialization Corporation
PETROMIN	General Petroleum and Minerals Organization
PIF	Public Investment Fund
SABIC	Saudi Basic Industries Corporation
SIDF	Saudi Industrial Development Fund
SR	Saudi riyal

BASIC INDICATORS 1
The economy

Population (1985):	11 million[a/]					
Area:	2,240,000 square kilometers					
Population density (1985):	5 persons per km^2					
Average annual growth of population (1973-84):	4.9 per cent					
GNP per capita (1984):	$10,530					
Labour force (1984/85):	4.446 million					
of which Saudi:	1.786 million					
Non-Saudi:	2.660 million					
GDP[b/] (1984/85):	$98.1 billion					
Average annual growth rate of (per cent)	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85
Oil GDP:	8.5	3.3	-9.2	-36.1	-8.8	-15.0
Non-oil GDP:	11.8	12.4	7.2	2.7	-0.9	6.4

Structure of non-oil GDP: (percentage)	1984/85
Agriculture[c/]	6.4
Manufacturing	7.7
Construction	14.3
Other	71.6

Consumer price inflation: (per cent)	1980	1981	1982	1983	1984	1985
	3.7	2.7	1.1	0.9	-0.9	-2.0

Exchange rate: (Saudi riyal equivalents to $1)	1980	1981	1982	1983	1984	1985	July 1986
	3.327	3.383	3.427	3.455	3.524	3.645	3.750

a/ Unofficial estimate.
b/ At current prices.
c/ Including forestry and fishing.

BASIC INDICATORS 2
Resources and transport infrastructure

Cash crops (1982/83): (in tons)	Wheat (817,478), fodder crops,[g/] watermelon (446,742), tomato (263,980), muskmelon (75,553), marrow (39,709), egg plant (34,256), okra (11,979), dates (406,722), citrus fruits (8,674), grapes (42,316)
Fishery production (1983):	
Marine fish:	16,000 tons
Shell fish:	10,000 tons
Livestock (1979/80): ('000)	Sheep (2,948,587), goats (2,240,468), cattle (398,726), poultry (606,191), camels (164,367)
Mineral resources:	Oil, natural gas, phosphates, iron ore, gold, silver, magesite, silica sand, zinc, bauxite, clays, building stone
TRANSPORT	
Roads:	29,850 km of main and secondary paved roads 48,400 km of rural roads
Railways:	884 km
Major ports:	Yanbu, Jeddah, Dammam, Jubail, Jizan
International airports:	Jeddah, Dhahran, Riyadh

g/ Production figures for 1982/83 not available.

BASIC INDICATORS 3
Foreign trade and balance of payments

Total exports (1985)a/:	$28 billion
Oil exports (1984/85):	
Crude:	SR 107,459 million
Refined:	SR 10,692 million
Of which bunkerfuel:	SR 313 million
Other exports:	Petrochemicals, fertilizers, building materials, etc.
Main destinations of exports (1984): (percentage)	Japan (24.2), France (9.1), USA (8.3), Italy (5.4), Federal Republic of Germany (4.1), UK (3.4)
Total imports (1985)a/:	$28 billion
Principal imports (1984): (in million $)	Machinery (8,062), foodstuffs (5,318), vehicles (4,517), metals (4,023), textiles (2,746)
Main origins of imports (1984): (percentage)	Japan (19.5), USA (17.4), Federal Republic of Germany (8.3), France (7.8), Italy (7.2), UK (5.8)
Balance of payments (1985)a/: (Current account deficit)	$25 billion
Reserves (1986):	$70 billion

a/ Unofficial estimates.

BASIC INDICATORS 4
The manufacturing sector

Value of manufacturing output,a/ excluding refining (1984/85):	SR 2,641 million					
Composition of MVA: (per cent)	1975	1982				
Food, beverages and tobacco	10.3	12.3				
Petroleum refineries	83.6	73.9				
Other	6.1	13.8				
Average annual growth of the manufacturing sector: (per cent)	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85
Manufacturing (excluding refining)	15.8	15.8	15.8	16.0	13.0	1.8
Manufacturing (including refining)	8.8	7.1	7.0	9.5	13.1	-1.6
Average annual growth of MVA: (1973-83)	8.2 per cent					
Structure of manufacturing employment: (per cent)	1975	1984				
Metal industries	31.0	27.3				
Building materials	22.6	29.7				
Chemicals	15.3	15.9				
Foodstuffs, drinks and tobacco	14.1	13.8				
Other	17.0	13.3				

a/ At constant 1979/80 prices.

BASIC INDICATORS 5
Inter-country comparison of selected indicators

Indicator	Measure	Period	Kuwait	Libya	Oman	Saudi Arabia	United Arab Emirates
I. Demographic indicators							
Population	million	mid-1984	1.7	3.5	1.1	10.8	1.3
Population growth	per cent per annum	1973-83	9.2	10.8	16.4	...	8.7
Infant mortality	aged under 1	1984	22	91	110	...	36
Area	thousands of square kilometres		18	1,760	300	2,240	84
II. Economic indicators							
GNP	$ million	1984	16,720	8,520	6,490	10,530	21,920
Per capita growth rate	per cent per annum	1965-84	-0.1	-1.1	6.1	5.9	...
GDP	$ million	1983	21,710	30,570	7,680	109,380	28,840
Agriculture	as per cent of GDP	1983	1	2	...	3	1
Industry	as per cent of GDP	1983	58	64	...	60	67
Manufacturing	as per cent of GDP	1983	8	4	...	7	9
Services	as per cent of GDP	1983	41	34	...	30	32
Gross domestic investment	as per cent of GDP	1983	21	23	...	35	27
Current account	$ million	1983	5,570	-1,803	148	-24,036	7,137
III. Industrial indicators							
MVA[a/]	$ million	1982	1,790	760	...	7,230	2,428
MVA growth rate	per cent per annum	1973-83	...	11.4	...	8.2	5.3
Share of world MVA	per cent	1981	0.06	0.02	...	0.15	...
Share of manufactured exports in total exports[b/]	per cent	1981	14.3	0.37	5.	0.59	0.28[c/]

a/ At 1980 prices.
b/ SITC 5-8 less (67 + 68).
c/ 1978.

Note: Five countries listed are high-income oil exporters.

Executive Summary

The Saudi economy has been passing through a period of subdued overall growth resulting from the sharp fall in oil production and revenue. Oil sector GDP suffered a drastic fall of 14.2 per cent during the Third Five-Year Plan ending 1984/85. Oil exports in 1985 were estimated to have averaged little more than 2.5 million barrels a day (b/d), compared with more than 9 million b/d in 1981. The current account of the balance of payments moved from a surplus of more than $38,000 million in 1981 to a deficit of $25 million in 1985.

Oil revenues represented 90 per cent of total government revenues during the 1970-81 period, and at present the share is still 60 per cent. Government spending of oil income is the single most important determinant of economic activity, and therefore the decline in oil income presents a formidable challenge to the Saudi economy.

The modern economy emerged after the 1962 reform programme which allocated a large proportion of oil income to the development of Saudi Arabia's infrastructure, agriculture, industry and government services. This development effort notwithstanding, the economy is still dominated by oil and gas extraction, which until the early 1980s accounted for well over 60 per cent of GDP; the 1984/85 share was 35 per cent.

The manufacturing sector is still quite modest, representing some 7.7 per cent of non-oil GDP in 1984/85, but growth has been rapid: real MVA growth during the 1973-83 period was, on average, 8.2 per cent per year. Total invested capital was SR 9,899 million in 1975 and SR 55,431 million in 1984. Petroleum refining accounted for 59 per cent of MVA in 1983/84; the share has declined somewhat, and was estimated to be below 50 per cent in 1986. The country has recently become self-sufficient in refined petroleum products. The manufacturing sector is otherwise dominated by the petrochemical industry. While its share in non-oil invested capital was 14.7 per cent in 1975, the share had risen to 36.1 per cent in 1984.

High oil prices in the 1970s and early 1980s have led to overexpansion in the manufacturing sector, both in terms of employment and capital. The less favourable economic conditions of the mid-1980s have underlined the need for a more integrated industrial structure, intensified linkages, inter-plant co-operation and greater efficiency both in planning and operation of industrial plants.

In spite of high per capita income, the domestic market is relatively small, and sustained economic growth depends on a high export performance. So far, manufactured exports consist largely of petroleum products. But since non-manufactured exports consist mainly of crude oil, the need for diversification is obvious. Petrochemical exports have expanded considerably during recent years, despite the fact that the petrochemicals branch suffers from overcapacity in many countries. There are, however, some serious obstacles to the further expansion of these exports. The years of international recession and sluggish growth have also caused stagnation in the markets for other products of the Saudi-manufacturing industry, such as petrochemicals and fertilizers.

In regard to imports the main items are machinery, motor vehicles, textiles, food and inputs for the manufacturing industry and the construction sector. The manufactured imports are largely provided by developed countries whereas the raw materials come mainly from developing countries. The decrease in oil income has led to a significant drop in imports: imports in 1985 were 28 per cent lower than in 1984.

Government ownership plays a major role in the Saudi economy. The Arab-American Oil Company (ARAMCO), formerly a joint Saudi-US enterprise, is now fully owned by the Saudi Government. It produces 97 per cent of all crude oil and produces all liquid natural gas. Of equal importance is the role of the General Petroleum and Mineral Organization (PETROMIN) which plays a leading role in oil refining. The Saudi Basic Industries Corporation (SABIC) is another major institution with responsibility for a wide range of joint ventures with foreign enterprises in both oil and non-oil basic industries. In 1985, some 600 of such joint ventures had been licensed, of which 390 were

operational; SABIC's joint ventures investment in the steel and petrochemicals industries totalled over SR 38 billion in that year. Through joint ventures, the Saudi Government expects to effect a large-scale transfer of technologies and the training of Saudi personnel for modern industry. Efforts in the field at present concentrate on electronics, engineering and aerospace industries.

In recent years, the private sector has been given more leeway in an effort to mobilize Saudi entrepreneurs to counter the effects of declining oil prices and a stagnating world market. One important factor in the development of the private sector could be the National Industrialization Corporation (NIC), founded in 1982 to serve as a private-sector equivalent to SABIC, but concentrating on downstream manufacturing.

Government policies stimulating industrial development have been part of Five-Year Plans since 1970. The most important objective is to lessen the dependence on oil and to create a diversified manufacturing sector. Actual expenditure on industrial projects has never been very high in comparison to other sectors of the economy, but considerable funds have been made available to create the conditions for further industrial development. A number of industrial estates have been established outside the central belt of the country where most manufacturing enterprises are found. Since the mid-1970s work on the industrial cities of Jubail and Yanbu has been in progress. These are to develop into diversified industrial centres around a "growth pole" core of refinery and petrochemical industries.

A key role in the financing of industrial projects is played by the Saudi Industrial Development Fund (SIDF), established by the Saudi Government. It provides medium-term interest-free, low-cost loans for industrial projects. Whereas in the past projects in the building materials branch received the majority of loans, reflecting the expansion of the country's infrastructure, priorities have shifted to metal products, consumer goods and final products derived from petrochemicals. Apart from the financial support provided by SIDF, support to industry also takes the form of direct government funding and

purchasing, a variety of tax incentives, subsidies and tariffs protecting domestic industries.

The rapid development of the Saudi economy from the 1960s onwards has emphasized the need for expansion of manpower training and education. There has also been an acute shortage of manpower in general, which has attracted a large non-Saudi labour force. Under the Fourth Plan (1985-1990) special attention will be paid to improvements in educational facilities. Under a Saudization scheme part of the expatriate labour force will be replaced by Saudi nationals.

The vast expansion of oil production during the last decades has caused a partial neglect of Saudi Arabia's other mineral resources. Exploration has shown that the country possesses a wide range of metallic minerals and non-metallic non-oil minerals. So far, only the latter have been exploited to a significant extent to serve as raw materials for the building materials industry. With the shift in development away from oil, the other mineral resources can make a major contribution to the Saudi economy.

Bilateral and multilateral arrangements cover a wide range of co-operation projects for development. A UNIDO mission has identified new areas for co-operation within the framework of the Fourth Plan. Particular attention is given to the downstream petrochemical industries. The country co-operates on economic matters with other member countries of the Gulf Co-operation Council. Saudi Arabia is actively involved in development co-operation. The country has granted SR 136 billion in development aid since 1970.

1. THE ECONOMY OF SAUDI ARABIA

1.1 Recent economic trends

The Saudi economy is passing through a period of decelerating growth resulting from the sharp fall in oil production and revenue. Oil sector GDP suffered a drastic fall of 14.2 per cent during the Third Five-Year Plan ending 1984/85 (see Table 1), against the targeted average annual growth rate of 3.2 per cent. With the onset of the world recession in 1981 demand for oil declined, forcing restrictions on OPEC and particularly Saudi production. Oil exports in 1985 were estimated to have averaged little more than 2.5 million barrels a day (b/d), compared with more than 9 million b/d in 1981.

The current account of the balance of payment moved from a surplus of more than $38,000 million in 1981 to a deficit of $25 million in 1985. Falling oil prices in early 1986 led to a decline in oil income from $113 billion in 1981 to an estimated $18 billion for 1986. Saudi Arabia is taking steps to push oil prices up.[1/]

The dramatic decline in oil income is illustrated in Table 2. Oil revenue represented 90 per cent of total government revenue during the 1970-1981 period; its share declined rapidly after the 1981/82 financial year, but it still accounts for 60 per cent of government revenue. Oil income is not only the mainstay of the Saudi economy but also, through government spending of oil revenue, the single most important determinant of economic activity in other sectors. It is therefore not surprising that actual economic performance during the Third (1980-1985) Plan period remained well below forecasts.

1/ Saudi Arabia's oil output strategy seems to have been successful in making OPEC members reach a binding agreement on quotas restoring oil prices on the world market. Seven members of OPEC offered voluntary cuts in their July 1986 production rate amounting to 1.6 million barrels a day as an interim measure to boost oil prices. In August 1986 OPEC agreed on production quotas effective for a period of three months. Prospects, however, remain uncertain as OPEC members disagree over the distribution of an extra 200,000 b/d of production during the last two months of 1986.

Real growth of non-oil GDP averaged 6.4 per cent a year between 1980/81 and 1984/85, which was slightly higher than the envisaged target of 6.1 per cent during the Third Plan. The country's Fourth Plan (1985/86 - 1989/90) calls for annual average growth of 5.6 per cent in oil GDP and a 2.9 per cent growth in non-oil GDP.

Table 1. Real rates of growth in oil and major non-oil sectors, 1979/80 - 1984/85
(per cent)

	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	Third Plan average
Oil sector GDP	8.5	3.3	-9.2	-36.1	-8.8	-15.0	-14.2
Non-oil GDP	11.8	12.4	11.2	7.0	2.7	-0.9	6.4
Government	10.1	13.8	8.1	-1.1	-2.8	-1.9	3.0
Private:	12.7	11.8	12.8	11.0	5.0	-0.5	7.9
Agriculture, forestry & fishing	5.8	5.8	6.0	10.0	7.4	2.0	6.2
Construction	9.1	10.3	10.1	-6.2	-7.6	-9.2	-0.9
Electricity, gas & water	19.7	27.8	25.9	20.8	10.0	10.0	18.6
Manufacturing (excluding refining)	15.8	15.8	15.8	16.0	13.0	1.8	12.4
Manufacturing (including refining)	8.8	7.1	7.0	9.5	13.1	-1.6	6.9
Transport, storage and communications	14.3	8.5	8.2	8.9	11.4	-0.9	7.1
Wholesale and retail trade, restaurants and hotels	25.2	18.4	15.1	12.7	1.8	-0.8	9.2

Source: Saudi Arabian Monetary Agency, Annual Report, 1985.

Despite about $15 billion non-oil income, originating from foreign investments and domestic sources, and foreign reserves amounting to $70 billion, budgetary problems have arisen. Publication of the budget for 1986/87 has been postponed until September 1986. It appears that the country plans to keep public spending at about $40 billion in the 1986/87 budget, less than half the 1980 level. The delayed announcement of the budget led to speculation against the Saudi riyal, leading to its devaluation from 3.65 per US dollar to 3.75 in June 1986. In spite of these setbacks in recent years, the Government appears determined to implement a programme of slow but steady industrial diversification.

The Saudi Government is concentrating efforts on attracting foreign high-tech corporations to assist in the modernization and diversification of the economy. One major example of the type of projects being initiated with

Table 2. Saudi oil and gas revenue and production (ARAMCO), 1982-85

	Gross revenue (US$ million)	Production		
		Crude oil[a/] (million b/d)	Liquid gas ('000 b/d)	Dry gas (billion Btu/d)
1982	67,896	6.8	430	1,582
1983	43,351	5.0	329	1,445
1984	35,290	4.4	356	1,623
1985	25,908	3.3	316	1,901

Source: ARAMCO statements.

a/ Including crude oil used by ARAMCO itself.

Saudi government support is a joint project, which involves a consortium of US firms. It encompasses a range of projects, of which one has been implemented and others are being studied: an aerospace maintenance, repair and support centre, an advanced electronics centre, a computer systems and services venture, a digital telecommunications company (not yet approved), a helicopter manufacturing plant, a power engineering centre, an advanced biotechnology centre and production of medical equipment and products. Developed country participants in this project are required to find Saudi partners for joint ventures; in this way, the transfer of modern technologies to domestic entrepreneurs is to be ensured. As private markets for high-tech products, both in Saudi Arabia and other countries of the region, are small, the combination of manufacturing activities was chosen with Saudi government purchases in mind. There are signs of uncertainties underlying the implementation of this project in the face of the present financial circumstances.

Economic recovery during the late 1980s, while to an important extent depending on developments in international markets, is expected to result from the modernization and expansion of the oil-refining branch and from increasing non-oil industrial activities. In the sphere of industrial diversification the petrochemical industry has been making significant progress. The Saudi petrochemical industry is expected to satisfy 6-7 per cent of world demand in the near future. Other new industries include chemical products, steel and engineering and fertilizers. Investment in non-oil economic activities is

expected to grow by a yearly average of 10 per cent; by 1990 the non-oil sector should have increased its share in gross fixed capital formation to 50 per cent, and the GDP share of manufacturing (including oil refinery) is expected to be 13 per cent in 1990.

1.2 Economic structure

The modern economy emerged after the 1962 reform programme which allocated a large proportion of oil income to the development of Saudi Arabia's infrastructure, agriculture, industry and government services. Mining and quarrying, completely dominated by oil and gas extraction, have long accounted for well over 60 per cent of GDP (see Table 3); only in recent years has their share decreased to less than 50 per cent. The 1984/85 share was 39.1 per cent. By far the greatest part of Saudi oil (97 per cent) is produced by the Arab-American Oil Company (ARAMCO), now totally Government-owned.

Table 3. Gross domestic product by sector, 1969/70 - 1984/85 (selected years)

(percentage share at current prices)

Sector	1969/70	1974/75	1979/80	1983/84 a/	1984/85 b/
Oil sector	55.8	79.8	65.8	42.9	39.1
Non-oil sector of which	44.2	20.1	34.2	57.0	60.9
a) Private	70.2	64.9	56.9	60.1	60.4
b) Government	29.8	35.1	43.1	39.9	39.6

Sources: Ministry of Finance and National Economy; Central Department of Statistics.

a/ Revised estimates.
b/ Preliminary estimates.

Note: GDP and components are measured at producer's value and include import duties.

The adaptation of oil production to fluctuations in world demand leads to fluctuations in the supply of associated gas. Associated gas is an important source of energy for desalinization plants and petrochemical industry, and

until recently, therefore, essential economic activities could be seriously disrupted by shortages of gas. The completion of non-associated gas production systems has now removed these bottlenecks in industrialization. The second most important sector of the economy, both in terms of contribution to GDP and employment share, is the services sector, which now accounts for some 25 per cent of GDP (and for some 60 per cent of non-oil GDP). Construction follows with 12.7 per cent (1984/85), a share which is appreciably higher than in the 1960s and 1970s. The growth of the construction sector which was closely linked to oil revenues, however, has declined strongly. The emphasis is shifting to servicing the existing infrastructure. Agriculture claims only a modest share of GDP, but even so its growth has been quite spectacular - the sector more than doubled its GDP share during the Third Plan period, and the country has reached self-sufficiency in wheat.

The size of the manufacturing sector is very modest, although growth during the Third Plan period has been fast. Its contribution to non-oil GDP stood at around 7.7 per cent in 1984/85. The most important non-oil manufacturing branches are the chemicals, building materials, metals and food products industries. Petroleum refining, however, produces the larger part of MVA; its share in GDP in 1982/83 was 3.2 per cent, as opposed to 2.5 per cent for non-oil manufacturing.

Table 4. Non-oil GDP by major economic activities, 1983/84 and 1984/85
(at constant 1979/80 prices)

Economic activity	1983/84 (million riyals)	(Per cent)	1984/85[a/] (million riyals)	(Per cent)
Electricity, gas, water	1,855	(5.3)	2,041	(5.9)
Agriculture, forestry and fishing	2,172	(6.2)	2,216	(6.4)
Manufacturing[b/]	2,599	(7.5)	2,645	(7.7)[b/]
Construction	5,394	(15.5)	4,899	(14.3)
Transport, storage and communication	4,441	(12.8)	4,403	(12.8)
Wholesale, retail trade and restaurants	8,362	(24.1)	8,299	(24.1)
Other	9,804	(28.3)	9,814	(28.5)
Non-oil GDP	34,627	(100)	34,317	(100)

Source: Saudi Arabian Monetary Agency, Annual Report, 1985.

a/ Preliminary estimates.
b/ Excluding refining.

The growth of capital goods imports during the late 1970s and early 1980s (42 per cent of total imports in 1982) to a large extent reflect the boom in the construction sector: transport equipment was a major item. In recent years, the non-oil GDP share of the construction sector has been reduced by some 50 per cent, and intermediate goods used as inputs in manufacturing have increased their share in imports. By 1985 the proportion of capital goods had fallen to 19.8 per cent of total imports. However, intermediate goods accounted for 43.5 per cent of total imports and these were used in manufacturing.

In spite of a high per capita income, Saudi Arabia still exhibits many of the characteristics of a single resource-based economy; the country largely relies on a single source of export earnings (crude oil, with petroleum products as the major remaining export item), and the services sector is by far the second most important sector.

1.3 Oil pricing policy and government expenditure

After a boom decade, when rising oil revenues financed more than $550 billion in development programmes, Saudi Arabia is now passing through a period of austerity due to falling oil revenues that may last through the rest of the 1980s. Price fluctuations and the extreme dependence of the economy and the Treasury on oil income have caused considerable fluctuations in the execution of development policies. Up to 1973/74, the gradual rise in oil income was reflected in a gradual rise of government expenditure. By the end of 1973, oil prices started a steep rise upwards (see Table 5), and government expenditure during 1974/75, SR 32,000 million, was one-third higher than in the preceding year. The full impact of rising revenue, however, became visible only in 1975/76, when expenditure was at SR 82,000 million, or almost 250 per cent over the preceding year. Government spending then grew steadily until 1980/81, although budget surpluses were replaced by small deficits during 1977/78 and 1978/79, reflecting a slight decline in the riyal value of oil earnings. At the end of 1979, oil prices again started to rise steeply, and so did government spending in the early 1980s: at SR 285,000 million, spending in 1981/82 was almost twice as high as in 1978/79. The decline in oil production and income from 1982 onwards resulted in considerable cuts in government budgets: expenditure was down to SR 244,000 million in 1982/83, declined to SR 230,000 million in 1983/84, SR 215,000 million in 1984/85, and

is expected to be SR 200,000 million in 1985/86. In spite of these cuts, there were substantial (and unusual) deficits: SR 24,000 million in 1983/84, SR 45,000 million in 1984/85. The 1985/86 budget was expected to be balanced, but a further drop in oil income is thought to have resulted in a budget deficit of approximately SR 40,000 million. The delay in publication of Saudi Arabia's 1986/87 budget is presumably caused by the preparation of new austerity measures. With the oil market worsening (by spring, 1986, oil prices were below US$ 15 per barrel), Saudi Arabia may have to reduce expenditure levels in the new budget to avoid further substantial drawdowns on reserves.

Table 5. Saudi oil export prices and revenue statistics, 1960-85

Year	End of year export (US$ per barrel)	Oil revenues (million US$)
1960	1.800	333.7
1961	1.800	377.6
1962	1.800	409.7
1963	1.800	607.3
1964	1.800	524.2
1965	1.800	664.1
1966	1.800	789.9
1967	1.800	903.6
1968	1.800	926.4
1969	1.800	949.2
1970	1.800	1,214.0
1971	2.285	1,884.9
1972	2.484	2,744.6
1973	5.036	4,340.1
1974	11.651	22,573.5
1975	11.951	25,676.2
1976	12.376	30,754.9
1977	13.660	36,540.1
1978	13.660	32,233.8
1979	24.000	48,435.2
1980	32.000	84,466.4
1981	34.000	99,187.0
1982	34.000	67,895.8
1983	29.000	35,758.5
1984	28.23	29,606.7
1985	28.00 (Oct.)	25,600.0 (estimate)

Sources: A. Reza, S. Islami, Rostan Mehraban Karoussi. "The political economy of Saudi Arabia"; Oil & Energy Trends, 1984 Statistics Review; The Economist Quarterly Review of Saudi Arabia; Aramco Statements.

Up to the 1970s, no specialized agency existed to formulate and co-ordinate oil policy in Saudi Arabia. PETROMIN, founded in 1962, was charged with the development of both the oil and manufacturing sectors, but it did not formulate oil pricing or production policies. The transfer of oil revenue, the basis for all government development measures, was based on a simple agreement on royalty percentages (later expanded to include profit-sharing), concluded between the oil companies and the Saudi Government. In 1973, the Supreme Petroleum Council was created. Together with advisers to the King and the Petroleum Ministry this council formulates oil policy. The Petroleum Ministry is charged with policy execution.

Another element in the formulation of pricing policy is OPEC, of which Saudi Arabia is a founding member. It is also the largest producer: some 30 per cent of total OPEC production was produced by Saudi Arabia in 1977, and in 1985 the figure was still close to 25 per cent. Saudi Arabia is often thought to be the main force guiding OPEC pricing strategies, but this may not be totally accurate. Individual member strategies, the disruptive influence of events like the Gulf War, and changes in supply and demand outside the OPEC countries may have had a more decisive influence.

The Saudi share in world production of crude petroleum, which stood at 8.3 per cent in 1970, had doubled by 1980, to rise to 17.5 per cent in 1981. It then fell to 12.2 per cent in 1982, to 8.3 per cent in 1983, and rose to 9.4 per cent in 1984. The vast reserves have in principle enabled the country to rely in part on expanded output (rather than price increases) to boost revenue during periods of scarcity in the world market. The high prices in 1980 and 1981 seem partly related to the fact that demand remained high while oil extraction was approaching physical limits in Saudi Arabia.

In the face of falling oil prices Saudi Arabia is offering contract customers discounts of at least 50 cents per barrel, depending on volumes purchased. The incentive may boost Saudi Arabia's output above 4.3 million barrels a day - the maximum quota for the Kingdom under the 16 million b/d ceiling agreed by the Organization of Petroleum Exporting Countries (OPEC) in 1984. The country is believed to have increased its stocks of crude oil stored at sea (in supertankers) in order to be able to react promptly to

upward movements in oil prices. The increase in the OPEC output from 13 million b/d in June 1986 to 20 million b/d in July 1986 is believed to be wholly accounted for by Saudi production.

1.4 Overview of the manufacturing sector

Petroleum refineries accounted for some 54 per cent of total MVA in 1983/84, but declining to less than 50 per cent in 1986 (estimated). Up to the early 1960s, Saudi Arabia exported crude oil and imported all of its refined petroleum products. The country has now reached self-sufficiency in these products. The overall structure of the non-oil manufacturing sector shows one essential change over the past decade: the petrochemical industry has become increasingly important (see Table 6). Its share of invested capital rose from 14.7 per cent in 1975 to 36.1 per cent in 1984. A major role in the expansion of the petrochemical industry is played by the Saudi Basic Industries Corporation (SABIC), which has in recent years set up plants producing plastics, fertilizer, methanol, etc., and vigorously promotes further diversification of the petrochemical industry. Appendix Table A-3 presents information on licensed industrial enterprises according to stages of implementation.

Traditional cottage industries and small-scale industries largely catering to the domestic market still play a significant role in Saudi manufacturing. Around 95.9 per cent of all establishments employ less than 20 workers and 71 per cent less than 5. Of the total manufacturing employment 52 per cent work in establishments which employ less than 20 workers. In recent years modern manufacturing activities have grown strongly.

Table 6. Overview of non-oil manufacturing, 1975-84 (selected years)

Industrial activity	1975		1980		1982		1984					
							Factories in production			Licensed factory projects under construction		
	No. of factories	Capital (SR million)	No. of factories	Capital (SR million)	No. of factories	Capital (SR million)	No. of factories	No. of Workers	Total capital (SR million	No. of licenses	No. of workers	Total capital (SR million)
Foodstuffs, drinks and tobacco	73	1,144	242	4,377	269	4,917	287	16,248	5,128	78	3,454	1,581
Ready-made clothes and textiles	10	52	24	438	31	563	33	2,934	568	15	1,484	423
Manufacture of leather products	2	14	5	42	8	70	11	723	102	5	248	66
Manufacture of wood products	25	232	47	399	59	536	60	3,696	539	20	1,062	498
Manufacture of paper and paper products, printing & publishing	46	338	79	859	102	1,143	106	5,227	1,161	17	723	307
Chemical industries including petro-chemicals, coal, rubber & plastics	63	1,460	184	10,562	242	19,606	259	18,681	20,043	116	7,012	29,257
Manufacture of china earthenware, pottery, porcelain and glass	1	335	4	396	5	398	5	1,416	398	5	484	484
Manufacture of building materials	90	4,024	405	15,717	458	16,400	486	34,857	16,822	56	3,381	4,068
Metal industries	159	2,159	383	8,727	462	9,674	500	32,136	10,114	133	8,625	4,118
Manufacture of other products	3	121	10	196	16	215	20	774	227	17	699	275
Storage	1	20	18	329	18	329	18	668	329	19	452	282
TOTAL	473	9,899	1,401	42,042	1,670	53,851	1,785	117,360	55,431	481	27,624	41,059

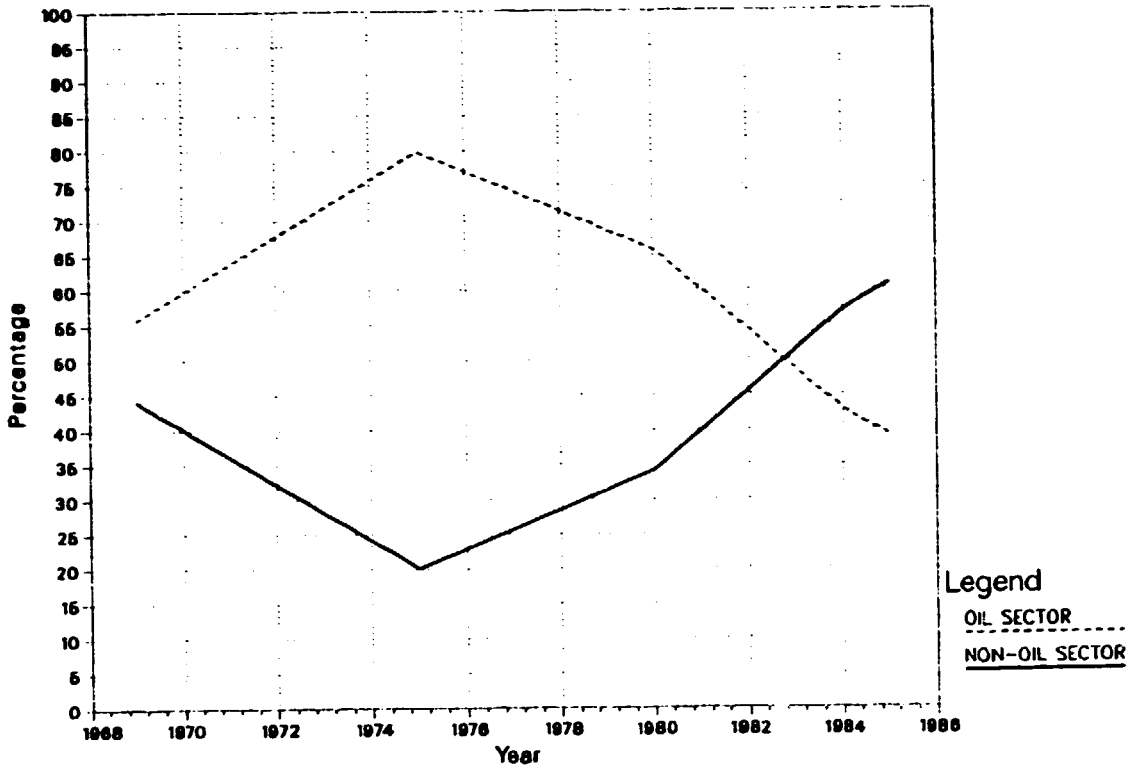
Source: Ministry of Industry and Electricity, Industrial Statistical Bulletin 1984.

Manufacturing industries which do not use oil as a raw material are mainly found in the building materials, metal and foodstuffs branches. Non-oil manufacturing also includes a large number of chemicals and plastics enterprises. In 1983 these enterprises accounted for 13 per cent of operational factories. As mentioned before, demand for building materials has levelled off in recent years with the decline in new construction activities. Saudi Arabia is expected to become self-sufficient in cement during the present decade.

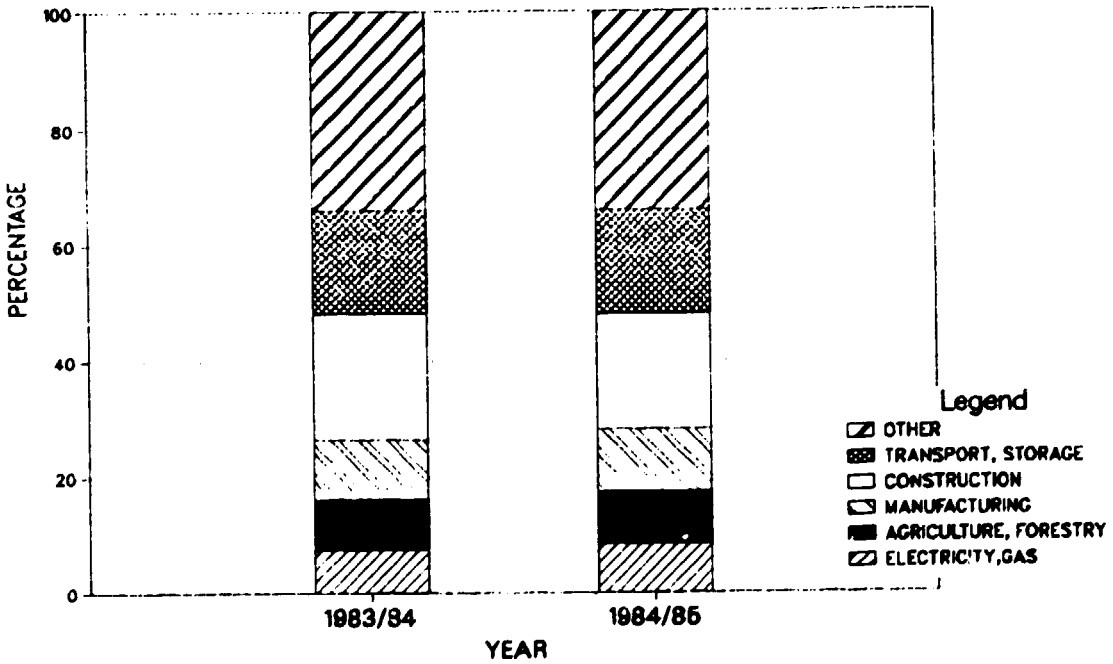
The metal industry and the food processing industry still play a relatively minor role, but, like the building materials industry, are essential for the diversification of the economy. If the wide variety of natural resources is exploited more intensively, these industries can help make the country less dependent on imports. Areas where manufacturing activities are expected to expand are in the production of cement, industrial gases, intermediate petrochemicals, glass products, metal products, automotive parts, animal feed concentrates, building materials and agro industrial products.

MANUFACTURING TRENDS

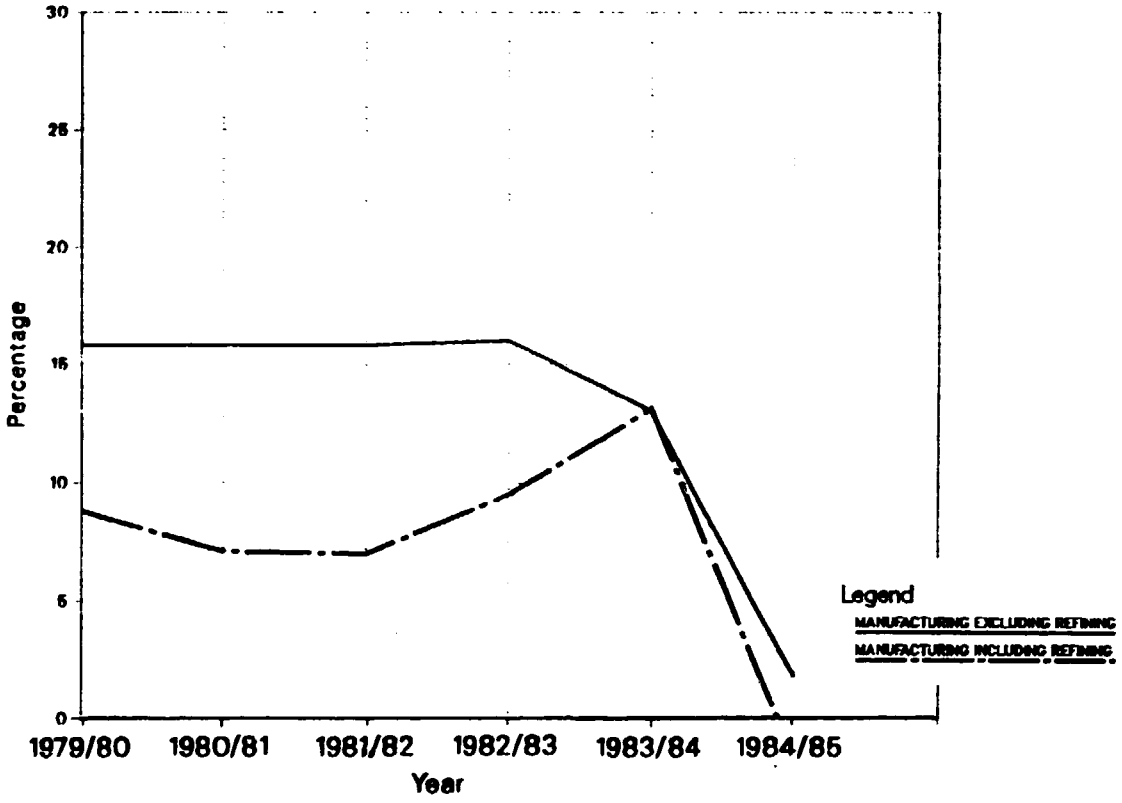
DISTRIBUTION OF GROSS DOMESTIC PRODUCT BY SECTOR, 1969-1985
(at current prices)



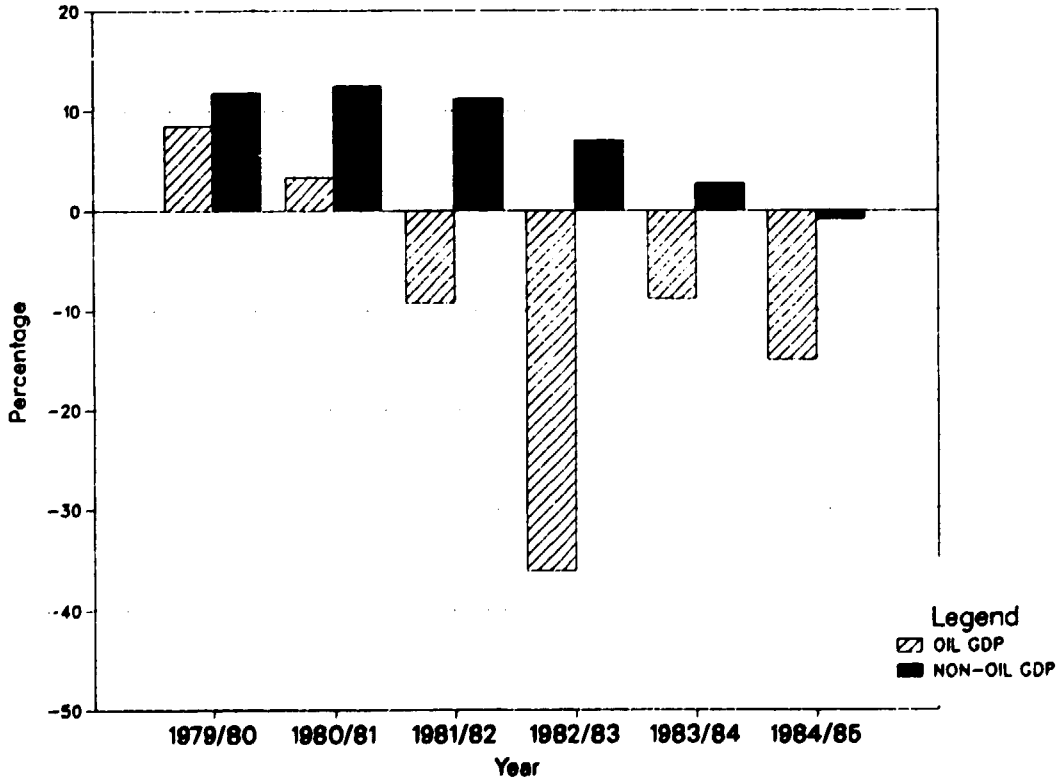
SECTORAL ORIGIN OF NON-OIL GDP, 1983/84 AND 1984/85



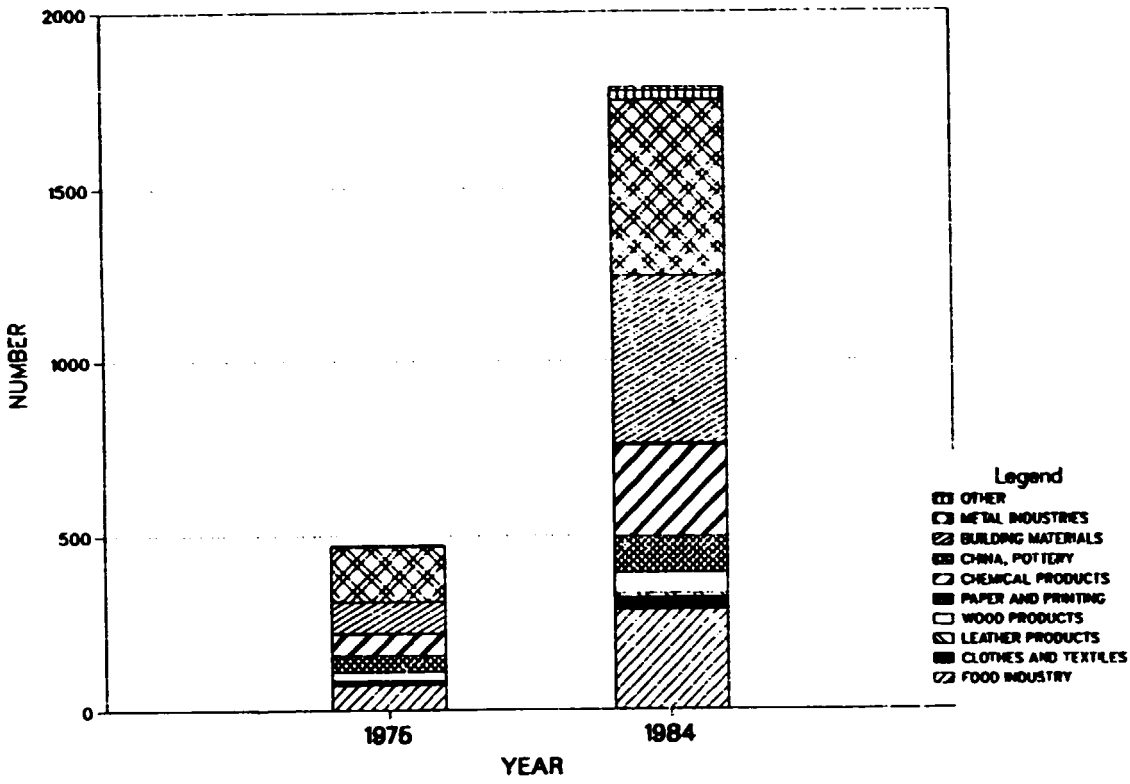
GROWTH OF MANUFACTURING, EXCLUDING AND INCLUDING REFINING, 1979/80-1984/85



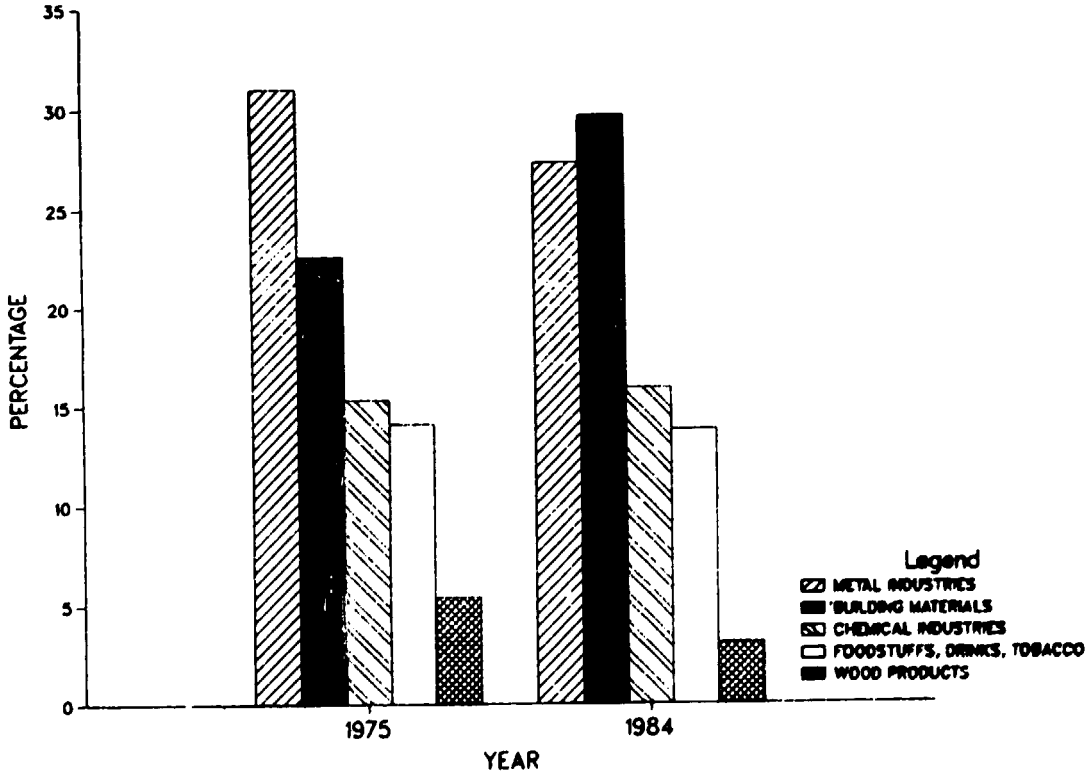
REAL GROWTH RATES OF OIL AND NON-OIL GDP, 1979/80-1984/85



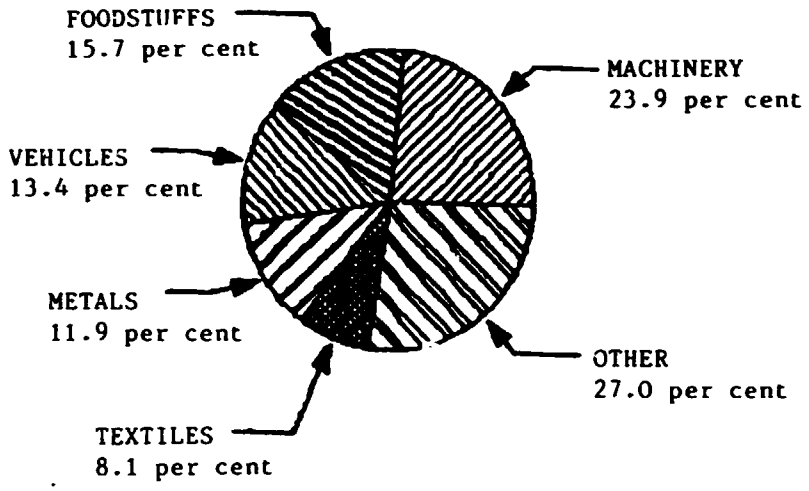
NUMBER OF MANUFACTURING ENTERPRISES, 1975 AND 1984



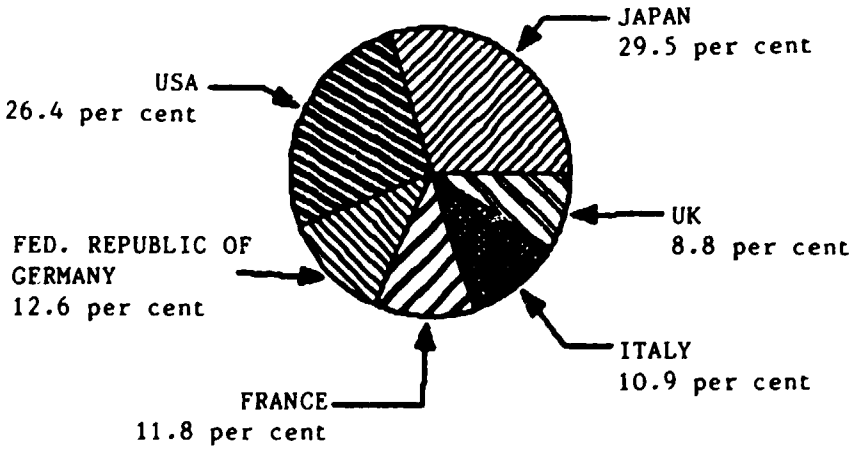
STRUCTURE OF MANUFACTURING EMPLOYMENT, 1975 AND 1984



COMPOSITION OF MANUFACTURED
IMPORTS
1984



ORIGIN OF MANUFACTURED
IMPORTS
1984



2. STRUCTURE AND GROWTH OF THE MANUFACTURING SECTOR

2.1 Growth and structural change

With the exception of traditional crafts and cottage industries, Saudi Arabia had no industry before the mid-1940s, when the first refinery became operative. The pace of industrial expansion was very slow until 1960, but began to accelerate during the 1960s after the implementation of the 1962 reform programme which allocated part of oil revenues to industrial development. By the 1970s large-scale industries included five refineries and a fertilizer plant. Recognizing that oil and natural gas reserves could be depleting and the future demand could diminish, the Saudi Government embarked on a programme of industrial diversification.

Appendix Table A-5 shows the changing pattern of industrial development and the expansion of non-oil industrial activities. The share of food products, beverages and tobacco in recorded MVA increased from 10.3 per cent in 1975 to 12.3 per cent in 1982, and of petroleum refineries declined from 83.6 per cent to 73.9 per cent during the same period. Other non-metallic mineral products more than doubled their share of recorded MVA during 1975-82.

Table 7 gives a somewhat different perspective on industrial development: expansion of licensed factories in manufacturing activities during 1975-84. The accumulated number of industrial licences issued by the Government up to end-1984 reached 3,203 compared to 492 licences issued up to the end of 1975, i.e., an increase of 551 per cent. Of these, 1,785 factories were in operation in 1984 compared to 473 in 1975, an increase of 277 per cent. In terms of enterprise numbers all manufacturing branches have grown significantly during a ten-year period since 1975. With 500 licensed factories in production in 1984, the metal industry ranks first, followed by building materials industry (486), food, drinks and tobacco (287), chemical industries - including petrochemicals, coal, rubber and plastics (256), paper and paper products (106), etc. Real MVA grew at an average annual rate of 8.2 per cent between 1973 and 1983.

Table 7 shows that the highly capital-intensive chemical industries, which use advanced technology, have the largest invested capital. Table 7

Table 7. Number of licensed manufacturing enterprises in production, 1975-84 (selected years)
(value in SR millions)

Manufacturing activity	1975		1977		1979		1980		1982		1984	
	No. of Fac.	Capital	No. of Fac.	Capital	No. of Fac.	Capital	No. of Fac.	Capital	No. of Fac.	Capital	No. of Fac.	Capital
Foodstuffs, drinks and tobacco	73	1,144	139	2,843	214	3,730	242	4,377	269	4,917	287	5,128
Ready-made clothes and textiles	10	52	14	108	21	421	24	438	31	563	33	567
Manufacture of leather products	2	14	2	14	4	29	5	42	8	70	11	102
Manufacture of wood products	25	232	31	276	40	359	47	399	59	536	60	539
Manufacture of paper and paper products, printing & publishing	46	338	59	540	69	690	79	859	102	1,143	106	1,162
Chemical industries including petro-chemicals, coal, rubber & plastics	63	1,460	106	2,166	154	3,257	184	10,562	242	19,606	259	20,043
Manufacture of china earthenware, pottery, porcelain and glass	1	335	3	391	4	396	4	396	5	398	5	398
Manufacture of building materials	90	4,024	253	10,923	356	14,991	405	15,717	458	16,400	486	16,822
Metal industries	159	2,159	233	2,991	314	7,669	383	8,727	462	9,674	500	10,114
Manufacture of other products	3	121	3	121	7	163	10	196	16	215	20	227
Storage	1	20	2	48	18	329	18	329	18	329	18	329
Total	473	9,899	845	20,421	1,201	32,034	1,401	42,042	1,670	53,851	1,785	55,431
Yearly growth rate (per cent)	--	--	33	48	18.8	32	16.6	31	5	2	3	1

Source: Ministry of Industry and Electricity, Industrial Statistical Bulletin, 1984.

also reveals the rapid expansion of non-oil manufacturing activities. It should be kept in mind that there are thousands of small, unlicensed establishments; the estimated figure for 1980 was 9,000.

Responsibility for the production and marketing of petroleum products lies with the General Petroleum and Minerals Organization (PETROMIN). The country's three refineries for domestic production at Riyadh, Jeddah and Yanbu produced 48.8, 31.5 and 64.9 million barrels of refined products respectively during 1984. In 1985 eight refineries were operational, with a combined capacity of 1.95 million b/d. A new refinery project has been shelved as a consequence of the economic downturn. Apart from fuel for aircraft, automobiles and ships, the petroleum refining branch also produces heating and lubricating oil. Domestic petroleum products and liquid gas local sales by PETROMIN increased by 36.5 per cent to 34.0 million barrels during 1983. Sales were expected to rise to 36.2 million barrels in 1984.

The fertilizer industry, which uses methane as a feedstock, is represented by two plants with a total capacity of 830,000 tons. Part of the production is exported to India and the Republic of China. Exports are constrained by domestic production reaching self-sufficiency level in fertilizer-importing countries. The plastics industry, also dependent on the oil industry for its raw materials, is a recent addition to the manufacturing sector, and virtually all plastic products until very recently were being imported. At present, the branch concentrates on the production of intermediates, but long-term plan envisages a shift towards a wide range of end-products.

The domestic building materials industry benefited much from the boom in construction activities during the 1970s. The cement industry especially expanded rapidly over the years because of escalating demand, domestically available raw materials and the generous finance provided by the Saudi Industrial Development Fund (SIDF). Cement production capacity grew from about 0.8 million tons in 1973 to some 8.7 million tons in 1982, an average annual growth rate of 30.4 per cent. Its role in manufacturing has become less important in recent years. In 1984, annual consumption was about 15 million tons, and imports accounted for around 7 million tons. Cement imports have been declining rapidly as a result of both increased domestic production and, recently, declining demand.

The number of licensed factories producing metal and metal products increased from 159 in 1975 to 500 in 1984; the important plants are of recent date. Iron and steel are produced by two relatively small mills with a combined capacity of almost 1 million tons. Copper and aluminium cables are also produced on a modest scale, and domestically produced cables are now used in the Saudi electrification projects. Since the early 1980s, metal products also include panels, cans, pipes, furniture, air conditioners and radiators. With the exception of local scrap for the iron and steel industries, these industries are yet largely depending on imported raw materials.

The share of food products in manufacturing, using value added or the number of establishments and workers as a measure, is significant; a major part of the branch however consists of traditional, small-scale enterprises catering to the local market.

2.2 Manufacturing employment, performance and efficiency

Table 8 shows the structure of manufacturing employment between 1975 and 1984. The capital-intensive chemical industry, including petrochemicals, coal, rubber and plastics, accounted for 15.3 per cent of manufacturing employment in 1975. Its contribution to employment declined during the second half of the 1970s, but increased significantly during the boom years of the early 1980s. By 1984 building materials and metal industries accounted for 57 per cent of the total manufacturing employment. The share of industries engaged in the production of foodstuffs, drinks and tobacco in manufacturing employment declined marginally in recent years.

During the boom of the early 1980s, employment growth exceeded the rate of economic expansion. Over-expansion was not limited to employment, but became evident in the accumulation of fixed capital as well. As a result, parts of the manufacturing sector have experienced overstaffing/ underemployment, lower profit margins and a substantial loss in productivity. Thus, by the mid-1980s, the private sector had to initiate adjustments to the new economic conditions.

Table 8. Structure of manufacturing employment, 1975-84
(per cent)

Manufacturing activity	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Foodstuffs, drinks and tobacco	14.1	13.4	14.9	14.6	15.2	14.8	14.3	14.2	14.0	13.8
Ready made clothes and textiles	2.1	1.6	2.2	2.6	2.8	2.5	2.6	2.6	2.5	2.5
Manufacture of leather products	0.2	0.1	0.1	0.3	0.3	0.3	0.4	0.4	0.5	0.6
Wood products	5.4	4.5	3.6	3.2	3.3	3.1	3.2	3.3	3.2	3.1
Paper and paper products	6.0	5.4	4.9	4.8	4.2	4.3	4.5	4.6	4.5	4.4
Chemical industries	15.3	14.4	13.0	12.9	12.4	14.7	16.2	16.1	16.1	15.9
China earthenware, pottery and glass	2.2	2.4	2.0	1.8	1.6	1.4	1.3	1.2	1.2	1.2
Building materials	22.6	29.4	32.0	31.5	31.0	29.4	28.2	28.2	28.4	29.7
Metal industries	31.0	27.0	26.2	26.7	27.4	27.8	27.6	27.6	27.8	27.3
Other	0.7	0.8	0.4	1.1	1.2	1.2	1.2	1.2	1.2	1.2

Source: Ministry of industry and electricity, Industrial Statistical Bulletin, 1984.

Although value added in the non-oil sector continued to grow throughout the Third Plan period (Table 9), its rate of growth declined. While employment growth rates declined as well, the decline in value-added growth has been faster: the overall employment growth rose by 46.9 per cent in the Third Plan period, output, as measured by value added, increased by only 28.0 per cent, indicating a fall in productivity.

Table 9. Non-oil value added, employment, and productivity change in the Third Plan period, 1980/81 - 1984/85
(per cent)

	Average Annual Rates of Change		
	Value added	Employment	Productivity
1980/81	10.9	14.3	-3.4
1981/82	10.8	12.8	-2.0
1982/83	8.6	11.8	-3.2
1983/84	6.9	11.0	-4.1
1984/85	5.1	8.0	-2.9

Source: Fourth Five-Year Plan, 1985/86 - 1989/90.

In the oil refining branch, larger and more efficient plants are now being constructed, as older, less efficient plants are being phased out. The iron and steel industry, faced by strong competition from foreign manufacturers, succeeded in considerably reducing costs and improving efficiency in general during 1984. Capacity utilization in major SABIC plants (petrochemicals, iron and steel) was above 90 per cent or even above planned capacity in 1984.

The current recession has led to the closure of many of the less efficient manufacturing enterprises established during the boom of the 1970s and early 1980s. The costs of building and operating industries have been reduced by up to 50 per cent - mainly because of reductions in the cost of real estate, rents, labour and overheads. Greater efficiency and the development of Saudi manpower to reduce dependence on foreign labour are the main themes of the country's Fourth Five-Year Plan.

2.3 Exports and imports of manufactured goods

Appendix Table A-6 gives an overview of manufactured exports classified according to level of processing. Non-processed goods (mainly crude oil) for further processing continued to dominate total exports during 1975-82, with a share of above 90 per cent. The declining share of processed goods for final use (from 6.9 per cent in 1975 to 3.8 per cent in 1982) indicates the degree of success in import substitution. Appendix Table A-7 shows that apart from petroleum products, the chemicals, machinery and transport equipment are dominant among the manufactured exports. Recent figures presented in Table 10 show that Saudi oil exports were still characterized by the dominance of crude oil which accounted for 91 per cent of the total, with refined products accounting for the remaining 9 per cent. While export demand for crude oil has fallen, the share of refined products in total oil exports increased from 5 per cent in 1981/82 to 7 per cent in 1982/83 and 9 per cent in 1983/84. In 1985 there was a marginal increase in manufactured exports other than petrochemicals.

Table 10. Exports of crude and refined oil, 1982/83 - 1984/85
(million Riyals)

	1982/83	1983/84	1984/85[a/]
Crude	190,675	139,252	107,459
Refined, of which	14,228	13,199	10,692
bunker fuel	936	496	313
Total	204,903	152,451	118,151

Source: Central Department of Statistics.

a/ Preliminary.

There is an overcapacity of up to 20 per cent in the chemicals and plastics products now produced by SABIC plants. In EEC countries ceilings exist for duty-free imports of certain petrochemical products, and import duties on Saudi petrochemicals were reintroduced when the Saudi quota were exceeded during 1985.

The markets for Saudi fertilizers in India and the People's Republic of China account for 60 per cent of Saudi fertilizers. Building materials exports appear largely confined to the region, which are now experiencing a slump because of the fall in oil prices. Motor vehicles are assembled on a modest scale, largely supplying various government departments, which bought some 80 per cent of the industry's output. With the cutbacks in government expenditure, markets have been sought in other countries of the region which are, however, also suffering from recession.

Table 11 shows the high degree to which Saudi Arabia depends on manufactured imports. The main import items are motor vehicles, textiles, machinery, food and various inputs for the manufacturing industry and for construction. Most manufactured imports come from developed countries; raw materials (much less significant) are mainly provided by developing countries.

In 1984, imports were 12.3 per cent lower than in 1983. The decline in the value of imports of base metals and a few other products is attributed to the increase in the local production of certain items such as iron as well as the drop in prices of imported iron, metal products and wood products by 20.3 per cent. Machinery and transport equipment imports also decreased sharply in 1984. In value terms, 1985 imports were 28 per cent lower than 1984 imports; in volume terms, the decline was 37 per cent.

Imports from the main developed market economies (US, Japan, Federal Republic of Germany, Italy, UK and France) accounted for 68.2 per cent of the Kingdom's total imports in 1983. Analysis of the top 50 imported commodities indicates that over 87 per cent of the latter originate from the developed market economies. The share of the Arab countries in the region and of the developing countries in general is rather insignificant. Imports from countries belonging to the Gulf Co-operation Council (Kuwait, Bahrain, Qatar, Oman and Musqat and the United Arab Emirates) amounted to only 1.29 per cent of total imports in 1983. The collective percentage share of the other Arab League countries in that year was 2.10 per cent only.

The most important exporter of manufactured goods to Saudi Arabia is Japan (motor vehicles, textiles) followed, in decreasing importance, by the

Table 11. Composition of imports, 1980-84
(million Riyals)

	Commodity Group	1980	1981	1982	1983	1984
1.	Live animals and animal products	4,121	4,874	4,980	4,975	4,696
2.	Vegetable products	5,345	7,144	8,276	6,588	8,859
3.	Animal & vegetable fats, oils & their products	554	407	537	426	550
4.	Prepared foodstuffs, beverages spirits, vinegar & tobacco	4,172	4,854	4,361	4,597	4,634
5.	Mineral products	3,155	3,063	3,043	3,475	2,913
6.	Products of the chemical & allied industries	3,475	4,121	4,881	5,081	5,245
7.	Artificial resins and plastic materials, cellulose esters, rubber, synthetic rubber	2,795	2,911	3,397	3,501	3,468
8.	Raw hides and skins, fur skins and articles thereof, travel goods & hand bags	385	409	471	504	484
9.	Wood & articles of wood, charcoal, cork & articles of cork & wicker work	2,597	2,650	2,711	2,799	2,095
10.	Paper making materials, paper card board & articles thereof	1,107	1,353	1,536	1,600	1,605
11.	Textiles and textile articles	6,571	7,294	8,251	9,056	8,823
12.	Footwear, headgear, umbrellas, sunshades, whips, artificial flowers, articles of human hair & fans.	530	674	794	920	853
13.	Articles of stone plaster, asbestos, ceramic products, glass & glassware	3,421	3,515	3,487	4,160	3,669
14.	Pearls, precious & semi-precious stones, precious metals, articles & imitation jewellery	2,397	3,478	3,827	4,205	3,605
15.	Base metal & articles of base metals	14,611	17,443	20,716	19,101	14,183
16.	Machinery, mechanical appliances, electrical equipment & parts thereof	24,534	30,323	35,536	36,120	28,409
17.	Transport equipment	13,924	17,242	24,034	19,087	15,916
18.	Optical, photographic, measuring, checking, precision, medical & surgical instruments & apparatus, clocks & watches, musical instruments, sound records & reproducers & parts thereof	3,616	4,313	4,666	5,279	5,014
19.	Arms, ammunition and parts thereof	61	29	8	13	23
20.	Miscellaneous manufactured articles	2,772	2,979	3,553	3,613	3,355
21.	Work of art collection pieces & antiques	207	222	270	317	337
	Total Imports	100,350	119,298	139,335	135,417	118,736

Source: Ministry of Finance and National Economy, Central Dept. of Statistics (Foreign Trade Statistics Yearbooks).

United States (motor vehicles, aircraft, machinery and parts), Federal Republic of Germany (motor vehicles, aircraft, electrical goods), France (aircraft), Italy (jewellery, furniture, textiles) and the United Kingdom (medicines, cigarettes, aircraft, spare parts).

2.4 Ownership and investment patterns in manufacturing

Government ownership plays a major role in Saudi manufacturing. The most important institutions are:

1. ARAMCO, a fully Government-owned enterprise since 1983. The original US partners are now involved only in a consultancy and technical assistance role. Apart from producing 97 per cent of all crude oil, it is also responsible for the production of all liquid natural gas.

2. The General Petroleum and Minerals Organization (PETROMIN) was established by the Government in 1962 for developing the country's natural resources and promoting their industrial exploitation. It plays an important role in petroleum refining, partly through joint ventures with overseas oil companies.

3. Saudi Basic Industries Corporation (SABIC), established in 1976, is responsible for a wide range of oil- and non-oil-based basic industries. It is a partner in a number of important joint ventures with overseas corporations (see Appendix Table A-11).

Joint ventures play a major role in the country's basic industries. Joint ventures of SABIC and overseas companies in the steel and petrochemicals sectors totalled investments in excess of SR 38 billion in 1985; some 600 joint ventures had been licensed up to early 1985, of which 390 were operational.

The Saudi Government has recognized that the advantages could be derived from joint ventures with foreign companies in many areas of industrial activity both in terms of management and technology. SABIC, for example, collaborates with US, Anglo-Dutch and Japanese transnational companies who are

requested to provide the latest technologies in their respective fields and to transfer these technologies to Saudi personnel. Apart from providing management, technical skills and capital, the foreign partner has to market most of a plant's output. Only about 10 per cent will generally be supplied to domestic buyers. A separate marketing subsidiary of SABIC has been set up to deal with this particular aspect. The domestic market for intermediates produced by joint ventures can only be significantly expanded if there is an accelerated development of downstream industries.

Terms for joint ventures in the petrochemicals branch, which give a good impression of terms applying to joint ventures in general, include:

- Equal shareholdings by SABIC and the foreign parties in the new companies, with equity capital to account for 30 per cent of the projects' final cost;
- Long-term crude oil supply contracts with an average of 500 b/d supplied to the foreign partner for each $1 million invested;
- Loans from the State-owned Public Investment Fund (PIF) equivalent to up to 60 per cent of project costs. Interest will be 3-6 per cent depending on the degree of profitability in any one year;
- Low-cost feedstock ($0.50/Btu) until certain profitability criteria have been reached;
- Tax incentives;
- Exemption from duties on equipment and raw materials;
- Subsidies for training of locally recruited employees;
- Land, electricity and water supply at nominal rates.

In spite of fierce international competition, SABIC profits increased by 71.5 per cent to SR 34.3 million during 1984, although with a total revenue of SR 1,530 million (1983: SR 619 million) the present profit rate is only 2.2 per cent. Almost half of the 1984 income came from steel sales, the next most important item being fertilizers. SABIC revenue during the first nine months of 1985 was SR 1,490 million, and profits SR 81 million.

The uncertain general prospects for the next few years notwithstanding, SABIC intends to spend SR 16,000 million on new investments during the Fourth

Plan period, most of it in downstream industries. SABIC employment is to be raised from 7,000 to 12,400.

Foreign investment shares in non-oil manufacturing for 1984 are shown in Table 12. Direct foreign investment, mainly concentrated in the metal and chemical industries, amounted to 19 per cent of total capital invested in 1984. There would be considerable scope for manufacturing projects in import substitution and downstream petrochemical industries. The slowdown of the economy which followed the fall in oil prices could, however, prove to be a disincentive to further foreign investment.

Private ownership of enterprises was traditionally concentrated in the trades and services sectors. The building materials industry was the first major manufacturing branch where private enterprise played a dominant role. A major objective of the Fourth Plan is to stimulate private entrepreneurship and to reduce the role of Government. Notably the role of private enterprise is to be strengthened in the intermediate industries. In 1984, 20 per cent of SABIC was sold to the Saudi public, and PETROMIN will also be partly privatized. It is hoped that under private ownership the efficiency of many industries can be improved and that private enterprise will lead to further diversification of the manufacturing sector.

In 1982, the National Industrialization Corporation (NIC) was founded by a large group of Saudi entrepreneurs. It is to be the private-sector equivalent of SABIC - a holding company initiating and investing in new enterprises. NIC was established as a joint-stock company in late 1984, with an authorized capital of SR 600 million. A minor part of the shares is held by public organizations like SABIC and the Public Investment Fund.

Whereas SABIC concentrates on the heavy industry, NIC will invest in downstream manufacturing. Investment for NIC-initiated joint ventures will largely have to be supplied by Saudi and foreign partners - in contrast to SABIC, NIC's share in joint ventures will be rather limited. Joint ventures have been agreed upon, or discussed with firms in France, Japan, the Netherlands, Austria, Sweden and the Federal Republic of Germany. By late 1985 NIC investments or commitments stood at US$215 million. Projects have been initiated or planned in steel and metal products, control instruments,

Table 12. Foreign investment shares in non-oil manufacturing, 1984

Industrial activity	No. of factories	Total Capital investment (SR millions)	Foreign partner share (SR millions)	Foreign partner share (Per cent)
Foodstuffs, drinks and tobacco	38	1,216	306	25
Ready-made clothes and textiles	8	244	92	38
Manufacture of leather products	...	...	...	...
Manufacture of wood products	13	118	67	57
Manufacture of paper and paper products, printing & publishing	16	478	206	43
Chemical industries including petro-chemicals, coal, rubber & plastics	90	15,968	7,662	48
Manufacture of china, earthenware, pottery, porcelain and glass	1	21	3	14
Manufacture of building materials	65	4,167	1,174	28
Metal industries	152	6,524	1,169	18
Manufacture of other products	5	150	78	52
Storage	1	20	12	60
Total	389	28,906	10,769	37

Source: Ministry of Industry and Electricity, Industrial Statistical Bulletin, 1984.

synthetic rubber and polyester fibres. Appendix C presents a list of major industrial companies in Saudi Arabia.

As mentioned earlier, the chemical industries had the largest investment share: 36.1 per cent of total non-oil industrial investment. In absolute figures, total investment in these industries amounted to SR 20 billion in 1984. The building materials sector is next with a total investment of about SR 16.8 billion (30.3 per cent of total manufacturing investment). Fabricated metal industries accounted for 18 per cent of total investment in 1984. These industries encompass two plants for iron and steel production and metal

galvanizing which absorbed 37 per cent of total investment in the branch. Finally, 9 per cent of total investment was spent on food and beverage manufacturing in 1984. Investment in paper, printing and publishing (2.1 per cent), garments and textiles (1.0 per cent), wood and wood products (0.9 per cent) and other industries (2 per cent) is still very low.

2.5 Size and geographical distribution of manufacturing enterprises

A ranking of establishments in the manufacturing sector in 1981 by employment size is presented in Table 13. Over 70 per cent of all establishments (16,177 enterprises) employed fewer than 5 workers and more than 95 per cent employed less than 20 employees. On the other hand, only 0.8 per cent (177 enterprises) employed more than 100 workers. The latter, however, accounted for 30.3 per cent of total manufacturing employment.

Table 13. Number of employees and number of establishments by employment size in manufacturing sector in 1981

Employment size	Employees		Establishments	
	Number	Per cent	Number	Per cent
1	4,941	3.3	4,941	21.8
2-4	30,692	19.6	11,236	49.9
5-9	25,176	16.3	3,994	17.6
10-19	19,491	12.4	1,477	6.5
20-49	16,285	10.4	566	2.6
50-99	12,083	7.7	182	0.8
+100	47,419	30.3	177	0.8
Total	156,087	100	22,573	100

Source: Saudi Arabia, Statistical Yearbook, 1982.

Manufacturing enterprises are mainly located in the Red Sea, Riyadh and Gulf Coast segments of a central belt bisecting the country from Jeddah to Dammam. The distribution of manufacturing over the regions is shown in Table 14. The heavy concentration of industry in the central belt, especially in the Central and Western regions, is clearly visible. The great majority of SABIC projects and of foreign investments is also to be found in the central belt. Since 1980, diffusion of economic activities toward the less-developed Northern and Southern regions has been stimulated. The Government, through

the Ministry of Industry and Electricity, has established a network of industrial cities with an operation area of 3,283 hectares by 1985 and with an additional 1,223 hectares planned for the Fourth Plan (1985/86 - 1989/90).

Since the mid-1970s, work on the new industrial cities of Jubail and Yanbu has been in progress. Conceived in the early 1970s, detailed planning for the cities began after the 1973/74 oil price rise brought about a large increase in Government revenues. The Royal Commission for Jubail and Yanbu - established by royal decree in 1975 - set up a directorate-general for each city, charged with creating a focus for development in the west and east of the country. Recent financial cutbacks in the Kingdom have also led to successive reductions of the Commission's budget allocations. Yet, by late 1985, some SR 50 billion had been spent on the development of the two cities.

Table 14. Regional distribution of non-oil manufacturing, 1984

Regions	Factories		Investment	
	Number	Per cent of total	SR billions	Per cent of total
Central region	677	38.0	19.8	35.6
Western region	559	31.3	19.2	34.7
Eastern region	416	23.3	13.2	24.0
Northern region	45	2.5	3.0	5.3
Southern region	88	4.9	0.2	0.4
Total	1,785	100.0	55.4	100.0

Source: Ministry of Industry and Electricity, Industrial Statistical Bulletin, 1984.

In the initial stage, a core of large petroleum refining and petrochemical plants has been built which are to form "growth poles" in these cities. During the late 1980s, these are expected to be complemented by industries providing forward linkages. In the long run, a diversified industrial base is foreseen, mainly composed of petrochemical intermediates, plastic intermediates, steel products, non-ferrous metal products and natural

textile fibres. Appendix Table A-12 shows the growth of licensed factories in central, western, eastern and northern regions during 1975-84.

2.6 Recent developments and projects

The efforts towards diversifying and modernizing the economy, exemplified in the US/Saudi aerospace/electronics/biotechnology project (see section 1.1), are to a very large extent concentrated on the manufacturing sector. The helicopter manufacturing component of the above-mentioned project may find a parallel in a recently concluded contract for the purchase of British aircraft which is expected to result in the setting up of Saudi-British aerospace plants in Saudi Arabia.

Seven SABIC projects became operative during 1984/85: the Saudi Petrochemical Company, the Saudi Yanbu Petrochemical Company, the Al-Jubail Petrochemical Company, the National Methanol Company, the Arabian Petrochemical Company, the Eastern Petrochemical Company and the National Industrial Gases Company. An eighth, the National Plastic Company was to be started up before the end of 1985. Exports of a variety of intermediate petrochemical products from these plants started during 1985. The Eastern Petrochemical Company, which has a design capacity of 130,000 tons a year of linear low-density polyethylene, began test production in the second half of the year. The plant's 300,000 ton-a-year ethylene glycol unit was undergoing final trials in late 1985, and commercial production and exports of both products were scheduled to commence in 1986. In 1985, work on two export refineries was in an advanced stage, and another two export refineries were in the planning stage.

In the metalworking industry, NIC has initiated a project for a factory which will produce metal wire and related products. In the cement industry, four new plants with a total capacity of 3.7 million tons were due to become operational by the mid-1980s, and capacity of the other plants has been increased. Finally, a pharmaceutical plant, a Saudi-Franco-German project, is due to become operational during 1987.

Table 15. Location of manufacturing enterprises started by SABIC up to the second quarter of 1985

Projects	Location and date of agreement	Feedstock	Annual capacity (Metric tons)	Products	Production date	Percentage of implementation
Metallurgical						
1. Saudi Iron & Steel Co. (Hadeed)	Jubayl (March 1979)	Iron Ore & Natural Gas	800,000	Steel rods & bars	1983	100
2. Jiddah Steel Rolling Mill (Sulb)	Jiddah (May 1979)	Steel billets	140,000	Steel rods & bars	1983	100
Fertilizer						
3. Al-Jubayl Fertilizer Co. (Samad)	Jubayl (Dec. 1979)	Methane	500,000	Urea	1983	100
4. Saudi Arabian Fertilizer Co. (SAFCO)	Dammam		33,000 100,000 20,000	Urea Sulfuric Acid Melamine	1970	100
Petrochemical						
5. Saudi Methanol Co. (Al-Razi)	Jubayl (Nov. 1979)	Methane	600,000	Methanol	1983	100
6. Saudi Yanbu' Petrochemical (Yanpet)	Yanbu' (April 1980)	Ethane	455,000 200,000 205,000 90,000	Ethylene Ethylene glycol L.D. Polythylene H.D. Polythylene	1983	100
7. Al-Jubayl Petrochemical Co. (Kemya)	Jubayl (April 1980)	Ethylene	260,000	L.D. Polythylene	1985	100
8. Saudi Petrochemical Co. (Sadaf)	Jubayl (Sept. 1980)	Ethane	656,000 454,000 295,000 281,000 377,000	Ethylene Ethylene Dycloride Styrene Ethanol Caustic Soda	1985	100
9. National Methanol Co. (Ibn Seena)	Jubayl (Feb. 1981)	Methane	650,000	Methanol	1984	100
10. Arabian Petrochemical Co.a/ (Petrokemya)	Jubayl (May 1981)	Ethane	500,000 70,000	Ethylene Polystyrene	1985	100
11. Eastern Petrochemical Co. (Sharq)	Jubayl (May 1981)	Ethylene	130,000 300,000	L.D.Polythylene Ethylene Glycol	1985	100
12. National Industrial Gas Co. (Gas)	Jubayl (Feb. 1983)	Atmospheric air	146,000 438,000	Nitrogen Oxygen	1985	100
13. National Plastic Co. (Ibn Hayyan)	Jubayl (Dec. 1983)	Ethylene Ethylene Dichloride	300,000 200,000	Vinyl Chloride Monomer Polyvinyl Chloride	1986	62
14. Saudi European Petrochemical Co. (Ibn Zahr)	Jubayl (Dec. 1984)	Methanol	500,000	MTBE	1987	2
15. National Chemical Fertilizer Co.	Jubayl (April 1985)	Methane	500,000	Ammonia	1988	2

Source: SABIC.

a/ Fully Saudi-owned projects.

3. INDUSTRIAL DEVELOPMENT PLANS, POLICIES, AND INSTITUTIONS

3.1 Plans and policies

Since 1970, economic development in Saudi Arabia has been co-ordinated through Five-Year Plans. Ultimate responsibility for development strategies lies with the Council of Ministers, but the preparation of the Plans takes place in the Ministry of Planning. The industrial policy objectives of the Fourth Plan reflect the 1974 Industrial Policy and accord greater importance to the development of private sector and export promotion.

The single most important industrial objective is to lessen the dependence of the Saudi economy on oil and to transform the Saudi economy into a balanced and diversified industrial economy. This overall objective is served by a host of sub-objectives including the following:

- creating an industrial base capable of producing at competitive costs a wide range of products for domestic and export use;
- exploiting the Kingdom's comparative advantage arising from oil-related products;
- encouraging the full exploitation of the country's natural resources other than oil;
- utilizing the existing industrial capacity and of the expansion of plants to their optimal economic size;
- improving the linkage of industries in order to secure a balanced structure of production;
- securing a regionally balanced structure of production;
- protecting import-substituting industries;
- reducing the dependency on foreign workers by developing national skills through education and training; and
- facilitating the acquisition of the appropriate and modern technology.

The First Five-Year Plan (1970/71 - 1974/75) was relatively modest in size. Its SR 80 billion was spent mainly on developing basic infrastructure, particularly public utilities, and on improving government services. During the Second Plan (1975/76 - 1979/80), also concerned with infrastructure to a high degree, government expenditure had reached nearly SR 700 billion, almost a nine-fold increase over the First Plan. Expenditure during the Third

(1980/81 - 1984/85) Plan period was SR 562.3 billion; the lower figure reflects the drop in oil income. During the Third Plan period, manufacturing excluding refining grew at an average annual rate of 12.4 per cent and manufacturing including refining grew at 6.9 per cent a year.

The Fourth Plan, 1985/86 - 1989/90, signalled the end of the period of rapid infrastructural development which characterized the Third Plan and the beginning of a phase of consolidation, and of focusing on manpower training, second generation industries (a shift away from the oil industries) and greater efficiency in terms of higher capacity utilization, rationalization of investment and locational decisions. New Plan objectives also include greater reliance on the private sector and on the promotion and diversification of exports. An overview of Fourth Plan expenditure, compared with Third Plan expenditure, is given in Table 16. Although categories are not strictly identical in both Plans, the shift in priorities is clearly visible.

Table 16. Development expenditure of the Fourth Development Plan (1985/86 - 1989/90) compared with actual expenditure in the Third Development Plan (1980/81 - 1984/85)
(billion SR)

	Third Development Plan		Fourth Development Plan		
	Estimated actual expenditure	Percentage distribution	Projected expenditure	Percentage distribution	Percentage change
Economic development of which:	120.4	21.4	164.8	27.4	+36.9
Primary sector			65.8		
Secondary sector			4.2		
Tertiary sector			64.8		
Jubail and Yanbu (industrial cities)			30.0		
Education, science, technology	124.3	22.2	136.2	22.6	+9.6
Health and social services	69.6	12.4	108.6	18.0	+56.0
Transport and communications	139.1	24.7	(		
Municipalities and housing	108.9	19.3	(192.7 (	32.0	-22.3
Total	562.3	100.0	602.3	100.0	+7.1

Sources: Fourth Five-Year Plan, 1985/86 - 1989/90; South, January 1986.

The Fourth Plan aims at realizing an average GDP growth rate of 4 per cent per annum, raising its absolute level in real terms from SR 284.1 billion in 1984/85 to SR 345.9 billion in 1989/1990. Productivity growth is expected to result in a reduction of 855,000 jobs in existing economic activities, to be partially offset by the creation of 630,000 jobs in the growing non-oil sector and by remigration of foreign labour.

The non-oil sector is estimated to grow at an average annual rate of 2.9 per cent. The Plan anticipates that agriculture, mining and quarrying, industry, electricity and construction will record a combined growth rate of 3.3 per cent. With the exception of the construction sector which is expected to decline by an annual average rate of 2.8 per cent, the rest of the producing sectors are projected to grow at rates ranging from 3 per cent in the mining and quarrying sector to around 14 per cent in the manufacturing sector. The high growth rate in the manufacturing sector is attributable largely to the expected coming on stream of major petrochemical projects and the likely growth in downstream petrochemical industries. Actual Government development expenditure on industry is low: growth in the sector is expected to result from private investment and joint ventures. The services sector is expected to register growth rates ranging from 2.5 per cent in trade to 9 per cent in finance and business.

Owing to the decline in government revenue since the early 1980s, financial constraints will probably inhibit the implementation of projects in the Fourth Plan. Although there have recently been cuts in a variety of subsidies, overall government expenditure has not followed the decrease in income, leading to considerable budget deficits.

3.2 Government and financial institutions

The most important ministry involved in the development of Saudi manufacturing is the Ministry of Industry and Electricity. The implementation of industrial policies is to a large extent left to SABIC (see section 2.4). Other government institutions for industrial development are the Saudi Consulting House, which studies the viability of industries to be established in the country, the autonomous Royal Commission for Jubail and Yanbu (see section 2.5) and the Saudi Arabian National Centre for Science and Technology (SANCST).

Over the nine-year period since its establishment, SABIC has successfully completed and operated its first generation of basic industries, comprising 11 projects. SABIC has already embarked on the implementation of its second generation projects which aim at establishing intermediary or secondary industries. SABIC envisages the participation of private sector investors in these projects to contribute to a broadening of the industrial base. Projects now being implemented include the National Plastic Co. (Ibn Hayyan), the Saudi-European Petrochemical Co. (Ibn Zahr) and the National Fertilizer Company. For implementing its second generation of intermediary industries, SABIC has prepared a Five-Year Plan. Investments under this Plan are estimated at SR 16.4 billion, involving training, research, technological development and the construction of many complexes for the production of fertilizers, metal products, plastic and petrochemicals with a total annual capacity of 3,751,000 tons.

Until 1984, the Local Industrial Development Department of ARAMCO provided information on projects for the construction sector. As a consequence of the decrease of operations in that sector, its services were discontinued. Finance for industrial development projects has been provided through the Saudi Industrial Development Fund (SIDF) and the Public Investment Fund (PIF).

The Public Investment Fund was established in 1971 under the control of the Ministry of Finance and National Economy. Its activities have concentrated on financing PETROMIN and SABIC projects and the Saudi airline. By the end of 1982/83 it had disbursed loans with a total value of SR 43.8 billion.

Established in 1974 as a financing agency reporting to the Ministry of Finance and National Economy, Saudi Industrial Development Fund (SIDF) started with an initial capital of SR 500 million. By 1980/81 this figure had been increased several times by the Council of Ministers to its present level SR 8 billion. SIDF provides medium-term low-interest loans for up to 50 per cent of the total cost of a project. The Fund has been able to continue its industrial lending for the past three years by recycling funds from repayments. By 1984/85 SIDF had approved 885 industrial projects with loans totalling SR 13.3 billion. Cement and other building materials accounted for

SR 5.96 billion of this total, with metal products, chemicals and food being the next largest sectors receiving financial assistance. Investment has shifted from the building materials to the food processing, paper and printing, chemical products and engineering branches, reflecting a trend towards more diversified and sophisticated industrial production. In 1985, only 3 out of 93 applications for funds came from the building materials branch.

The Fund's central role in economic development arises from the very favourable financing terms it offers. It can disburse loans covering up to 50 per cent of the total project cost. For joint ventures, SIDF will lend to Saudi partners in proportion to the investment made by foreign manufacturing companies. SIDF loans are for a maximum period of 15 years. Loans are interest-free but the Fund charges a fee of 2-5 per cent of the project cost.

Table 17. Loans disbursed by SIDF, by branch of manufacturing, 1971/72 - 1984/85
(million Riyals)

Sector	1981/82	1982/83	1983/84	1984/85	Cumulative total
Food commodities	76.9	86.6	63.5	63.8	631.8
Beverages	51.4	57.3	37.6	16.6	332.6
Textiles	4.0	10.6	12.1	7.6	111.9
Leather products	1.4	...	9.0	...	13.8
Wood products	...	...	...	...	14.5
Wood furniture	10.3	1.9	4.3	4.3	70.9
Paper products	20.9	13.0	21.2	61.1	177.6
Printing materials	20.9	24.4	4.9	13.5	163.1
Chemical products	56.4	61.6	185.6	180.0	768.8
Gas	5.7	76.2	33.5	8.2	214.6
Rubber products	...	...	...	...	16.9
Plastic products	28.0	55.7	42.7	26.7	349.1
Ceramic products	31.1	32.6	16.2	...	131.4
Glass products	25.4	33.0	14.1	...	132.7
Cement	125.0	165.0	372.5	292.5	2,905.0
Other construction materials	56.6	42.3	58.5	66.1	1,590.3
Metal products	111.9	90.7	69.1	92.2	955.4
Machines	62.9	44.2	10.5	12.1	209.1
Electric equipment	51.1	28.0	65.2	6.2	329.0
Transport equipment	5.3	6.7	14.5	5.5	181.0
Other products	3.2	12.5	4.2	1.4	30.4
Shipping	...	...	...	...	60.0
Total	748.4	842.3	1,039.2	913.8	9,389.9

Source: Saudi Industrial Development Fund.

Although the Government has taken the lead in financially stimulating industrialization, private enterprises have become active in the field as well. In 1984/85 commercial banks had committed loans and advances to the manufacturing sector of SR 6.1 billion; in addition loans and advances to commerce accounted for SR 19.1 billion, to a large extent to finance imports of industrial inputs.

Recently established private entities involved in domestic development financing and financial consultancy include the National Industrialization Company (NIC) and Financial Investment Services and Consultancy (FISC).

NIC's first activity will be to set up industrial joint ventures with foreign partners. By April 1984, the company had reviewed more than 70 proposals, and 20-30 projects were under consideration with partners from Japan, Federal Republic of Germany, the US and France. NIC's capital will eventually total SR 600 million ($171 million). Private interests account for 86 per cent of the initial SR 120 million (US$ 34.2 million) which has been paid in.

The purpose of Financial Investment Services & Consultancy (FISC) is to help financial institutions and other companies to redefine their corporate strategies in response to the changing commercial climate. Bank-related advisory work produces some 45 per cent of the firm's revenue. Since 1985, FISC has expanded its services to other sectors of the economy.

3.3 Industrial incentives

The Government has affirmed that its objective is to establish a diversified economic base. This objective is seen against a long-term perspective in the face of uncertainties underlying oil revenue and production. Given the infrastructure and base industry already in place, a wider manufacturing capacity is now possible. New industrial licenses issued during the first half of 1986 show a continued preference for food processing, industrial chemicals and metal manufactures. Of the total investment of SR 1,180.3 million, investment in food processing industries accounts for 22 per cent. Metal manufactures receive 16 per cent of total investment. Foreign investment accounts for only 7.4 per cent total investment in the manufacturing sector during the first half of 1986. The Government continues to grant incentives plus a range of direct and indirect subsidies to attract

new investments. Prospective industrial investors are stimulated by the following incentives:

- Government funding of industrial projects. Government funds continue to play a major role in financing the manufacturing industry;
- Government purchasing;
- Subsidized pricing of infrastructural facilities and feedstock;
- Duty free imports of non-locally available raw materials;
- Tax incentives to attract foreign investment (such as a 10-year tax holiday for joint ventures);
- Opening up foreign markets through international negotiations;
- Tariffs (up to 20 per cent) protecting domestic industries;
- Technological upgrading through technology transfer contracts with foreign investors and through the activities of the National Industrial Studies and Development Centre.

The Royal Commission for Jubail and Yanbu pledges to encourage capital investment in the manufacturing sector, particularly in light manufacturing industries. Opportunities for industrial investors abound in these two industrial cities.

Utilizing its rich endowment of hydrocarbon and mineral resources, both capital- and energy-intensive manufacturing products could be produced. There is considerable scope for manufacturing projects in import substitution industries. A broad range of products could also stem from the downstream manufacturers who could produce petrochemical intermediates, plastics, steel, copper, aluminium products and agro-chemicals. The Government also offers support for the development of light manufacturing industries.

Apart from government incentives, Jubail and Yanbu also offer other advantages:

- fully serviced industrial sites with a complete range of industrial infrastructure;
- long-term land leases at economical rental rates;
- convenient access to domestic and world markets by air, sea and land;
- plentiful and reliable fuel and feedstock supplies;
- a trained workforce with planned training programme; and
- a modern urban and business environment.

4. RESOURCES FOR INDUSTRIAL DEVELOPMENT

4.1 Human resources

In the past two decades, a shortage of skilled manpower and the explosive growth of the economy have strongly stimulated the migration of foreign labour to Saudi Arabia. Whereas 10 per cent of the labour force consisted of foreign nationals in 1960, the share of these workers had risen to over 50 per cent in the early 1980s. The composition of the labour force is shown in Table 18.

Table 18. Composition of the labour force, a/ 1979/1980 - 1984/85

	Labour force (thousand)		Annual average growth rate (per-cent)
	1979/1980	1984/85	
Saudi men	1,366.4	1,649.2	3.8
Saudi women	126.8	136.8	1.5
Percentage share of women	9.3	8.3	
Sub-total Saudi	1,493.2	1,786.0	3.7
Sub-total non-Saudi	1,532.8	2,660.0	11.7
Percentage share of Saudis	49.2	40.1	
Total	3,026.0	4,446.0	8.0

a/ Fourth Development Plan 1985-1990, Ministry of Planning, Kingdom of Saudi Arabia, "Progress during the Third Development Plan", Chapter II, Table 2-8, p. 36.

With the changes in economic structure currently taking place, marked by a decline in oil production and in construction and a determined effort to create a more diversified domestic industrial base, a change in the type of labour demanded is occurring as well. Saudization being one of the targets of the Fourth Plan, some 600,000 expatriate workers, many of them construction workers with relatively low skills, are expected to leave the country by 1990.

The achievement of the Saudization target will to a large extent depend on:

- A higher level of technical and vocational education (the expansion of the Petroleum and Minerals University at Dhahran is an important element here);
- A closer matching of education/training and the skill demands in the economy;
- A greater awareness among Saudi Arabians of the possibilities offered by industrial development.

Special attention will be paid to improved educational facilities for women during the Fourth Plan. Literacy levels, which are still quite low for the country as a whole, are even lower for women. By 1990, however, over 900,000 females are expected to participate in primary and secondary education, a figure which closely approximates projected male participation. It is expected that improved training and education and improved job opportunities for women will lead to expansion of the female labour force with some 40,000 by 1990.

The education sector has made substantial progress due to the high priority accorded to it by the Government. The estimated amount of SR 113 billion spent by the Government on the education sector during the Third Plan exceeded the total expenditure on this sector during the First and Second Plans taken together. The Fourth Development Plan envisages a total outlay of SR 126 billion which is about 11 per cent larger than the actual amount spent on this sector in the Third Plan period. The Government agencies responsible for the promotion and development of education are the Ministry of Education, the General Presidency of Girls' Education and the Ministry of Higher Education.

During 1984/85, a total of 730 new schools and colleges were opened in both the Government and the private sectors, raising the total number of educational institutions in the country to about 11,490. During the Third Plan period, 3,900 new schools were opened. The number of male and female students enrolled at the various levels of education reached 2.1 million in 1984/85 compared with 1.9 million in the previous year and 1.4 million at the end of the Second Plan.

Technical Education and Vocational Training

The General Organization for Technical Education and Vocational Training organizes training programmes in different professions. For this purpose, it has set up a number of educational training centres, vocational and pre-vocational centres and trainers' institutes. Table 19 provides information on enrolments and graduates at vocational training centres.

Technical education covers industrial, commercial and agricultural fields. In the industrial field, the top two institutions are the Higher Technical Institute and the Intermediate Technical College. The former had a total of 43 students in 1984/85 and the latter 254 students. There are also 8 secondary schools in which intermediate-level students enroll to graduate as technicians in various specializations such as: electricity, radio, television, automobile engineering and civil engineering. The total number of students enrolled in these institutes during 1984/85 was around 4,000, a figure which is still far below needs.

Commercial education has two levels, higher and secondary. For the higher level there are two institutes in Riyadh and Jeddah. The number of enrolments in these institutes during 1984/85 was 330. Besides, there are ten secondary schools for commercial education. A total of 6,192 students was enrolled in these schools during the year. A new commercial school has been opened recently in Buraydah. The Model Agricultural Institute in Buraydah organizes general courses in agriculture. The number of students enrolled in the Institute stood at 153 in 1984/85. There are also three institutes for technical assistants in which 333 students were enrolled in 1984/85. There are 24 vocational training centres spread all over the country. The number of trainees enrolled in these centres in 1984/85 was 9,235 and the number of persons who graduated from these centres during the year stood at 6,394.

4.2 Raw materials

Saudi Arabia has the world's largest known crude oil reserves. By 1985, recoverable reserves of crude oil in ARAMCO fields were estimated at 166.3 billion barrels; gas reserves in these fields were at 122.7 trillion cubic feet. Although ARAMCO is not the only concessionaire, it is by far the

Table 19. Enrolments and graduates at vocational training centres, 1981/82 - 1984/85
(Regular and evening programmes)

	1981/82		1982/83		1983/84		1984/85	
	Enrolments	Graduates	Enrolments	Graduates	Enrolments	Graduates	Enrolments	Graduates
Air-conditioning mechanics	490	373	437	372	510	362	790	478
Car mechanics	2,873	2,296	2,595	2,142	2,474	2,168	2,678	2,001
Carpenters	1,027	697	886	645	816	612	839	606
Electricians	2,243	1,638	2,064	1,575	1,940	1,593	2,126	1,492
General mechanics	92	84	72	72	138	71	204	88
Plumbers	799	519	696	567	636	466	477	444
Printers & bookbinders	116	41	95	68	192	112	137	83
Welders	1,149	784	925	683	838	695	1,032	697
Others	469	316	446	232	575	378	952	445
Total	9,258	6,748	8,216	6,356	8,119	6,457	9,235	6,394

Source: General Organization for Technical Education and Vocational Training.

most important one, and these estimates therefore may serve as an indicator of the actual Saudi reserves of oil and gas. The 1985 OPEC oil production quota allocated to Saudi Arabia amounted to 4.5 million b/d; actual production was about 3.85 million b/d in February 1985 but has been rising again during 1986. The development of the petrochemicals industry, using domestic oil as a cheap feedstock, is an important step towards higher value added and more stable earnings on the basis of oil. With the completion of the Saudi gas gathering system in the mid-1980s, natural gas has also become a major input and source of energy for Saudi industry.

The country's great solar energy potential is now being explored in a joint US-Saudi programme. Solar energy is already being used to desalinize water. Saudi Arabia being a desert country, supplying water for industrial purposes is costly, and the Fourth Plan puts a premium on low water- consuming industries.

Non-metallic non-oil mineral deposits include potash, diatomite, bentonite, kyanite, fluorite, high-quality silica, gypsum, stone and clay. Phosphate and coal/lignite have also been discovered. So far, mainly those non-metallic minerals which can be used by the construction and building materials industry have been exploited.

A wide range of metallic minerals has also been discovered, both on land and in the central and northern parts of the Red Sea; proven reserves in the Red Sea a.o. consist of 1,890,000 tons of zinc. Significant reserves of copper, lead, cobalt, tantalium, colombium, uranium and precious metals exist as well. Exploitation is still in the early stages. In 1983, a gold mine became operative at Mahd al-Dhabab.

To share the costs and risks and to secure the necessary mining experience, the private sector will need to form joint-venture companies. The role of PETROMIN, besides representing the public interest, will be to contribute funds to mining projects in the framework of joint-venture arrangements. In addition, Government loans are available for mining projects.

Finance alone, however, will not be sufficient. Given the wide range of discovered minerals in the Kingdom and the competitiveness of international

mineral markets, access to specialized know-how and managerial skills will also be required. The most efficient vehicle for transferring these to the mining sector will continue to be equity investment by experienced international mining companies.

Agricultural resources have become more diversified during the past twenty years. The physical environment by itself allows only a narrow product range, and until recently dates were the only significant agricultural export. Financed by oil revenues, desalinization and the tapping of aquifers have provided the water supply for extensive cereal production and animal husbandry. Government also provided heavy subsidies for a wide range of agricultural machinery and inputs and set a high producer price for wheat. The country became self-sufficient in wheat in the early 1980s, and the 1985 harvest was expected to be approximately twice the domestic consumption of 850,000 tons. Overproduction of wheat and the decline in oil income are expected to lead to large cuts in government subsidies and a rationalization of agriculture. The long-term irrigation water supply in aquifers is also an uncertain factor.

The Ministry of Agriculture and Water runs a coastal laboratory in Jiddah to serve as a research centre for the development of fish resources. Another research centre is in Dammam. The two research centres have carried out a number of scientific experiments. These centres have prepared and issued maps indicating fishing locations, types of fish, fishing quantity per hour and the fishing method that should be applied. The centres have conducted a number of field studies, the most important of which concern means of developing fishing ports, the significance of ice plants in fishing areas and fish processing by fumigation. A study has also been prepared on types of shrimps and their locations.

So far, relatively little industrial processing of agricultural resources has taken place. Food products accounted for only a small part of manufacturing employment and value added. Prospects for the expansion of the food industry seem limited by the constraints to further agricultural development, strong foreign competition in the processed food sector and domestic consumer preferences - with the expected strong reduction in the

Table 20. Agricultural area and production, 1981/82 - 1982/83

	1981/82		1982/83	
	Area (Hectares)	Production (in tons)	Area (Hectares)	Production (in tons)
Grains				
Wheat	151,058	416,735	245,071	817,478
Sorghum	10,720	5,222	10,355	7,478
Millet	95,829	60,910	59,239	47,088
Corn	1,222	1,143	825	672
Barley	3,121	4,507	932	1,851
Vegetables				
Tomato	20,346	299,788	19,397	263,980
Marrow	3,858	41,496	3,135	39,700
Egg plant	3,247	43,459	3,083	34,256
Okra	1,227	6,345	1,951	11,979
Dry onion	1,623	16,482	604	7,464
Potato	4,415	3,260	5,834	8,769
Watermelon	28,174	456,512	21,132	446,742
Muk-melon	7,309	124,175	3,640	75,553
Fruits				
Dates	68,583	399,576	55,481	406,722
Citrus fruits	1,447	9,440	1,462	8,674
Grapes	2,983	44,116	3,831	42,316

Source: Ministry of Agriculture and Water.

foreign labour force, the market for certain processed foods can be expected to shrink.

4.3 Technical co-operation

Bilateral and multilateral arrangements cover a wide range of co-operation projects for social and economic development. With regard to manufacturing, a recent UNIDO mission has identified new areas for technical co-operation within the framework of the Fourth Plan. Particular attention is given to the downstream petrochemical industries (plastics, synthetic fibres and rubber), including technological and international market trends. In the plastic industry a sample study has been started and some sectoral trends

identified. A number of areas for technical co-operation is proposed, namely: market opportunities, productivity and export promotion policy, Glass Reinforced Plastics (GRP) and Polyvinyl Chloride (PVC) technologies and mould design and mould making. Construction materials also rate high in priority and in this connection, the cement and ceramic industries could reap considerable benefit from technical co-operation. Annex A-10 gives an overview of UNIDO technical co-operation projects in Saudi Arabia.

Saudi Arabia is itself actively involved in development co-operation, having granted SR 136 billion in development aid since 1970. The country co-operates on economic matters with other member countries of the Gulf Co-operation Council, which also includes Bahrain, Kuwait, Oman and Musqat, Qatar and the United Arab Emirates. A joint Saudi-Sudanese project explores the possibilities of Red Sea mining. There is scope for further co-operation among countries in the region. The recession and the decline in demand for oil products have made it clear that the countries of the Gulf area can benefit from regional co-operation in production of specific products, and co-ordination of productive capacity, technological research and marketing efforts.

Appendix A

Statistical Tables

Table A-1. Comparative growth rates by economic sector, 1963-81

(at 1975 prices)

Sectors	Period	Saudi Arabia	Western Asia	Developing countries Total
Agriculture	1963-1970	0.78	2.27	2.37
	1970-1981	3.92	2.85	2.74
	1963-1981	2.76	2.63	2.77
Mining & quarrying	1963-1970	10.81	7.48	9.61
	1970-1981	6.83	3.52	0.88
	1963-1981	10.17	6.24	4.69
Manufacturing	1963-1970	10.49	9.87	7.37
	1970-1981	5.09	6.39	6.52
	1963-1981	7.24	7.74	7.20
Utilities	1963-1970	16.96	10.44	9.34
	1970-1981	10.37	10.88	9.41
	1963-1981	11.03	10.30	9.44
Construction	1963-1970	7.94	7.21	5.99
	1970-1981	18.95	13.10	7.96
	1963-1981	13.37	9.87	7.51
Services	1963-1970	9.81	7.28	5.93
	1970-1981	11.35	7.91	6.63
	1963-1981	9.91	7.51	6.65

Source: Statistics and Survey Unit, UNIDO. Based on data supplied by the UN Statistical Office, with estimates by the UNIDO Secretariat.

Table A-2. Aggregate non-oil sector supply and demand, 1979/80 - 1984/85
(billion Riyals)

	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85[a/]
1. Aggregate domestic supply at constant prices	63.1	72.6	84.0	93.8	91.8	81.6
a) Non-oil GDP	25.2	28.3	31.5	33.7	34.6	34.3
i) Private sector	16.9	18.9	21.3	23.6	24.8	24.7
ii) Government sector	8.3	9.4	10.2	10.1	9.8	9.6
b) Net private sector imports[b/]	37.9	44.3	52.5	60.1	57.2	47.3
c) b as per cent of 1	60.1	61.0	62.5	64.1	62.3	58.0
2. Aggregate domestic demand at current prices[c/] (a+b or c+d)	264.8	292.4	364.7	364.8	359.7	339.3
a) Government demand	139.2	148.8	202.4	193.3	175.1	160.5
b) Private demand	125.6	143.6	162.3	171.5	184.6	178.8
c) Final consumption	179.9	196.8	255.0	264.2	265.3	256.9
d) Gross capital formation[d/]	84.9	95.6	109.7	100.6	94.4	82.4
e) Changes in stocks[e/]	-17.5	6.4	-19.8	-2.6	3.3	3.5
Memorandum items:						
a) Non-oil GDP at current prices	130.9	157.3	184.3	205.4	209.6	203.4
b) Net private sector imports at current prices	184.2	100.9	119.1	132.7	123.9	102.8
c) Non-oil GDP deflator (1389/90 = 100)	5.197	5.553	5.850	6.092	6.054	5.928
d) Riyal import price deflator (1389/90 = 100)	221.9	227.7	227.0	220.8	216.7	217.2
e) Private demand as per cent of total demand	47.4	49.1	44.5	47.0	51.3	52.7
f) Capital formation as per cent of total demand	32.1	32.7	30.1	27.6	26.2	24.3

Source: Saudi Arabian Monetary Agency and the Ministry of Finance and National Economy.

a/ Provisional.
b/ Private sector imports (CIF) net of non-oil exports and re-exports.
c/ Aggregate demand = aggregate supply X implicit absorption multiplier.
d/ Excluding gross fixed capital formation in the oil sector and changes in stock.
e/ Non-oil private sector stocks only.

Table A-3. Industrial licenses and factories classified according to stages of implementation, end-1984
(value in SR millions)

Classification No.	INDUSTRIAL ACTIVITY	TOTAL LICENSES AND FACTORIES			FACTORIES IN PRODUCTION			LICENSES THAT STARTED IMPLEMENTATION			INDUSTRIAL LICENSES NOT STARTED IMPLEMENTATION		
		No. of Licenses & Factories	No of Workers	Total Finance	No of Factories	No of Workers	Total Finance	No of Licenses	No of Workers	Total Finance	No of Licenses	No of Workers	Total Finance
31	Foodstuffs, Drinks and Tobacco	555	27838	10969	287	16248	5128	78	3454	1581	190	8136	4360
32	Ready-made clothes and Textiles	87	6678	1492	33	2934	568	15	1484	423	39	2260	501
32	Manufacture of Leather Products	35	1351	467	11	723	102	5	248	66	19	980	299
33	Manufacture of Wood Products	121	6842	2271	60	3696	539	20	1062	498	41	2084	1234
43	Manufacture of Paper and Paper Products, Printing & Publishing	156	6466	1813	106	5227	1161	17	723	307	33	516	345
35	Chemical Industries including Petrochemicals, Coal, Rubber & Plastics	575	34989	67480	259	18681	20043	116	7012	29257	200	9296	18180
36	Manufacture of China Earthenware, Pottery, Porcelain and Glass	30	2610	778	5	1416	398	5	484	184	10	710	196
36	Manufacture of Building Materials	649	43184	22885	486	34857	16822	56	3381	4068	107	4946	1995
37-38	Metal Industries	886	51652	18476	500	32136	10114	133	8625	4118	253	10891	4444
39	Manufacture of Other Products	67	2373	756	20	774	227	17	699	275	30	900	254
71	Storage	52	1394	768	18	668	329	19	452	282	15	274	157
	TOTAL	3203	185879	128355	1785	117360	95431	481	27624	41069	937	40995	31865
	PERCENTAGE OF IMPLEMENTATION	100	100	100	55,7	63,1	43,2	15	14,9	32	29,3	22	24,8

Source: Ministry of Industry and Electricity, Industrial Statistical Bulletin for the Year 1404 A.H. - 1984 A.D.

Table A-4. Expenditure on gross domestic product at purchasers' current prices,[a/] 1978/79 - 1982/83
(SR billion)

	1978/79	1979/80	1980/81	1981/82	1982/83
Government consumption	71.90	77.56	81.92	128.53	110.55
Private consumption	68.61	102.39	114.91	126.51	138.78
Gross fixed capital formation	76.65	97.07	106.38	122.32	117.41
Of which:					
government	49.03	61.60	66.88	73.88	63.87
non-oil private	19.40	23.21	28.69	35.83	38.34
oil sector	8.22	12.26	10.81	12.61	15.21
Increase in stocks	-7.38	-17.35	6.43	-19.79	12.98
Exports of goods & services	147.24	258.49	368.43	354.92	223.41
Less: imports of goods & services	-107.48	-132.35	-157.46	-187.75	-188.68
Expenditure on GDP	249.54	385.81	520.59	524.72	414.45

a/ Central Department of Statistics, Ministry of Finance.

Table A-5. Main components of manufacturing value added (at 1980 prices), 1975-1982
(percentage)

Description (ISIC)	1975	1976	1977	1978	1979	1980	1981	1982
Food products (311) Beverages (313) Tobacco (314)	10.3	9.6	10.2	12.1	12.0	9.3	11.8	12.3
Petroleum refineries (353)	83.6	85.7	85.4	81.1	77.6	61.5	75.7	73.9
Other non-metallic mineral products (369)	6.1	4.7	4.5	6.7	10.4	8.7	12.5	13.8
TOTAL MANUFACTURING (300)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
TOTAL MVA (in millions US$)	3,212	3,843	3,731	4,059	4,381	5,820	4,821	4,940

Source: Statistics and Survey Unit, UNIDO. Based on data supplied by the UN Statistical Office, with estimates by the UNIDO Secretariat.

Note: TOTAL MANUFACTURING is the sum of the available components and does not necessarily correspond to ISIC 300 total.

Table A-6. Shares of exports and imports classified according to level of processing 1975 and 1982 and trend growth rates 1975-1980 and 1980-1982

CLASSES	EXPORTS				IMPORTS			
	CLASS SHARE OF TOTAL (PERCENTAGE)		CLASS GROWTH RATE (PERCENTAGE)		CLASS SHARE OF TOTAL (PERCENTAGE)		CLASS GROWTH RATE (PERCENTAGE)	
	1975	1982	1975-1980	1980-1982	1975	1982	1975-1980	1980-1982
A : Non-processed goods for further processing	92.87	92.80	25.85	-15.64	4.23	5.64	48.58	33.57
B : Processed goods for further processing	0.20	0.13	2.99	2.40	11.15	5.15	35.42	-5.20
C : Non-processed goods for final use	0.05	3.31	121.69	4.72	3.54	2.81	46.97	5.38
D : Processed goods for final use	6.88	3.76	11.46	-7.22	81.08	86.40	47.91	17.52
	1975	1982			1975	1982		
Sum of classes: A+B+C+D in 1000 current US$	29668949	79119830			4139921	40430442		
Total trade SITC 0-9 in 1000 current US$	29668949	79124809			4141238	40472584		

SOURCE: UNIDO data base; Information supplied by the United Nations Statistical Office, with estimates by the UNIDO Secretariat.

Note: Calculations are based on current us dollar prices.
Sum of classes and Total trade figures should be identical. Discrepancies or zero values are due to lack of countrys" trade reporting in general but especially at the 3-, 4- and 5-digit SITC level.

Table A-7. Product mix of traded manufactured goods, 1975, 1981, 1982*/

SITC	DESCRIPTION OF TRADE GOODS	EXPORTS 1975 PERCENT IN TOTAL MANUFACTURES	EXPORTS 1981 PERCENT IN TOTAL MANUFACTURES	EXPORTS 1982 PERCENT IN TOTAL MANUFACTURES	EXPORTS 1982 (1000 US $)	IMPORTS 1975 PERCENT IN TOTAL MANUFACTURES	IMPORTS 1981 PERCENT IN TOTAL MANUFACTURES	IMPORTS 1982 PERCENT IN TOTAL MANUFACTURES	IMPORTS 1982 (1000 US $)
01	Meat and meat preparations	0.002	0.030	0.087	2702	1.251	1.540	1.282	481115
02	Dairy products and eggs	0.005	0.100	0.118	3656	1.871	1.083	1.058	397087
032	Fish n.e.s. and fish preparations	0.020	0.074	0.097	3015	0.140	0.117	0.114	42892
0422	Rice,glazed or polished not otherwise worked	0.006	0.053	0.027	847	0.921	0.919	0.770	289172
046	Meal and flour of wheat or of meslin	0.020	0.014	0.038	1188	1.874	0.256	0.131	49243
047	Meal and flour of cereals,except above	0.001	0.014	0.007	209	0.174	0.012	0.004	1684
048	Cereals preparat. & starch of fruits & vegetab.	0.007	0.207	0.220	6818	0.396	0.341	0.348	130797
052	Dried fruit	0.006	0.212	0.281	8705	0.028	0.031	0.025	9248
053	Fruit,preserved and fruit preparations	0.009	0.211	0.318	9847	0.800	0.589	0.525	197184
055	Vegetables,roots & tubers,preserved or prepared	0.003	0.023	0.023	720	0.400	0.239	0.224	84109
06	Sugar,sugar preparations and honey	0.017	0.563	0.183	5658	1.004	1.259	0.614	230598
0713	Coffee extracts,essences,concentrates & similar	...	0.006	0.000	2	0.023	0.038	0.041	15450
0722	Cocoa powder,unsweetened	...	...	0.000	1	0.001	0.002	0.001	558
0723	Cocoa butter and cocoa paste	0.001	...	...	...	0.000	0.000	0.000	32
073	Chocolate and related food preparations	0.022	0.001	0.010	295	0.056	0.046	0.064	24178
074	Tea and mate	0.001	0.042	0.047	1458	0.287	0.208	0.158	59190
081	Feeding-stuff for animals	0.025	0.017	0.026	815	0.213	0.167	0.143	53530
09	Miscellaneous food preparations	0.004	0.038	0.029	905	0.275	0.285	0.321	120598
11	Beverages	0.001	0.137	0.126	3886	0.100	0.424	0.228	85777
122	Tobacco manufactures	0.225	0.385	0.328	10143	1.181	0.872	0.734	275670
2219	Flour and meal of oil seeds,nuts,kernels	...	0.000	...	...	0.000	0.000	0.000	42
231	Crude rubber,synth. & reclaimed(excl.SITC 2311)	0.000	0.000	0.000	4	0.011	0.002	0.003	1008
243	Wood,shaped or simply worked	0.002	0.045	0.025	785	0.658	0.701	0.552	207058
251	Pulp and waste paper	0.010	0.001	0.006	190	0.000	0.000	0.000	9
2626	Wool shoddy	...	...	0.000	5	0.000	...	0.000	0
2627	Wool or other animal hair,carded or combed	...	...	0.000	0	0.000	0.000	...	...
2628	Wool tops	...	...	0.000	4	0.000	...	...	...
2629	Waste of wool and other animal hair n.e.s.	...	...	...	...	0.002	0.000	0.000	1
263	Cotton	0.000	0.000	0.000	15	0.030	0.010	0.007	2733
266	Synthetic and regenerated(artificial) fibres	0.000	0.001	0.001	26	0.008	0.001	0.001	215
267	Waste materials from textile fabrics(incl.rags)	0.002	0.135	0.258	7992	0.060	0.011	0.009	3444
332	Petroleum products	91.232	75.810	7[illegible]89	2193765	0.687	0.774	0.504	189290
4	Animal and vegetable oils and fats	0.000	0.121	[illegible]93	5979	0.680	0.356	0.404	151691
411	Animal oils and fats	0.000	0.000	[illegible]001	31	0.007	0.003	0.002	867
421	Fixed vegetable oils,soft(incl.SITC 422)	...	0.117	0.191	5917	0.516	0.323	0.381	142923
431	Animal and vegetable oils and fats processed	0.000	0.004	0.001	30	0.158	0.031	0.021	7902

Table A-7 (continued)

SITC	DESCRIPTION OF TRADE GOODS	EXPORTS 1975 PERCENT IN TOTAL MANUFACTURES	EXPORTS 1981 PERCENT	EXPORTS 1982 PERCENT */	EXPORTS 1982 (1000 US $)	IMPORTS 1975 PERCENT IN TOTAL MANUFACTURES	IMPORTS 1981 PERCENT	IMPORTS 1982 PERCENT	IMPORTS 1982 (1000 US $)
5	Chemicals	0.240	2.644	5.037	155879	5.161	4.236	4.161	1562036
51	Chemicals elements and compounds	0.031	0.077	2.016	62386	0.450	0.441	0.454	170396
52	Tar and chemicals from coal,petroleum,nat. gas	0.000	0.002	0.001	21	0.012	0.008	0.006	2296
53	Dyeing,tanning and colouring materials	0.004	0.039	0.035	1092	0.445	0.536	0.461	173047
54	Medicinal and pharmaceutical products	0.001	0.022	0.024	727	1.814	0.993	1.042	391300
55	Essential oils and perfume materials	0.172	0.386	0.608	18818	0.890	0.780	0.741	278056
56	Fertilizers,manufactured	0.014	1.947	2.200	68074	0.119	0.082	0.104	38859
57	Explosives and pyrotechnic products	0.000	0.001	0.000	8	0.100	0.023	0.031	11555
58	Plastic materials,regenerated cellul. & resins	0.016	0.106	0.094	2912	0.589	0.794	0.709	266234
59	Chemical materials and products n.e.s.	0.002	0.065	0.059	1841	0.742	0.576	0.613	230292
6	Manufactured goods classified by material	0.491	2.537	5.308	164274	23.373	28.062	27.434	10299182
61	Leather manufactured n.e.s. & dressed fur skins	0.030	0.015	0.021	639	0.024	0.029	0.031	11536
62	Rubber manufactures n.e.s.	0.064	0.127	0.100	3100	1.612	1.176	1.272	477660
63	Wood and cork manufactures(excl.furniture)	0.000	0.490	0.474	14657	1.325	1.358	1.251	469520
64	Paper,paper board and manufactures thereof	0.042	0.097	0.092	2853	1.065	0.996	0.971	364546
65	Textile yarn,fabrics,made-up articles	0.135	0.507	0.956	29590	7.242	4.409	4.241	1592278
66	Non-metallic mineral manufactures,n.e.s.	0.045	0.193	2.320	71787	2.505	4.709	4.116	1545248
67	Iron and steel	0.021	0.300	0.270	8364	4.843	7.170	7.334	2753133
68	Non-ferrous metals	0.030	0.052	0.042	1289	0.533	0.620	0.557	208982
69	Manufactures of metal,n.e.s.	0.115	0.757	1.034	31995	4.224	7.596	7.662	2876279
7	Machinery and transport equipment	3.286	15.086	14.594	451619	43.636	43.547	46.659	17516199
71	Machinery,other than electric	0.153	4.072	3.550	109853	13.848	15.933	16.670	6258074
72	Electrical machinery,apparatus and appliances	0.215	1.852	1.364	42202	8.342	12.565	12.095	4540726
73	Transport equipment	2.918	9.162	9.680	299564	21.447	15.049	17.893	6717399
8	Miscellaneous manufactured articles	4.364	1.490	1.720	53233	14.696	13.871	13.479	5060229
81	Sanitary,plumbing,heating & lighting fixtures	0.007	0.039	0.048	1481	0.651	0.804	0.728	273277
82	Furniture	0.021	0.163	0.127	3929	1.339	2.042	2.065	775262
83	Travel goods,handbags and similar articles	0.001	0.005	0.007	216	0.294	0.315	0.313	117481
84	Clothing	0.028	0.384	0.506	15665	2.380	2.347	2.273	853289
85	Footwear	0.010	0.138	0.153	4741	0.426	0.522	0.520	195303
86	Professional,scient. & controll. instruments	0.029	0.194	0.210	6504	2.862	2.552	2.475	929118
89	Miscellaneous manufactured articles,n.e.s.	4.267	0.567	0.669	20697	6.745	5.289	5.105	1916500
		1975		1981	1982	1975		1981	1982
	TOTAL MANUFACTURES	2054990		3322425	3094637	3895868		32494583	37541248
	TOTAL: SITC 5-8 LESS 68 a/	171586		721199	823715	3363441		28951381	34228665
	TOTAL TRADED GOODS: SITC 0-9	29668949		119913143	79124809	4141238		35041508	40472584

Note:Data and SITC descriptions refer to SITC revision 1

*/ This table is based on the definition of trade in manufactures covering a list of 148 specifically identified SITC 3-digit or 4-digit codes comprising a wide range of processing stages of manufactured goods.

a/ Definition of trade in manufactures SITC 5-8 less 68 is one of the most often found. It covers only items recognized as exclusively manufactured goods,i.e. with a high level of manufacturing content.

Source: UNIDO data base;Information supplied by the United Nations Statistical Office.

Table A-8. Balance of payments estimates, 1982/83 - 1985/86
(million Riyals)

	1982/83[a/]	1983/84[a/]	1984/85[b/]
1. Merchandise trade f.o.b.	91,986	47,498	31,383
a) Oil exports (excluding bunker oil)	203,967	151,955	117,838
b) Other exports	3,356	3,762	4,196
of which re-exports	(2,474)[c/]	(1,757)[c/]	(2,222)
c) Imports	-115,337	-108,219	-90,651
2. Services and transfers	-86,465	-105,027	-90,307
a) Receipts	70,779	68,049	59,451
i) Investment income	53,969	51,204	44,677
ii) Oil sector (bunker oil)	936	496	313
iii) Other	15,874	16,349	14,461
b) Payments	-157,244	-173,076	-149,758
i) Freight and insurance	-20,761	-19,479	-16,317
ii) Oil sector investment income	-14,661	-15,034	-11,872
iii) Other private services	-35,585	-31,221	-31,765
iv) Other Government services[d/]	-67,500	-89,489	-71,259
v) Private transfers	-18,737	-17,853	-18,545
3. Capital movements and reserves	-5,521	+57,529	+58,924
a) Oil sector capital transactions and other capital transactions (net)	+23,802	+10,908	+13,677
b) Others[e/]	-29,323	+46,621	+45,247

Source: Saudi Arabian Monetary Agency.

a/ Revised.

b/ Provision.

c/ Estimate.

d/ Including official transfers and contributions or capital subscriptions to international or regional development agencies and some, but not all, Government imports.

e/ Including short-term private capital, valuation adjustment and net errors and omissions, and changes in commercial banks' net foreign assets and official capital and reserves.

Table A-9. Origin of imports, 1983 and 1984
(value in million Riyals)

Region and Country	1983		1984	
	Value	Percent	Value	Percent
Western Hemisphere, of which:	**29,561**	**21.8**	**23,154**	**19.5**
U.S.A.	26,735	19.8	20,655	17.4
Brazil	852	0.6	947	0.8
Argentina	202	0.2	106	0.1
Canada	1,167	0.9	776	0.7
Europe	**58,448**	**43.2**	**51,903**	**43.7**
E.E.C., of which:	**45,739**	**33.8**	**40,590**	**34.2**
Belgium & Luxembourg	1,973	1.5	2,018	1.7
France	7,232	5.3	9,253	7.8
Germany	13,471	9.9	9,861	8.3
Italy	10,225	7.6	8,595	7.2
Netherlands	3,525	2.6	3,165	2.7
U.K.	8,376	6.2	6,898	5.8
Other Western Europe, of which:	**11,896**	**8.8**	**10,438**	**8.8**
Greece	1,272	0.9	1,009	0.8
Spain	2,512	1.9	2,280	1.9
Switzerland	3,169	2.3	2,379	2.0
Turkey	1,164	0.9	1,709	1.4
Eastern Europe	**813**	**0.6**	**875**	**0.7**
Middle East, of which:	**3,805**	**2.8**	**3,321**	**2.8**
Bahrain	425	0.3	221	0.2
Jordan	400	0.3	378	0.3
Kuwait	520	0.4	473	0.4
Lebanon	824	0.6	555	0.5
Syria	156	0.1	149	0.1
Egypt	323	0.2	278	0.2
Other Asia, of which:	**39,955**	**29.5**	**36,675**	**30.9**
India	958	0.7	99[illegible]	0.8
Japan	26,367	19.5	23,568	19.5
Korea, South	3,884	2.9	3,579	3.0
Pakistan	677	0.5	511	0.4
Philipines	166	0.1	153	0.1
Singapore	1,355	1.0	1,313	1.1
Taiwan	3,245	2.4	3,236	2.7
Thailand	683	0.5	800	0.7
Africa, of which:	**1,429**	**1.1**	**923**	**0.8**
Somalia	308	0.2	175	0.1
Oceania	**1,845**	**1.3**	**2,404**	**2.0**
Others	**374**	**0.3**	**357**	**0.3**
Grand Total	**135,417**	**100.0**	**118,737**	**100.0**

Source: Ministry of Finance & National Economy, Central Dept. of Statistics, Foreign Trade Statistics.

Table A-10. Destination of exports, 1983 and 1984
(value in million Riyals)

Region and Country	1983		1984[2]	
	Value	Percent	Value	Percent
Western Hemisphere, of which:	**19,968**	**12.6**	**13,053**	**10.1**
U.S.A.	12,696	8.0	8,741	6.7
Bahamas	42	—	52	—
Brazil	7,030	4.3	4,043	3.1
Europe	**38,622**	**24.4**	**26,766**	**20.6**
E.E.C., of which:	**28,956**	**18.3**	**19,212**	**14.8**
Belgium & Luxembourg	1,150	0.7	975	0.8
France	9,236	5.8	5,573	4.3
Germany	3,738	2.4	2,327	1.8
Italy	8,724	5.5	5,949	4.6
Netherlands	3,111	2.0	2,334	1.8
U.K.	2,857	1.8	1,914	1.5
Other Western Europe, of which:	**9,355**	**5.9**	**7,470**	**5.8**
Greece	1,848	1.2	1,786	1.4
Spain	3,911	2.5	2,500	1.9
Switzerland	20	—	87	0.1
Turkey	748	0.5	748	0.6
Eastern Europe	**312**	**0.2**	**83**	**0.1**
Middle East, of which:	**9,288**	**5.8**	**7,226**	**5.6**
Bahrain	4,824	3.0	4,787	3.7
Jordan	1,992	1.3	1,324	1.0
Kuwait	234	0.1	140	0.1
Lebanon	190	0.1	309	0.2
Syria	18	—	14	—
Egypt	482	0.3	26	—
Yemen Arab Republic	859	0.5	415	0.3
Other Asia, of which:	**84,236**	**53.2**	**74,689**	**57.5**
India	4,476	2.8	4,191	3.2
Japan	45,059	28.4	42,130	32.5
Korea, South	5,507	3.5	4,067	3.1
Pakistan	1,994	1.3	1,962	1.5
Philipines	2,773	1.8	1,118	0.9
Singapore	10,781	6.8	7,041	5.4
Taiwan	6,068	3.8	6,416	4.9
Thailand	2,974	1.9	2,830	2.2
Africa, of which:	**3,138**	**2.0**	**2,360**	**1.8**
Somalia	173	0.1	75	0.1
Oceania	**2,488**	**1.6**	**2,261**	**1.7**
Others[1]	**704**	**0.4**	**3,439**	**2.7**
Grand Total	**158,444**	**100.0**	**129,794**	**100.0**

Source: Ministry of Finance & National Economy, Central Dept. of Statistics, Foreign Trade Statistics.

(1) Mainly bunker fuel exports.
(2) Includes Rls. 2,504.8 million of re-exports.

Table A-11. SABIC: Domestic heavy industry projects,[a/] selected years

Project	Joint-venture partner(s)	Signature date	Production start-up date	Location	Feedstock	Products	Annual Capacity (tons)
Saudi Arabian Fertilizer Company (SAFCO)	Saudi private sector (including SAFCO employees - 59%)	1965	1970	Dammam	Methane	Urea Sulphuric acid Melamine	330,000 100,000 20,000
Saudi Iron & Steel Company (HADEED)	DEG (West Germany - 5%)	March 1979	1983	Jubail	Iron ore, limestone, natural gas, scrap iron	Steel rods & bars	800,000
Jeddah Steel Rolling Mill Company (SULB)	Hadeed subsidiary (100%)	May 1979	1981	Jeddah	Steel billets	Steel rods & bars	140,000
Saudi Methanol Company (AR-RAZI)	Japanese consortium led by Mitsubishi Gas Chemical Corporation (50%)	November 1979	1983	Jubail	Methane	Chemical-grade methanol	600,000
Al-Jubail Fertilizer Company (SAMAD)	Taiwan Fertilizer Company (50%)	December 1979	1983	Jubail	Methane	Urea	500,000
Saudi Yanbu Petro-Chemical Company (YANPET)	Mobil Oil Corporation (US - 50%)	April 1980	1984	Yanbu	Ethane	Ethylene Linear low density polyethylene High-density polyethylene Ethylene glycol	455,000 205,900 91,000 220,000
Al-Jubail Petro-Chemical Company (KEMYA)	Exxon Chemical	April 1980	1984	Jubail	Ethylene	Linear low-density polyethylene	260,000
Saudi Petrochemical Company (SADAF)	Pecten Arabia (subsidiary of Shell Oil Company - 50%)	September 1980	First unit: ethylene, 1984 Last unit: styrene, 1985	Jubail	Ethane Salt Benzene	Ethylene Ethylene dichloride Styrene monomer Crude industrial ethanol Caustic soda	656,000 454,000 295,000 281,000 377,000

Table A-11 (continued)

Project	Joint-venture partner(s)	Signature date	Production start-up date	Location	Feedstock	Products	Annual Capacity (tons)
National Methanol Company (IBN-SINA)	Celanese Corporation (US - 25%), Texas Eastern Corporation (US - 25%)	February 1981	1984	Jubail	Methane	Chemical-grade methanol	650,000
Arabian Petrochemical Company (PETROKEMYA)	None	May 1981	1985	Jubail	Ethane	Ethylene	500,000
Eastern Petrochemical Company (SHARQ)	Mitsubishi-led Japanese consortium (50%)	May 1981	1985	Jubail	Ethylene	Linear low-density polyethylene	130,000
						Ethylene glycol	300,000
National Industrial Gases Company (GAS)	Saudi gas companies (30%)	February 1983	1984	Jubail	Air	Oxygen	438,000
						Nitrogen	145,000
National Plastic Company (IBN-HAYYAN)	Lucky-group (South Korea - 15%)	December 1983	1986	Jubail	Ethylene	Vinyl chloride monomer	300,000
					Ethylene dichloride	Polyvinyl chloride	200,000
Saudi European Petrochemical Company (IBN ZAHR)	Arab Petroleum Investments Corporation (APICORP - pan-Arab - 10%), Neste (Finland - 10%), ENI (Italy - 10%)	December 1984	1988	Jubail	Butane	Methyl tertiary-butyl ether	500,000
					Chemical-grade methanol	Butadiene	125,000
						Butene 1	80,000

Source: SABIC.

a/ Table compiled from MEED Special Report, February 1985.

Table A-12. Licensed factories in production classified according to regions, 1975 and 1984

Classification No.	INDUSTRIAL ACTIVITY	1975					1984				
		Central Region	Western Region	Eastern Region	Northern Region	Southern Region	Central Region	Western Region	Eastern Region	Northern Region	[illegible] Region
31	Foodstuffs, Drinks and Tabacco	20	38	13	1	1	82	120	59	7	19
32	Ready-made clothes and Textiles	—	9	1	—	—	11	18	3	-	1
32	Manufacture of Leather Products	1	1	—	—	—	5	3	3	—	—
33	Manufacture of Wood Products	12	8	5	—	—	30	15	13	1	1
34	Manufacture of Paper and Paper Products, Printing & Publishing	15	19	12	—	—	40	36	23	2	5
35	Chemical Industries including Petro-chemicals, Coal, Rubber & Plastics	20	29	14	—	—	73	98	79	5	4
36	Manufacture of China Earthenware, Pottery, Porcelain and Glass	1	—	—	—	—	3	1	1	—	—
36	Manufacture of Building Materials	42	25	19	2	2	205	110	111	16	44
37-38	Metal Industries	78	45	29	4	3	212	145	119	12	12
39	Manufacture of Other Products	2	1	—	—	—	11	6	2	—	1
71	Storage	—	1	—	—	—	5	7	3	2	1
	TOTAL	191	176	93	7	6	677	559	416	45	88
	PERCENTAGE OF EACH REGION TO TOTAL %	40,4	37,2	19,6	1,5	1,3	38	32	23	2	5

Source: Ministry of Industry and Electricity, Industrial Statistical Bulletin for the Year 1404 A.H. - 1984 A.D.

Appendix B

The approved and/or operational technical co-operation projects of UNIDO, 1985

(approved = PAD issued)

Kingdom of SAUDI ARABIA

Backstopping Responsibility (Spe.Act.Code)	Project Number	Project Title
IO/INFR (31.3.K)	DP/SAU/80/008*	Technical advisory services to the Saudi Arabian Standards Organization (SASO)
IO/FEAS (31.6.A)	DP/SAU/81/008**	Industrial advisory services to the Ministry of Industry and Electricity (phase II of DP/SAU/79/005) (SI/SAU/85/801 and UC/SAU/85/042 also refer)
IO/FEAS (31.6.A)	UC/SAU/85/042	Advisory services to the Ministry of Industry and Electricity (DP/SAU/81/008 also refers)
IO/FEAS (31.6.A)	SI/SAU/86/002	Seminar on financial analysis and the application of the computer model for feasibility analysis and reporting (COMFAR)
IO/CHEM (32.1.H)	SI/SAU/85/801	Technical assistance for downstream petrochemical industries (complementary to DP/SAU/81/008)

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* Large-scale project (= total allotment $150,000 or above).
** Total allotment $1 million or above.

Appendix C

Major industrial companies, 1985
(sales and capital figures are in SR)

Arabian Cement Co. Ltd.: 1956; produces Portland cement and hydrated lime; subsidiary company Cement Product Industry Co. Ltd.; cap. 1,050m.; 700 employees.

The Concrete Company, LLP: 1977; manufacture and erection of pre-cast concrete; member of the Dallah Group; sales 67m. (1982); cap. 60m.; 450 employees.

Hoshanco: 1965; construction and trading; sales 370m. (1982); cap. 140m.; 2,290 employees.

Manufacturing and Building Co. Ltd. (MABCO): 1977; manufacture of pre-cast components for construction of buildings; also turnkey contractor for pre-cast construction; sales 830m. (1984); cap. 100m.; 2,800 employees.

National Pipe Company Ltd.: 1978; manufacture and marketing of spiral-welded steel pipes for oil and gas transmission; sales 170m. (1981/82); cap. 50m.; 380 employees.

Saudi Cable Co. Ltd.: 1976; manufacture of building wires, copper and aluminium low-voltage power cables, overhead lines for low-, medium- and high-power transmission; sales 311m. (1982); cap. 70m.; 739 employees.

Saudi Cement Co.: sales 350m. (1981); cap. 557m.; 1,358 employees.

Saudi Metal Industries Ltd.: 1978; manufacture of chain-link fencing systems, production of steel reinforcing fabric for concrete; sales 110m. (1982); cap. 116.5m.; 160 employees.

Saudi Plastic Products Co. Ltd.: manufacture and supply of PVC pipes and polystyrene insulation boards; sales 143m. (1982); cap. 100m.; 510 employees.

Tamimi and Fouad: pipeline construction, mechanical and civil construction, industrial catering; sales 150m. (1982); cap. 100m.

Al Zamil Group: 1930; involved in real estate and land development as well as the marketing of products from numerous subsidiary companies, including Al Zamil Aluminium Factory Ltd., Zamil Soule Steel Building Co. Ltd., Yamama Factories, Arabian Gulf Construction Co. Ltd., Bahrain Marble Factory, Al Zamil Nails and Screws Factory, Saudi Plastics Factory; 2,500 employees.

Source: The Europa Year Book, A World Survey, Volume 11, 1985.

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