
Evolution and Performance of the UAE Economy 1972–1998

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Introduction

The United Arab Emirates' (UAE) economy has been transformed from a precarious base of fishing and pearling, together with some local agriculture, to an oil-based, high-income economy with a high concentration of expatriate labour driving the engines and wheels of the different sectors. The transformation of the economy brought with it challenges and opportunities that induced discussions on how best to confront the challenges and utilize the opportunities in an optimal manner. The analysis of the evolution of the economy that will be presented indicates that the UAE Government has succeeded, to a great extent, on both counts. In section two an overview of the economy in 1998 is presented, utilizing a production and demand structure. Section three traces, discusses and analyses the evolution of the economy over the period 1972–1998, highlighting the oil boom challenges and opportunities, the sources of growth and instability in incomes and prices. In section four the evolution of the consolidated budget, an effective policy tool for economic and social development, is outlined and the achievements in the social sphere are highlighted. Section five presents a brief discussion of the evolution of the trade and current account balances in the balance of payments. Section six indicates briefly the monetary and credit policy in the UAE and this is followed by a short concluding section.

Overview of the Economy

The UAE, which was established on 2 December 1971, is a federation of the seven emirates: Abu Dhabi, Dubai, Sharjah, Ajman, Umm al-Qaiwain, Ra's al-Khaimah and Fujairah. It has a total area of approximately 84,000 sq. km with an estimated population of three million inhabitants in 2000, of which non-nationals make up over three-quarters.¹ The labour market is dominated by expatriates who accounted for more than 91 per cent of total employment in 1998.² The UAE per capita income on the basis of the gross domestic product (GDP) amounted to US \$16,700 in 1998 and is considered relatively high compared to the average per capita income of developing countries.³ Three emirates, Abu Dhabi, Dubai and Sharjah, account for more than 93 per cent and 84 per cent of the UAE GDP and population respectively. The distribution of GDP and population between the emirates in 1998 was as in Table 1 below.

Table 1. Distribution of GDP and population between the emirates in 1998

	GDP	Population	GDP per capita	
	%	%	dh	US \$
Abu Dhabi	55.32	38.59	87,820	23,929
Dubai	27.88	28.92	59,066	16,094
Sharjah	9.88	16.77	36,105	9,838
Ra's al-Khaimah	2.81	5.80	29,638	8,076
Ajman	1.28	5.23	22,964	6,047
Fujairah	1.51	3.17	29,194	7,955
Umm al-Qaiwain	0.64	1.49	26,256	7,154

Memorandum: 1998 UAE GDP = 170,066 mn dirhams; 46,340 mn US \$; population = 2, 776,000
Source: On the basis of Ministry of Planning, *Annual Economic Report 1999*, Tables 1 and 6.

The income distribution between the emirates is skewed in favour of Abu Dhabi, as its income share of 55.32 per cent is 143.35 per cent of its population share. This is reflected in the differences between the per capita incomes of the emirates presented in Table 1. Abu Dhabi's 1998 per capita income at US \$23,929 is the highest for the emirates and is about four times the lowest per capita income, that of Ajman, which did not exceed US \$6050. In fact, the per capita incomes of all the emirates, except Abu Dhabi, are lower than the UAE average per capita income of US \$16,700

The cited income differences between the emirates are generated mainly by the variations in their natural resource endowments. The most important resource the UAE possesses is hydrocarbons (oil and gas). UAE proven oil reserves are estimated at 98.10 billion barrels (bbl) and gas reserves were 6003 billion cubic metres (bcm) at the end of 1998. UAE crude oil production was 2.278 million barrels per day (mb/d) in 1998 and gas production was 48,860 million cubic metres (mcm) per year in 1997. These UAE petroleum related amounts are split between the emirates as shown in Table 2 below.

Table 2. Production and reserves of oil and gas

(Oil: production in mb/d & reserves in bbl)

(Gas: production in mcm per year & reserves in bcm)

	Production	Reserves	Production*	Reserves
	Oil		Gas	
Abu Dhabi	1.990	92.2	14.30	6,003
Dubai	0.230	5.9	1.7	121
Sharjah.	.058	–	0. 20	303
Ra's al-Khaimah.	–	–	0. 04	31
Total	2.278	98.10	48,860	5779
World	72.760	10,517.73	2,898,180	152,504

*1997

Sources: 1. *Petroleum Economist*, September.

2. OAPEC, *Secretary General Annual Report 1998*, Tables 2-6 to 2-9, pp 95–101.

3. EIU, *Country Profile United Arab Emirates 1998–1999*.

The impact on their income shares of the distribution of the petroleum resource between the emirates is reflected in its contribution to their GDPs. The shares of value added of the oil sector in the emirates' GDPs in 1997 are shown in Table 3 below.

Table 3. Contributions of the oil sector to emirates' GDPs in 1997

(per cent of the emirate's GDP)				
Abu Dhabi	Dubai	Sharjah	Ra's al-Khaimah	UAE
43.72	12.15	7.48	1.3	29.63

Source: calculated based on Ministry of Planning, *Annual Economic Report 1999*, Table 7

Structure of GDP: the demand side

Crude oil production contributed about 22 per cent to UAE GDP in 1998. However, the oil sector's impact on UAE economic activities and evolution is more extensive. Oil exports are the main source for foreign exchange earnings and government revenues, accounting for more than 37 per cent and 60 per cent of their totals respectively in 1998 (total exports and re-exports = Dh 111.45 billion, of which Dh 42.2 billion from oil and gas, total public revenue Dh 42.69 billion, of which Dh 25.50 billion from oil and gas).⁴

The impact and importance of such shares on the overall economic activity may be analysed and gauged through the structure of expenditure on GDP utilizing the income determination equality, namely:

$$\text{GDP} = \text{Cp} + \text{Ip} + \text{G} + \text{X} - \text{Z} \quad (1)$$

where: Cp = private consumption expenditure

Ip = private investment expenditure

G = government consumption and investment expenditure

X = exports of goods and non-factor services

Z = imports of goods and non-factor services

It is appropriate to mention that available national accounts data do not split investment expenditures between the private sector and the Government. However, government financial statistics contain data on government investment expenditures (Ig) which may be used to obtain private investment expenditure (Ip) from the relation:

$$\text{Ip} = \text{I} - \text{Ig}$$

where I= total gross investment and Ig = government investment expenditure.

In fact, total investment in the UAE is split three ways: government gross fixed capital formation, public sector gross fixed capital formation, and private sector gross fixed capital formation. Total gross investment includes change in stocks.

The shares of the variables on the right-hand side of the income determination equality have changed significantly between 1995 and 1998 as reflected in the following data:

Table 4. Structure of aggregate demand (components of aggregate demand as per cent of GDP) in 1995 and 1998

Variable	1995	1998
Cp/GDP	47.92	53.12
Ip/GDP	20.76	22.14
G/GDP((Cg+Ig)/GDP)	25.38(16.45+8.93)	24.72(16.78+7.94)
X/GDP	68.96	67.4
Z/GDP(-)	63.02	67.38
Total	100.00	100.00

Source: UAE, Ministry of Planning, *Annual Economic Report, 1999*, Tables 1 and 5

These shares reveal that the UAE economy is highly dependent on the external sector as reflected by the trade ratio (export plus import shares) which exceeded 131 per cent and 134 per cent in 1995 and 1998 respectively. Both export and import shares are relatively high and consequently the external sector plays a major role in the performance and evolution of the UAE economy. In addition, the government sector, as reflected by its expenditure share (G/GDP), plays an important role in the economy. Private sector expenditures accounted for more than 68 per cent of GDP in 1995 and exceeded 75 per cent in 1998. Thus, domestic absorption (A) (equal to the sum of private and government expenditures on consumption and investment) accounted in 1995 for a little bit more than 94 per cent of GDP, indicating a positive net export of goods and non-factor services (X–Z). In contrast, domestic absorption in 1998 accounted for approximately 100 per cent of GDP, which is reflected by approximate equality between exports and imports of goods and non-factor services. However, imports of goods and non-factor services (Z) accounted for approximately 67 per cent of A in both 1995 and 1998. This is another measure of the dependence of the economy on the policies of and developments in economies of its international trade partners.

Structure of GDP: the production side

The production side of the UAE economy is heavily dependent on expatriate labour. A production theory framework may be utilized to understand the economic impact of expatriate labour on the economy. At the aggregate level labour and capital, the traditional factors of production, technology and organization (management) are combined to produce aggregate output Q. In mathematical terms, this relation takes the form:

$$Q = F(K, L, O) \quad (2)$$

where: Q = Output

K = Capital input

L = Labour input

O = Organization, Management

F = Technology

The UAE has had no capital constraint since, thanks to the foreign exchange earnings from oil and gas exports, it has been able to purchase from international markets the capital goods and services needed for its production processes. But the size of indigenous population (nationals) and consequently the indigenous labour force was and still is a constraint, from quantitative and qualitative aspects. For example, the labour force in the UAE numbered 1,378,000 workers in 1998 (about 49.64 per cent of the population) of which more than 91 per cent were expatriates. This labour force, together with the capital services, management and available technologies in the different sectors of the economy, produced the equivalent of Dh 170,066 million (US \$46,340 million) of final goods and services (GDP at factor cost) in 1998. Compensation of employees (wages and salaries) accounted for only 30.46 per cent of the GDP, a share less than half of the two thirds' share estimated from Cobb-Douglas production functions for other economies (Table 4 in the annex). The balance in the 1998 GDP is allocated to depreciation of fixed capital stock and operating surplus (owners of capital). This large divergence between labour share in the UAE GDP and in other economies can be comprehended by analysing the distribution of the labour force between the economic sectors and their contribution to GDP. Table 5 in the annex presents the said labour force distribution and the structure of GDP by origin.

The information content in Table 5 is important for understanding the low share of wages in GDP and for labour policy discussions on the issue of national versus foreign labour involvement in the economy. It is clear that there are large differences between the productivity of labour employed in the different sectors. The average labour productivity (GDP divided by number of workers) is about Dh 123,000 in 1998. The maximum labour productivity is in crude oil (Dh 1,687,260) and the minimum is in domestic services of households (Dh 10,785) with a standard deviation of Dh 451,371.

Table 5. Some statistics on labour productivity in the UAE economy in 1998 (dirhams)

Average	123,371
Maximum	1,687,260
Minimum	10,785
Standard Deviation (St. d.)	451,371

Source: based on Table 5 in the annex.

The crude oil subsector employed roughly 1.6 per cent of the labour force, but contributed about 22 per cent of GDP in 1998. The next best labour productivities are in finance and insurance (Dh 528,611) and real estate and business (Dh 513,826). These sectors (crude oil, finance and insurance, and real estate) employed less than 6 per cent of the labour force yet they contributed about 39 per cent of GDP. In contrast, the three sectors, wholesale, government and domestic services of households, employed about 38 per cent of the labour force, but contributed 24.5 per cent of GDP. Further, if the construction and agriculture sectors are added then the employment percentage increases to about 64 per cent, but their contribution to GDP increases only to about 37 per cent.

The analysis of the employment shares and sectoral shares in the UAE GDP leads to the issue of optimal allocation of the labour resource. In theory, the allocation of a resource between different uses should be in accordance with the principle of equality of the marginal productivities of the resource in the different uses, if one is to achieve optimal results. In the case under analysis, marginal productivities of labour in the different sectors are not available. However, as a proxy, the average labour productivities are presented in Table 5 in the annex.

These average productivities show wide variations and the oil sector is ahead of all sectors by a very large margin. The wide and extensive variation between the labour productivities in the different sectors is to be expected on the basis of differences in the quality of labour and the nature of the sector.

The special nature of the oil sector

The oil sector is not like any other sector because oil reserves are non-financial assets and these are part and parcel of national wealth (Kendrick 1972; Fisher 1965; Hicks 1978). Given this concept, then the contribution of the crude oil subsector of Dh 36,951 million in 1998 is not value added. That is, it is not income generated from an asset. It is rather transforming an asset from one form (oil) to another (foreign exchange or financial asset). This way of looking at the oil sector shows that the confusion between the concepts of wealth and income leads to income illusion about the proceeds of petroleum exports. The income illusion manifests itself in several economic variables, namely:⁵

- Overestimation of national income level.
- Overestimation of national saving.
- Distortion of the current account position.
- Underestimation of domestic absorption.
- Overestimation of the accumulation of national wealth.
- Distortions of the contributions of the different sectors to the national income.
- Underestimation of foreign aid.

These are important issues that have been raised in the literature and have been addressed in the framework of the 1993 United Nations System of National Accounts.

The adjusted GDP (AGDP) and labour productivity

To remove some of the distortions of the contributions of the different sectors to GDP, the contribution of crude oil is removed and an adjusted GDP is considered for 1998:

$$\text{AGDP} = \text{GDP} - \text{crude oil} = 170,066 - 36,951 = 133,115$$

Table 6 in the annex presents sectoral employment and contributions to adjusted GDP (AGDP) in 1998.

Average labour productivity relative to AGDP is about Dh 98,000, with a maximum of Dh 529,000 in the finance and insurance subsector and a minimum of about Dh 11,000 in the domestic services of households and a standard deviation of Dh 171,200.

It is important to note that the domestic services sector employs more than 11 per cent of the labour force (excluding employment in the crude oil subsector) but contributes less than 1.5 per cent of AGDP. Low contribution to value added, an outcome of low productivity, is a good and practical starting point for discussion on labour policy in the UAE. If this is granted, then a criterion to identify low labour productivity would be to compare the variable indicator *prod* with one, *prod* being defined as:

$$\text{prod} = \frac{\text{Sector's share in GDP}}{\text{Sector's employment share}}$$

If *prod* for a sector is less than one, the sector should be a target for study, analysis and reform aiming to raise its labour productivity.

According to this indicator the five sectors, agriculture, construction, wholesale, other services and domestic services of households, are low productivity sectors. These sectors employed about 62 per cent of the labour force, excluding the oil sector, yet their contribution was less than 39 per cent of AGDP in 1998. Agriculture, other services and domestic services are especially low productivity sectors and should be targeted for study and reform (Table 6 in the annex).

To conclude this section, it is appropriate to mention that the UAE economy is market based, open with a relatively high trade ratio, and has liberal trade policy and exchange rate convertibility for current and capital transactions. The lifeline of the economy is petroleum and it is heavily dependent on expatriate labour. The UAE economy has made important strides in its development despite the violent fluctuations of its income during the last three decades, thanks to the persistent efforts of the UAE President, HH Sheikh Zayed bin Sultan Al Nahyan, and the rulers of the emirates.

In the following sections, the evolution of the economy during the period 1972–1998 is presented, analysed and evaluated.

Evolution of the Economy

The UAE economy has witnessed several phases of growth and development. Up to the end of the 1950s, the economy was characterized by limited natural and human resources. Economic activities were centred mainly on agriculture (date cultivation, locally consumed vegetables and fruits), fishing, the raising of livestock, mostly camels, traditional manufacturing (tents, rugs and carpets, gowns, daggers and swords and some dried foods) and pearling.⁶ The UAE population is estimated to have been 72,000 and 86,000 inhabitants in 1950 and 1958 respectively.⁷

Oil boom challenges and opportunities

Foreign trade activity entered a new phase with the production and export of oil in the emirates: Abu Dhabi in 1962, Dubai in 1969 and Sharjah in 1970.⁸ The oil activity started to shape the evolution and development of the UAE economy in the 1970s as a result of the huge increase in oil production and exports and government revenues. Oil production increased from 253 mn b in 1970 to about 619 mn b in 1975; exports increased from 253 mn b to about 606mn b and oil revenues jumped from US \$233 million to US \$6000 million. The huge growth in oil revenues during the period 1970–1975 (about 2475 per cent) is an outcome of the increase in production and the adjustment in government take.⁹

The unprecedented affluence the UAE started experiencing from the early 1970s, thanks to the structural changes in the international oil industry, brought challenges and opportunities to its leadership. The challenges were tri-dimensional: political, social and economic. As mentioned earlier, the UAE was established in December 1971 as a federation of seven emirates with limited natural resources in addition to petroleum, which was mainly concentrated in Abu Dhabi. Thus, Abu Dhabi and, to a lesser degree, Dubai received the oil revenues. Given this situation, the first challenge facing the Government was how to utilize the revenues for strengthening and cementing the federation, improving and expanding the social services to raise the standard of living and develop the non-oil productive base of the economy. In the event, the UAE President, HH Sheikh Zayed bin Sultan Al Nahyan, supported and promoted development through planning and action as a single unified country. His paradigm was a trade off between Abu Dhabi's oil wealth and the rulers' release of personal authority to the Federal Government. This paradigm helped to cement and strengthen the federation politically, socially and economically. One of the early achievements of the UAE Government was the monetary integration of the emirates which culminated in May 1973 with the establishment of the UAE Monetary Agency and the issue of the UAE national currency, the dirham, which replaced both the Qatari/Dubai riyal circulating in the northern emirates and the Bahraini dinar circulating in Abu Dhabi.¹⁰ In 1980 the Monetary Agency was replaced by the UAE Central Bank, which was charged with the responsibilities usually assigned to a central bank.

In June 1974 the UAE Council of Ministers defined and outlined the main themes and directions for development.¹¹ Thus, in the economic sphere, development should aim to:

- Change the productive structure of the economy, optimize its capacity, diversify its activities and maximize export revenues.

- Concentrate on the expansion and exploitation of natural resources, promote and support manufacturing and lower the pressure on the growth of imports.
- Adopt capital-intensive projects so as to lower the demand for labour.
- Develop the infrastructure in a compatible way with the requirements of production of goods and services without barriers or bottlenecks.

Development in the social sphere should proceed on the basis that:

- The ultimate objective of any development plan is the human being. The different social services are therefore a basic right for him/her. These services include health care, education (with a view to supplying the country's labour demand for the different skills and specializations, along with its cultural and information aspects), the care of the environment, achieving the country's security and safeguarding the foundations of society, its morale, holy beliefs and shrines.
- With this foundation, the aim should be to supply the country with a trained and skilled national labour force to manage the economy and prepare and implement development plans.

Given these economic and social development objectives, it is appropriate to mention that the UAE Government in general, and the UAE President in particular, has always stressed that the fundamental objective of development is the welfare of society and ensuring its continuity for the present and future generations. The human being has always been at the centre of development in the UAE, which indicates the importance the Government placed on human development long before the publication of the first report, Human Development Report 1990, by the United Nations Development Programme (UNDP).¹²

The opportunities and challenges brought with affluence could be outlined as follows:

- No budget constraint as a result of a large increase in oil revenues and high saving rate.¹³
- A need for regulations and institutions in the public and private sectors.
- Shortage of data banks and research centres to support decision-making.
- Need to rationalize the answers to the basic economic questions of what, how and for whom to produce.

In light of the above, it is appropriate to study and evaluate the evolution of the main economic indicators.

Evolution of income and prices

The size of the UAE economy, measured by the nominal GDP, has grown by more than 26 fold during the period 1972–1998: nominal GDP increased from Dh 6450 million in 1972 (US \$1471 million) to Dh 170,066 million (US \$46,340 million). However, the UAE real GDP in 1998 was only about 4.161 times its level in 1972 due to the erosion of purchasing power as a result of the increase in inflation index by about 6.34 times (Table 1 in the annex).

The expansion of the economy has not been smooth. In fact, it suffered violent instabilities as reflected in the large expansions and contractions during the period 1972–1998 (Figs. 1 and 2). Using the sign of GDP growth rate as a criterion, the UAE economy witnessed 15 positive and 11 negative growth rates during the period: the maximum growth rate was 56.03 per cent in 1973 and the minimum was negative 18.8 per cent in 1986 with an average growth rate of 6.5 per cent and 14.85 per cent standard deviation.

Fig. 1. UAE real GDP in mn dirhams

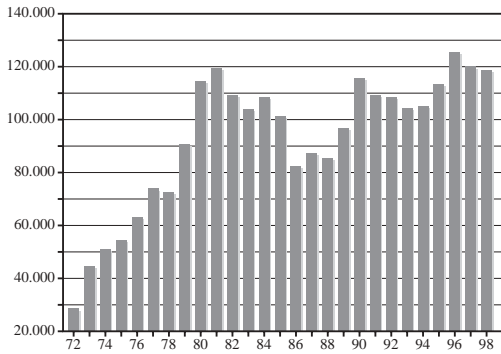


Fig. 2. UAE real GDP growth rates (per cent per annum)

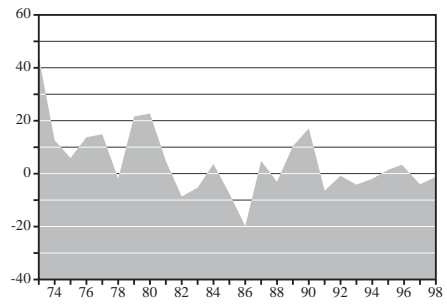


Fig. 3. UAE per capita real GDP (dirhams)

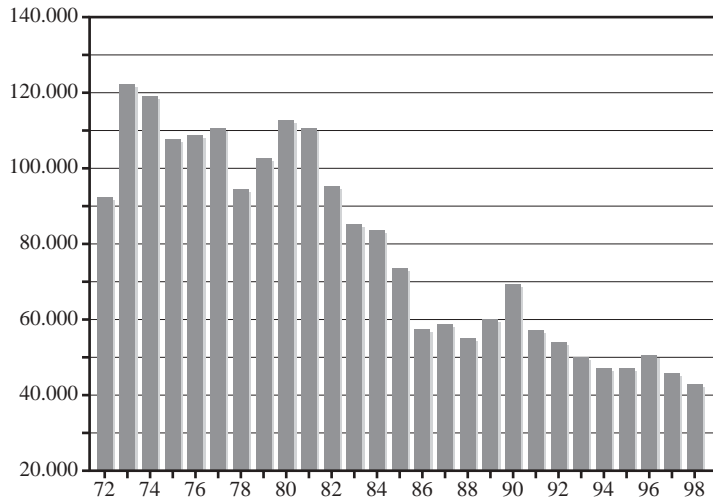
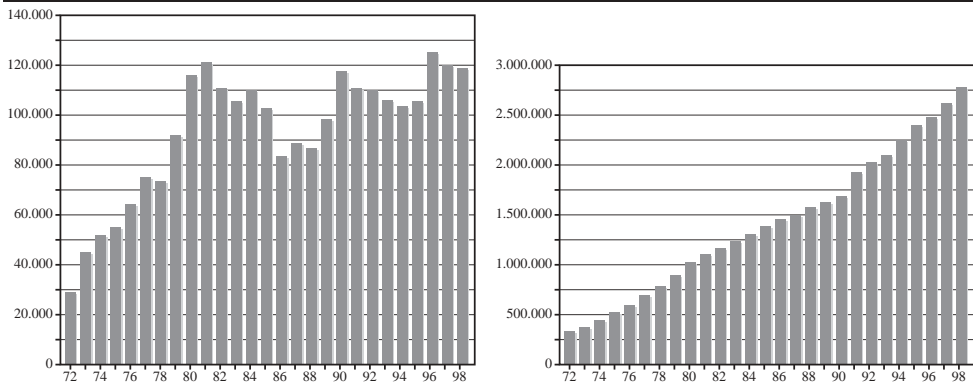


Fig. 4. UAE real GDP (mn. dh) and population (number)



The volatility of GDP during the period under study imparted volatility to per capita income (Fig. 3). The overall trend of per capita GDP is on the down side since the early eighties despite the rebounds in the oil market. This may be explained by the continued increase in the UAE population coupled with the slowdown in the economy (Fig. 4).

Sources of growth and instability

The sources of growth and instability in the evolution of the UAE economy might be traced to the development of the crude oil subsector. In fact, it is the lifeline of the UAE because economic activities, directly or indirectly, are linked with it. The direct impact of the oil subsector may be investigated through the evolution of its value added.

A. Crude Oil Value Added

The value added of the crude oil subsector fluctuated violently between 1972 and 1998. The average value added is estimated at Dh 41,705 million. Its maximum and minimum reached Dh 70,532 million and Dh 4099 million in 1980 and 1972 respectively, with a standard deviation of Dh 16,066 million. These variations are reflected in some statistics for the annual growth rates of the value added of crude oil from 1972 to 1998:

- Maximum rate = 218.53 % in 1974
- Average rate = 15.79 %
- Minimum rate = – 41.46 % in 1986
- Standard deviation = 50.14 %

Figures 5 and 6 clearly show that the value added of crude oil was unstable between 1972 and 1998. The trend of value added was increasing in the sub-periods 1972–1980 and 1987–1990, and it was decreasing during the periods 1981–1986 and 1991–1998. In fact, growth rates of crude oil value added were positive in 13 years and negative in 13 years during the whole period.

Fluctuations in the value added of crude oil are exogenous to the economic policy making of the UAE. They are an outcome of international oil market development. The international oil market witnessed major changes and experienced violent fluctuations during the period 1971–1998. Crude oil prices fluctuated between US \$2 and US \$33 per barrel and the oil market shifted from a seller's market up to 1981 to a buyer's market for the rest of the period.¹⁴

Fig. 5. Evolution of UAE value added in the crude oil sub sector (mn.dh)

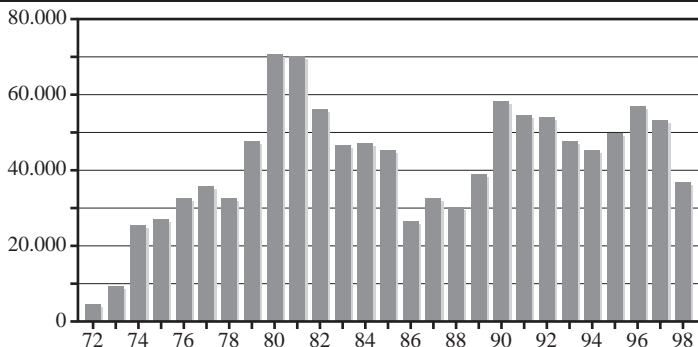
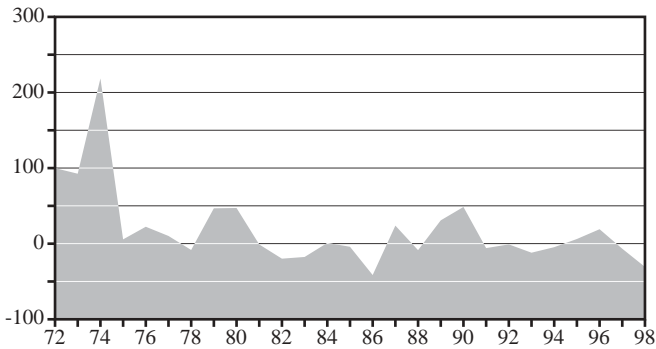


Fig. 6. UAE growth rates of value added of crude oil sector (per cent per annum)

Adjusting the GDP for crude oil contributions shows less volatility in the non-oil GDP.

B. Non-oil GDP

Non-oil GDP, christened adjusted gross domestic product (AGDP) and defined as: **AGDP = GDP – Crude Oil Value Added**, has grown by more than 56 fold during the period 1972–1998: from Dh 2351 million to Dh 113,115 million (Table 9 in the annex). AGDP experienced less volatility than GDP. Only during the period 1984–86 did it experience negative growth rates (Fig. 7). The average, maximum and minimum growth rates and standard deviations for AGDP and NGDP are presented in Table 6 below.

Table 6. Growth rates and standard deviations:
for AGDP and NGDP (1972–1998) (per cent)

	Average	Max	Min	St.d.
AGDP	19.17	116.36	-2.68	27.28
NGDP	17.25	173.20	-19.97	37.28

Source: based on Table 9 in the annex.

These variables indicate clearly that AGDP achieved a higher average growth rate with less volatility, as measured by the standard deviations, than nominal GDP (Fig. 7).

The AGDP also experienced an increasing share of GDP while that of crude oil declined from 1972 to 1998. The paths of the two shares crossed each other in 1982 (Fig. 8).

Thus, the share of non-oil GDP increased from less than 37 per cent in 1972 to more than 78 per cent in 1998 with a local peak of about 67 per cent in 1986.¹⁵

Table 7. Some statistics for the shares of AGDP and crude oil (per cent)

	Average	Max	Min
AGDP share	52.74	78.27	19.45
Crude Oil share	47.26	80.55	21.73

Source: based on Table 9 in the annex.

Fig. 7. UAE NGDP, crude oil value added and adjusted GDP (mn.dh)

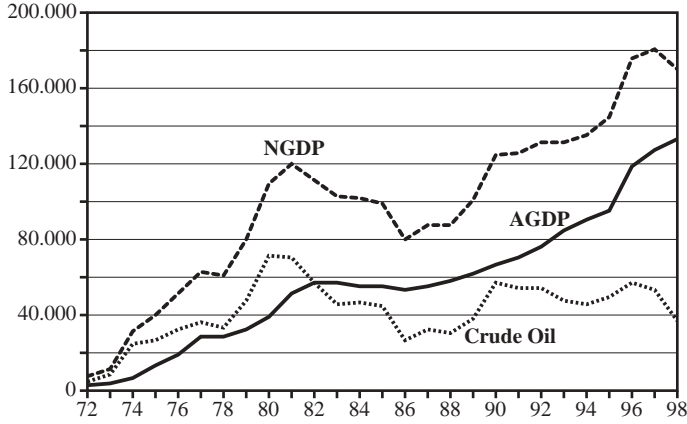


Fig. 8. UAE shares of AGDP and crude oil value added in GDP (per cent)

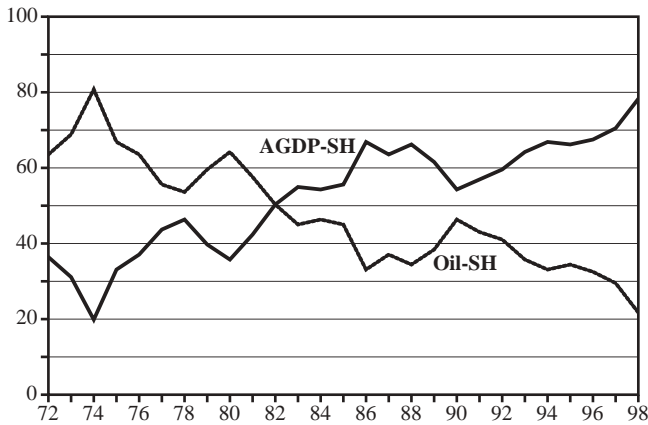
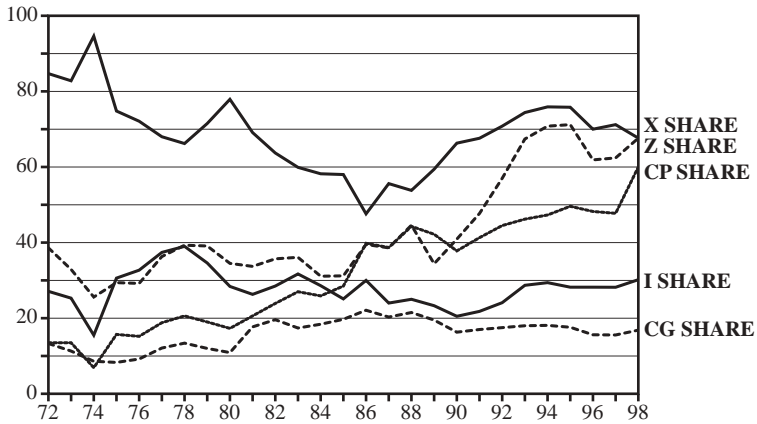


Fig. 9. UAE shares of aggregate demand components in GDP (per cent)



C. Evolution of Aggregate Demand

Another source of growth and volatility in the UAE economic activity is the evolution of aggregate demand. Aggregate demand is expenditure on GDP and may be represented as (see equation 1 and the subsequent discussion):

$$\text{GDP} = \text{Cp} + \text{Cg} + \text{I} + \text{X} - \text{Z} \quad (3)$$

Aggregate demand is made up of two parts: domestic absorption A and net exports (X–Z).

a. shares of components of aggregate demand

Figure 9 presents the paths for the shares of private consumption (Cp), government consumption (Cg), investment (I), exports (X) and imports (Z) in GDP from 1972 to 1998. Private consumption turns out to have experienced the largest volatility compared to the other variable components of aggregate demand.

In contrast, the share of government consumption in GDP experienced the least volatility. Both exports and imports showed relatively high volatility. Table 8 presents some statistics for the evolution of the different shares in GDP.

Table 8. Some statistics for the shares of aggregate demand (1972–1998) (per cent)

	Average	Maximum	Minimum	Standard Deviation
Cp	31.40	53.31	6.91	13.94
Z	43.39	70.08	25.63	13.43
X	68.30	94.64	47.63	10.03
I	27.89	39.03	15.50	4.9
Cg	15.80	22.10	8.26	3.94

Source: based on Table 2 in the annex.

All the shares of the components except that of exports were higher in 1998 than in 1972. The Cp share was less than 15 per cent in 1972 and exceeded 53 per cent in 1998. This increase in the share of private consumption is to be expected on the basis of the increase in population from 309,243 persons in 1972 to 2,776,000 in 1998 and in per capita income (on the basis of nominal GDP) from Dh 20,857 to Dh 61,263 in the same years.¹⁶ Also the Cg share was about 13 per cent in 1972 and reached a minimum of about 8 per cent in 1975. It increased to about 17 per cent in 1998 with a maximum of about 22 per cent in 1986. This surge in the government share in 1986 was not policy induced, but rather a result of the decline in GDP following the turmoil in the international oil market which led to the crash of oil prices to below US \$13 per barrel. In contrast, the X share declined in 1986, reaching a minimum of about 48 per cent because of the negative impact of the oil market on the UAE exports which are mainly oil related.

b. growth rates of aggregate demand

On the basis of growth rates, exports (X) experienced the highest volatility, followed by private consumption, investments, government consumption and imports (Fig. 10). Table 9 presents some statistics for the growth rates of the different components of aggregate demand.

Table 9. Growth rates of the components of aggregate demand and GDP 1972–1998 (per cent)

	Average	Maximum	Minimum	Standard Deviation
X	17.91	212	-34.28	45.61
I	17.26	150	-15.47	33.77
Cp	23.13	189	-2.63	37.94
Cg	17.17	108	-19.56	28.55
Z	18.	113	-12.45	25.35
A	18.71	123	-4.39	28.62
GDP	17.25	173	-20.	37.29

Source: based on Table 2 in the annex.

The contributions of the components of aggregate demand to the growth rates of GDP may be estimated from the relation:

Growth rate of GDP = (growth rate of Cp)(share of Cp) + (growth of Cg)(share of Cg) + (growth of I)(share of I) + (growth of X)(share of X) - (Growth of Z)(share of Z).

Thus, the contributions to the average growth rate of GDP from 1972 to 1998 may be calculated as follows:¹⁷

$$\begin{aligned}(\text{grth Cp})(\text{share Cp}) &= (23.13)(31.2) = 7.22 \% \\(\text{grth Cg})(\text{share Cg}) &= (17.17)(15.74) = 2.7 \% \\(\text{grth I})(\text{share I}) &= (17.26)(27.81) = 4.8 \% \\(\text{grth X})(\text{share X}) &= (17.91)(68.28) = 12.22 \% \\(\text{grthZ})(\text{share Z}) &= (18.)(-43.39) = -7.81 \%\end{aligned}$$

The contributions of the components to the average growth rate of GDP are:

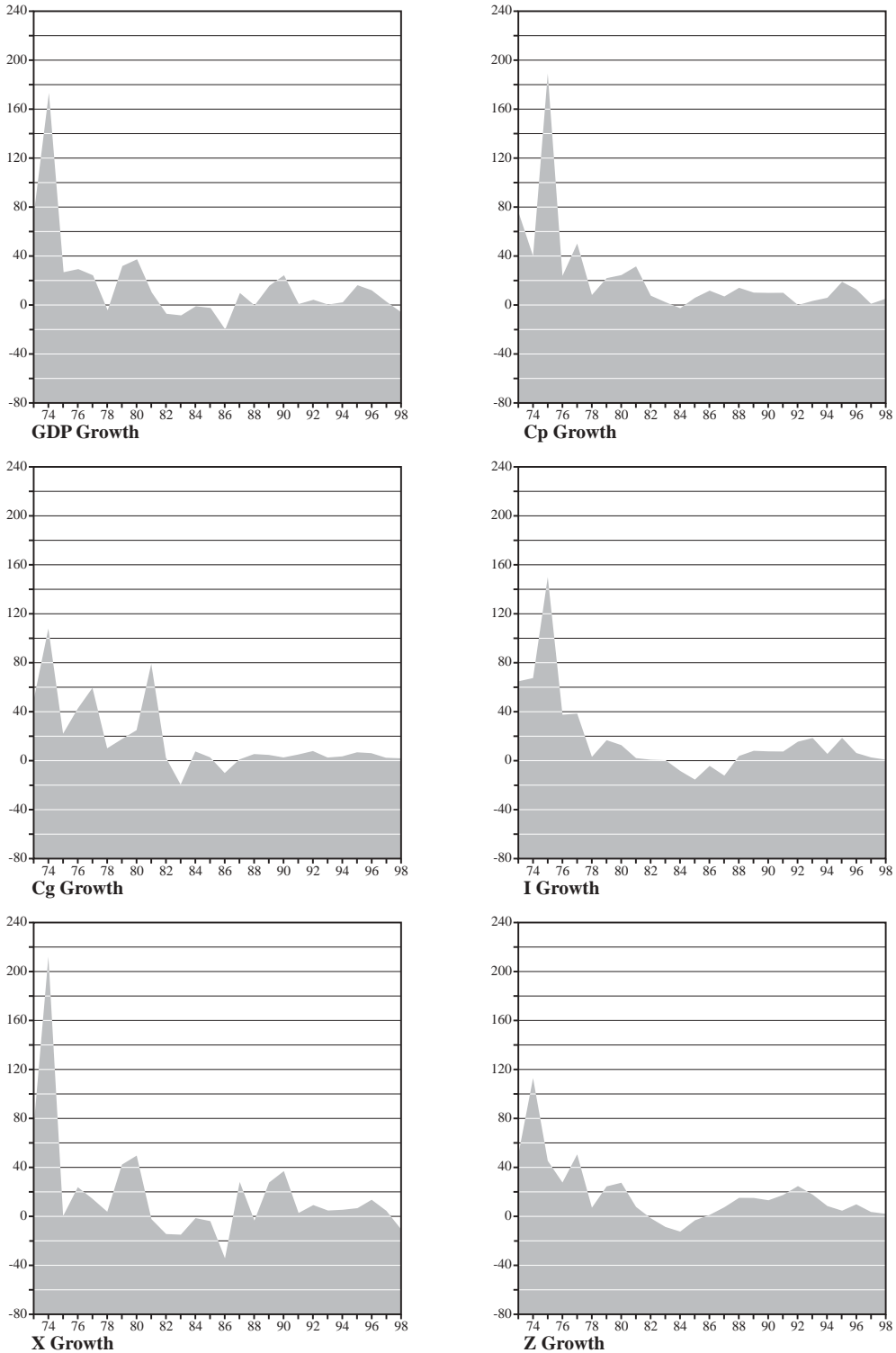
$$\begin{array}{ll} \text{Cp: } 37.72 \% & \text{X: } 63.93 \% \\ \text{Cg: } 14.10 \% & \text{Z: } -40.08 \% \\ \text{I: } 25.08 \% & \end{array}$$

Exports have contributed about 64 per cent to the average growth rate of GDP from 1972 to 1998. Such a high contribution renders exports the most effective factor in shaping GDP. The export concentration index for the UAE economy is relatively high at 0.691 in 1992, although it has declined from 0.801 in 1984.¹⁸

Given the high contribution of X, the high export concentration index makes GDP extremely sensitive to international developments in general and to the oil market in particular. Next in importance is the import contribution to GDP growth which averaged about -40 per cent. Thus, the external sector is the mover of the UAE economy.¹⁹

Private consumption contributed about 38 per cent of average GDP growth while government consumption contributed about 14 per cent. This relatively low government contribution to the growth of GDP should not be interpreted as limited or implying a small government impact on overall economic activity in the UAE. In fact, the Government receives the oil revenues and spends on investments, transfers and subsidies, all activities which influence the behaviour of the private sector in its consumption and investment activities. Investment, both private and government, contributed about 25 per cent to the average growth of GDP. But the

Fig. 10. UAE growth rates of GDP and components of aggregate demand (per cent)



incremental capital output ratio (ICOR) (investment divided by the increase in GDP between two dates) on the basis of real GDP is about 4.25.

$$\text{ICOR} = \frac{I}{\Delta \text{GDP}} = \frac{I}{\text{GDP}} \cdot \frac{\text{GDP}}{\Delta \text{GDP}} = (\text{investment ratio} \times \text{reciprocal of growth rate}) = 27.81 \times 1/6.55 = 4.25$$

This is a rough measure of the productivity of investments; the lower the number the better is the productivity. The ICOR for some groups are:²⁰

- Low-income economies: 4.84
- Upper-income economies: 7.35
- High-income economies: 13.53

d. Structure of the UAE economy: production

The UAE economy, as mentioned earlier, has expanded in size by more than 264 per cent between 1972 and 1998 (Table 1 in the annex). At the beginning of the period, value added in the crude oil subsector dominated production with more than 63 per cent of total GDP. However, the UAE Government aimed, through its economic policy, to lower the country's dependence on the oil sector. Thus, when oil prices were adjusted upward in 1979/1980 for the second time, and oil revenues surged by more than 100 per cent (from Dh 24,018 million in 1978 to Dh 52,727 million in 1980), the Ministry of Planning prepared a five year plan for the period 1981–1985. The plan centred on three major issues, namely:²¹

- Optimal size and structure of population.
- Improvement in the standard of living in all regions of the UAE and development of the skills and capabilities of the citizens.
- Expansion of the productive base by increasing growth in the non-oil sectors in order to lower the dependence on the oil sector and develop non-oil sources of income.

The funding of the plan assumed constant oil revenues and about 70 per cent of the funds were to be provided by the Federal Government. However, oil revenues were down to less than Dh 35,000 million in 1982 and Dh 27,000 million in 1983. Oil market developments in the first half of the 1980s discouraged the adoption of the development plan and it was shelved. This led to uncoordinated investments in the emirates that produced over-capacity and duplication in several activities in the economy. As a result, the non-oil economy did not improve as much as was expected, though the share of non-oil GDP improved from about 50 per cent in 1982 to about 55 per cent in 1985.²²

The agricultural sector expanded, but because of the climate of the UAE, it contributed less than 3 per cent in 1998 (Table 5 in the annex).

The manufacturing sector has expanded from 2.7 per cent of GDP in 1972 to about 12 per cent in 1998. Government services also increased its share of GDP from 4.48 per cent to 11.54 per cent in 1972 and 1998 respectively. The increase in government share is associated with the population increase (from 309,243 to 2,776,000) and the improvement in living standards. Also associated with the growth of population is the expansion in construction activity, the distributive sectors and the other service sectors.

The tremendous evolution and development that has taken place from 1972 to 1998 may not be easily quantified, evaluated and recorded. However, it may be appreciated and comprehended

through the simple, but clear and deep understanding of what the priorities of development were to the UAE President, HH Sheikh Zayed bin Sultan Al Nahyan:²³

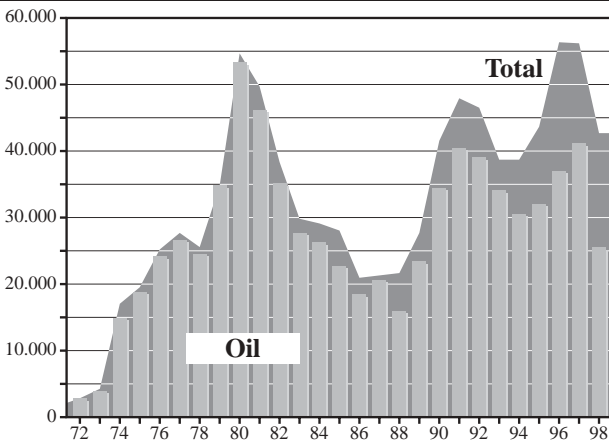
The first fundamental change, and the most important is the availability of drinking water. In the past, we had no drinking water here in Abu Dhabi, and we had to bring brackish water by tanker. The bringing of water was the most important. I remember telling my brother (then Ruler) that had we not got water, we would all of us have had to have moved somewhere, and to look for a place with sweet water. After that, everything started changing. Housing became available when there was none before, then infrastructure and everything else. Our policy was first to concentrate all our efforts to develop this country, and to develop its citizens. When I look around at what has been achieved, I realize I could not have imagined before that it could all have happened. It is like a dream. I had dreams, but would never have believed that it would all have been possible in such a short space of time.

The development to which Sheikh Zayed refers can be seen and experienced through the modern cities that have been built with modern facilities, the highways, the airports, the ports, the schools and colleges, the hospitals and clinics and the afforestation of the desert, in addition to other infrastructures that support further expansion and development in the future. A quantitative assessment of this growth may be made by studying the evolution of the consolidated budget of the UAE, which is the subject of the next section.

Evolution of the Consolidated Budget

Revenues increased from Dh 2423 million in 1972 to Dh 42,690 million in 1998, an increase of more than 17 fold (1762 per cent), while total expenditures increased from Dh 1257 million to Dh 71,640 million, an increase of about 57 fold. Revenues have been shaped to a great extent by oil revenues (Table 3 annex and Fig. 11). The share of total expenditure in GDP increased from less than 20 per cent in 1972 to more than 42 per cent in 1998. The average share over the period is about 37 per cent with a maximum share of 47 per cent, a minimum share of 16 per cent and a standard deviation of 7.24 per cent.

Fig. 11. UAE total and oil revenues in the consolidated govt. budget (mn.dh)



The expansion of the government role in overall economic activities has been the result of a huge increase in government revenues and population during the period, stemming from the Government's commitment to improving the standard of living for all residents, nationals and non-nationals.

Expenditure on social services (education, health, social security, welfare, housing and community amenities) increased from 23.6 per cent in 1980 to nearly 30 per cent of total expenditure in 1996.²⁴ The counterpart of the financial expenditure may be appreciated through the expansion in the services of education, health and housing presented in the following Tables.

Table 10. Evolution of education in the UAE

	1974/1975	1984/1985	1994/1995
1. Students	60,254	229,759	480,973
Govt.(G)	52,790	167,320	291,143
Privt.(P)	7,464	62,439	189,830
Male	33,233	121,813	NA
Female	27,021	107,946	NA
2. Teachers	3,681	14,088	37,425
G.	3,380	10,597	24,766
P.	301	3,491	12,659
3. Schools	198	551	951
G	171	394	586
P	27	157	365
4. University Ed.			
Faculty	76	469	1,137
Students	520	5374	20,570

* 1989/1990

Sources: UAE Ministry of Planning (1987). Tables (11-15) p 314, (11-17) p 316, (11-18) p 317.
UAE Ministry of Planning (1998). *Economic and Social Development in the United Arab Emirates 1990–1995*, Tables 57 and 64, pp 128 and 136.

Gulf Cooperation Council Secretariat. *Economic Bulletin*, No. 10 (1995), Tables 2-4, p 224. 10-4, p 232.

Table 11. Percentage of the age group enrolled in education (per cent)

	Primary		Secondary		Tertiary	
	1980	1993	1980	1993	1980	1993
F	88	108	49	94		
M	90	112	55	84		
Total	74	94	71	80	3	11
Adult illiteracy rate (%) in 1995			F	20	M	21

Source: World Bank. *World Development Report 1996*, Table 7, p 200, and *World Development Report 1998/1999*, Table 2, p 193.

The indicators on education and health services presented in these tables reflect the implication of the proverb 'action speaks louder than words' and translate the President's motto 'education is like a lantern which lights your way in a dark alley'.²⁵ The improvement in the status of women in the UAE is highly commendable and owes much to Her Highness Sheikha Fatima bint Mubarak, wife of the President, who emphasizes the importance of education to girls:

Table 12. Health services in the UAE

	1975	1990	1995
Hospitals	19	41	51
G	15	33	36
P	4	8	15
Beds	1745	6232	6412
G	1525	5869	6074
P	220	363	338
Doctors	751	3085	4415
G	671	1929	2742
P	80	4456	1673
Dentists	65	400	646
G	58	146	231
P	7	254	415
No. of people per			
Doctor	617	597	538
Bed	320	295	370
Nurse	258	356	274

Source: Ministry of Planning (1987). Table 11-20, p 319 (1993) Table 62, p 137.
Ministry of Planning (1998). Economic and Social Development in the United Arab Emirates, Tables 65 and 67, p 139.

Table 13. Percentage of total UAE population with access to:

	Health Care	Safe Water	Sanitation
1980	96	100	75
1993	90	100	95

Infant mortality rate (per 1000 live births)

	1980	1994
UAE	55	16
Low income countries	87	58
Middle income countries	63	40
High income countries	12	7
World	81	53

Source: World Bank. *World Development Report 1996*, Table 6, p 198.

Table 14. Evolution of housing services in the UAE (housing units)

1975	1980	1985	1990
94,380	209,077	272,791	305,920

Source: Ministry of Planning (1987) and (1990)

‘education is the real wealth which we should preserve and care for. A girl has the legal right to a proper education’.²⁶

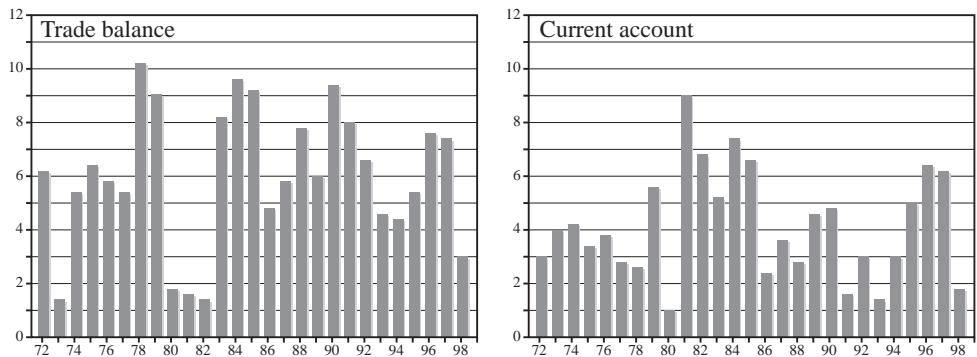
The continued expansion in the budget, despite the fall in oil revenues in the early 1980s, has resulted in an overall deficit position since 1982. The continued budget deficit has, once

again, brought the issue of dependence on the oil sector to the forefront. Charging for government services on the basis of cost recovery is being applied partially, and privatization of some utilities, water and electricity has occurred, in part, since 1998. In fact, the private sector has been encouraged to shoulder more and more economic activities. Total investment during the period 1975–1998 is estimated at Dh 721,112 million, of which Dh 203,164 million is the Government's share, the remainder being that of the private sector. The budgetary expansion, coupled with the fall in oil revenues, had a negative impact on the external sector as can be seen from its evolution between 1972 and 1998.

The External Sector

It has been mentioned before that the UAE economy has a high trade ratio and adopts a liberal trade policy. In fact, the UAE economy experienced substantial trade surpluses based on oil exports and prices. But the dependence of the economy, and especially the external sector, on development in the international oil market means that the balance fluctuates with its evolution. Trade balance fluctuated between US \$1.0 billion and US \$10.1 billion. The current account balance fluctuated between US \$1.0 billion and US \$9.20 billion during the period 1972–1998 (Fig.12).

Fig. 12. UAE trade and current account balances (bn.US dollars)



The 1980s witnessed a decline in the surplus of both the trade and current account balances. However, during the period 1990–1998, trade surplus declined from US \$11.14 billion in 1990 to US \$5.62 billion in 1998, while the current account surplus of US \$8.17 billion in 1990 declined to US \$1.78 billion in 1998. Transfers, private and public, continued to realize deficits throughout the period. This result is due to two factors: one is the development assistance the UAE Government extends to Arab and other developing countries through the Abu Dhabi Fund for Development,²⁷ and the other is the presence of expatriates to the extent of 91 per cent of the labour force. Despite the decline of current account surplus, UAE foreign reserves were estimated at nearly US \$8.12 billion in 1997 and US \$8.8 billion at the end of 1998. Other assets, unofficially estimated to be much larger, are managed by the Abu Dhabi Investment Authority.²⁸

Notwithstanding these foreign assets, the UAE foreign debt was estimated at US \$10.88 billion at the end of 1996. Most of this (86 per cent) is in the form of short-term trade and development-related debt. Less than 3 per cent of the debt is owed to official creditors and the balance is to commercial creditors. The debt service ratio continued to decline from a peak of 13 per cent in 1984 to about 3.1 per cent by the end of 1996.²⁹

Despite the fall in the current account in the balance of payments, the monetary authorities have continued to provide the economy with the liquidity it needs as reflected in the evolution of monetary and credit policy in the UAE.

Monetary and Credit Policy

The UAE Central Bank was established in 1980 to succeed the UAE Currency Board (set up in 1973) in managing the country's monetary and credit policy. It issues currency, advises the Government on monetary and financial matters, manages the country's foreign reserves and supervises the banking sector. The Central Bank overcame numerous problems to apply uniform federal laws throughout the emirates. The oil boom attracted many commercial banks to the UAE. At the end of 1998 there were 47 commercial banks, 20 of them locally incorporated with 284 branches and exchange offices and 27 foreign banks with 110 branches. In addition, there are specialized banks and investment institutions and foreign exchange offices.³⁰ Since 1993 all banks have had to conform to a risk weighted capital adequacy ratio of 10 per cent (two points higher than the minimum ratio of 8 per cent recommended by the Basle Committee). The Central Bank has maintained the dirham's exchange rate fixed at Dh 3.671 equal to one US dollar since 1981. From 1972 to 1980, the exchange rate appreciated from Dh 4.386 to the US dollar to Dh 3.707 to the US dollar (Table 15 in the annex). The UAE Monetary Authorities (the Board and the Central Bank) have provided the economy with the liquidity it needed. In fact, if the velocity equation paradigm is utilized:

$MV = PYRGDP = NGDP$, where M = money supply, V = velocity of the circulation, P = price level, $RGDP$ = real gross domestic product and $NGDP$ = nominal GDP, then growth rate of M + growth rate of V = growth rate of $NGDP$. The following growth rates are calculated:

Table 15. Some statistics for the growth rates of GDP, M1 and M2 (per cent)

	NGDP	M1	M2
Average	17.25	16	19.88
Maximum	173.2	81.92	167.25
Minimum	-19.96	-6.36	-8.23
Standard Deviation	37.29	21.85	36.56

Source: based on Tables 1 and 15.

Growth rate of narrow money ($M1$ = Currency outside the banks and demand deposits) is close to the nominal growth rate of GDP, which implies that V was stable. In fact, since 1986 it was almost constant. This was associated with low or no inflation. In conclusion, one could infer that monetary policy was accommodating to economic activity.

Conclusion

Prior to December 1971, the United Arab Emirates was characterized politically as seven separate emirates under British protection, economically as separate and underdeveloped entities and socially as backward and lacking essential and basic needs in the areas of education, health and housing services. Today, by contrast, having made major strides politically, economically and socially, it can boast of being in the company of high-income countries on both the Human Development Index and by GDP Index criteria.³¹

Notwithstanding these achievements, the UAE continues to face at least two challenges. First is the issue of economic diversification and the development of non-oil income sources. Although the share of non-oil income (AGDP) has continued to increase and has, since 1982, surpassed the oil share, the linkages and dependence of the former on the latter is large. Thus, recession in the oil sector has a negative impact on the overall performance of the non-oil GDP.

The other challenge is the high percentage share of expatriates in the size of the population and consequently in the labour force. Careful and prudent considerations are essential elements for any intelligent discussion on the issue. Concepts need to be defined and understood and historical and present experiences of other countries (USA, Canada, Australia and others) should be studied before taking decisions on this issue as it is not a social one only, but is first and foremost an economic problem.

¹ The Economist Intelligence Unit estimates non-nationals at 80 per cent, EIU, *Country Profile, United Arab Emirates 1998–1999*, p 7.

² Dr Abdallah, Matar A. *Disequilibrium in the United Arab Emirates Population Structure and Approaches to Correct it*, Al Sharjah (1999) p 57.

³ In 1997 the weighted average of gross national product (GNP) per capita for the middle-income economies was US \$1890 and that of the upper-middle income was US \$4520. However, the weighted average of GNP per capita for the high-income economies was US \$25,700. The highest GNP per capita was that of Switzerland at US \$44,320. Although the UAE is a member of the high-income economies according to the World Bank classification, its per capita GNP is less than 65 per cent of the group average and only about 38 per cent of that of Switzerland. See World Bank, *World Development Report 1998/99*, Table 1, p 190.

⁴ UAE Central Bank, *Annual Report 1998*, Table 2–15, p 37 and Table 2-7, p 26.

⁵ Al Sadik (1985) p 86–7.

⁶ Al Shamsi (1995) chapters 1–5. Peck (1986) p 92.

⁷ Al Shamsi, *op. cit.*, p 55 and p 60.

⁸ *Ibid.* Table 17, p 187.

⁹ Average government take increased from US \$0.89 per barrel in late 1970 to about US \$9.79 per barrel in October 1975. See Al Sadik (1984), Table 2, p 20.

¹⁰ UAE Monetary Agency, *Annual Report*, 31 December (1979) p 231.

¹¹ UAE Ministry of Planning, *Main Aspects of Economic and Social Development in the United Arab Emirates during 1972–1977*, May (1978) pp 3–2.

¹² The President, Sheikh Zayed, is quoted as having said, ‘The federation has embodied the hopes and aspirations of the UAE people for a good life, and represents the start of a great leap forward that will permit us to catch up with civilization in the rest of the world.’ see *UAE Yearbook 1995*, p 19.

¹³ In the development literature, two constraints on development in the developing countries are the two gaps, the foreign exchange gap (insufficient foreign earnings) and the saving-investment gap (saving less than investment).

¹⁴ For a review of the changes in the international oil market see Seymour (1980).

¹⁵ In 1986 the oil market witnessed the lowest prices since their adjustments in 1973/1974. The nominal average oil price declined to less than US \$13 per barrel, Table 14 in the annex.

¹⁶ In theory real income should be considered assuming no income illusion. In fact per capita income (real GDP) declined from Dh 92,332 in 1972 to Dh 42,808 in 1998 (Table 12 in the annex). On the real income basis the income effect on the share of consumption is negative. However, the positive effect of the increase in population on Cp exceeded the negative effect of the decline in income on Cp.

- ¹⁷ Numbers are taken from Tables 8 and 9 in the text. The sum of these contributions are not exactly equal to the growth rate of GDP reported in Table 9 due to rounding and not allowing for net indirect taxes.
- ¹⁸ Export concentration index measures the degree to which a country's exports are concentrated in, or diversified among SITIC (revision 2) three-digit level commodities. The index is calculated using Hirschman methodology: $I_x = \sum (X_i/X)^2$, X_i/X is share of exports of commodity X_i in total exports X with a maximum concentration index equal one. See World Bank (1996) pp 192 and 226.
- ¹⁹ The high degree of openness of the UAE economy to the international economies as measured by the trade ratio is a very good reason for the UAE Government to continue its oil policy aiming at stability in the international oil market.
- ²⁰ On the basis of average growth rates of GDP over the period 1990–1994 and investment /GDP ratio in 1994, World Bank (1996) Table 11 p 208 and Table 13 p 212.
- ²¹ Ministry of Planning (1987) p 175.
- ²² Between 1981 and 1988, GDP was trending downward and in 1989 its level was less than in 1981, see Table 1 in the annex.
- ²³ *UAE Yearbook 1995*, p 19.
- ²⁴ World Bank, *World Development Report: Knowledge for Development, 1998/1999*, p 217.
- ²⁵ *UAE Yearbook*, op. cit., p 99.
- ²⁶ *Ibid.* p 99.
- ²⁷ The Fund was established in July 1971, as The Abu Dhabi Fund for Arab Economic Development, and in 1993 changed its name to Abu Dhabi Fund for Development to reflect the actual emphasis on extending aid throughout the developing countries.
- ²⁸ The cumulative surpluses of the current account from 1980 to 1998 amounted to about Dh 307 billion (approximately US \$84 billion) in foreign assets before adding any derived interest or other income.
- ²⁹ EIU. *United Arab Emirates: Country Profile 1998–1999*, p 34.
- ³⁰ UAE Central Bank. *Annual Report, 1998*, pp 47–48.
- ³¹ United Nation Development Programme (UNDP), *Human Development Report 1998*, p 21.

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	Table 1. UAE nominal, real and GDP deflator (1987=100)		
	NGDP	RGDP	GDPDEF
1972	6450.2	28553.34	22.59
1973	11392.1	44552.6	25.57
1974	31122.7	51079.44	60.93
1975	39460	54427.59	72.5
1976	51033	63198.76	80.75
1977	63419	73932.15	85.78
1978	60669	72570.57	83.6
1979	79972	90671.2	88.2
1980	109833	114433.2	95.98
1981	121100	119486.9	101.35
1982	112433	109317.5	102.85
1983	102909	104085.2	98.87
1984	101843	108366.7	93.98
1985	99416	101331.2	98.11
1986	79566	82281.28	96.7
1987	87366	87366	100
1988	87106	85322.75	102.09
1989	100781	96793.12	104.12
1990	125266	115708.5	108.26
1991	126264	109158.8	115.67
1992	131676	108384.2	121.49
1993	132116	104315.8	126.65
1994	135065	105105	128.5048
1995	156902	113565	138.1605
1996	175778	125368	140.2096
1997	180630	119996	150.53
1998	170066	118836	143.1098

Sources: For GDP, UAE Ministry of Planning 1. *Main Features of Economic and Social Development in the United Arab Emirates 1972-1977*, May 1978. 2. *Main Features of Economic and Social Development in the United Arab Emirates 1975-1980*. 3. *Main Features of Economic and Social Development in the United Arab Emirates 1990-1995*, 1998. 4. *Main Features of Economic and Social Development in the United Arab Emirates 1990-1995*, 1998. 5. *Annual Economic Reports*, 1994, 1995, 1996, 1997, 1998.

	Table 2. UAE Components of aggregate demand				
	Cp	Cg	I	X	Z
1972	871.6	859.2	1747.7	5464.8	2493.1
1973	1535.5	1284.8	2880.6	9438.5	3747.3
1974	2150.4	2671.9	4824.7	29453.5	7977.7
1975	6215	3261	12059	29522	11597
1976	7695	4648	16585	36557	14802
1977	11557	7413	22966	41779	22296
1978	12501	8163	23679	40200	23874
1979	15245	9600	27643	57201	29717
1980	18968	11992	31155	85592	37874
1981	24946	21475	31801	83662	40784
1982	26846	22000	32063	71576	40152
1983	27467	17696	32193	60874	36665
1984	26744	19030	29496	60008	32101
1985	28317	19554	24933	57672	31060
1986	31640	17581	23872	37901	31428
1987	33852	17762	20956	48562	33766
1988	38605	18722	21770	46879	38870
1989	42510	19603	23526	59853	44711
1990	46717	20120	25314	81978	50590
1991	51376	21131	27210	84246	59444
1992	57921	22792	31435	92000	74148
1993	59849	23377	37259	96380	87298
1994	63314	24197	39324	101574	94656
1995	75303	25850	46655	108374	99038
1996	84880	27442	49584	123039	108761
1997	86232	28100	50907	128613	112673
1998	90662	28640	51334	115030	115000

Sources: For GDP UAE Ministry of Planning. 1. *Main Features of Economic and Social Development in the United Arab Emirates, 1972-1977*, May 1978. 2. *Economic and Social Development in the UAE, 1975-1985*, 1987. 3. *Economic and Social Development in the UAE, 1985-1990*, 1993. 4. *Annual Economic Reports*, 1994, 1995, 1996, 1997, 1999.

Table 3. UAE consolidated government fiscal accounts					Million dirhams	
	Tot. Rev.	Cur. Exp.	Cap. Exp.	Tot. Exp.	Oil Rev.	
1972	2423.9	934.7	NA	1256.8	2194	
1973	3699.1	1327.6	NA	2554.2	3166	
1974	16466.3	2841.2	NA	5029.6	14041	
1975	19033	4044	4075	13364	18025	
1976	24766	5703	6761	18562	23484	
1977	27347	7713	10332	24476	26116	
1978	25489	8895	11391	26250	24018	
1979	34653	10693	10154	29617	34265	
1980	54550	16763	9593	39811	52727	
1981	49617	24604	9207	46082	45480	
1982	37729	25818	9756	42723	34643	
1983	29539	24384	8096	38119	27005	
1984	28800	24075	6817	33997	25631	
1985	27762	24535	6534	34389	22247	
1986	20397.8	23706.7	7400.8	34896.2	17855	
1987	20683.4	31723.1	4492.6	37517	20042	
1988	20793.5	31048.4	3596.2	36176.5	15425	
1989	27367.5	32459.5	4229.7	38105.6	22934	
1990	41277.9	34475.4	4758.1	53461.8	34034	
1991	47833	33051	7171	59456	39915	
1992	46154.9	39098.2	9269.6	52132.9	38412	
1993	38517.2	38468.7	10910.4	54616.1	33243	
1994	38664	38103	11737	54792	29894	
1995	43654	43593	11945	61857	32033	
1996	56350	58846	10193	73825	37007	
1997	56192	48002	10842	64391	41140	
1998	42690	50482	13903	71640	25501	

Sources: 1. UAE Central Bank: Annual Reports (1993, 1994, 1995, 1997, 1998) 2. Bulletin (1991) UAE Ministry of Planning: *Main Features of Economic and Social Development 1972-1977*, (1978).

Table 4. UAE number of employees and their compensation			
	Workers	Wages	Wage per worker
	Number	Mn. Dh.	Dirhams per year
1972	144770	1256.7	8680.666
1973	182850	2524.2	13804.76
1974	234380	5103.9	21776.18
1975	288414	5633	19530.95
1976	383983	8138	21193.65
1977	477301	11442	23972.29
1978	494485	12617	25515.44
1979	523240	14166	27073.62
1980	541033	16011	29593.39
1981	578810	21123	36493.84
1982	592530	23300	39322.9
1983	600418	24297	40466.81
1984	607682	24573	40437.27
1985	619429	24997	40354.91
1986	621822	24007	38607.51
1987	624746	24426	39097.49
1988	643669	25226	39190.95
1989	667246	26784	40141.12
1990	694201	28019	40361.51
1991	737690	29883	40508.89
1992	799427	31904	39908.58
1993	859717	34484	40110.87
1994	912929	36242	39698.6
1995	955100	38000	39786.41
1996	1274000	47889	37589.48
1997	1330000	50201	37745.11
1998	1378000	51804	37593.61

Sources: Ministry of Planning: 1. *Main Features of Economic and Social Development in the United Arab Emirates: 1972-1977* (1978), 1975-1985 (1993), 1990-1995 (1998). 2. *Annual Economic Reports: 1994, 1995, 1996, 1997, 1998.*

Table 5. UAE labour force distribution between sectors and GDP at factor cost by economic sectors in 1998

Sector	Labour Number	GDP at current prices Mn. Dh.	Labour share: % of total labour	Sector's share: % of total GDP
Agriculture	101800	5834	7.38	3.43
Mining				
Crude Oil	21900	36951	1.59	21.73
Others	3700	635	0.27	0.37
Manufacturing	173800	20190	12.61	11.87
Electricity & Water	23935	4140	1.74	2.43
Construction	255800	16243	18.56	9.55
Whole Sale	234700	20490	17.03	12.05
Transportation	98710	12310	7.16	7.24
Finance, Insurance & Real Estate				
Finance and Insurance	20866	11030	1.51	6.49
Real Estate & Business Services	35440	18210	2.57	10.71
Other Services	116300	6690	8.44	3.93
Government	153659	19700	11.15	11.58
Domestic Services of households	137880	1487	10.00	0.87
Less imputed bank services		3844		
Total	1378490	170066	100.00	100.00

Source: UAE Ministry of Planning, *Annual Economic Report 1999*, Tables 3 and 9.**Table 6. UAE oil revenues (mn.US \$)**

1972	551
1973	900
1974	5536
1975	6000
1976	7000
1977	9030
1978	8000
1979	12400
1980	19200
1981	18306
1982	14465
1983	11441
1984	12400
1985	12500
1986	6100
1987	4560
1988	4141
1989	11300
1990	15600
1991	14765
1992	14490
1993	12086
1994	12300
1995	13350
1996	14980
1997	15270
1998	10260

Sources: 1970–1978 Bryan Cooper, (ed), *Opec Oil Report* London. *Petroleum Economist*, 2nd Edition, 1978
1978–1982, *Petroleum Economist*, June 1981 and 1983
1983–1995. O.APEC., *Secretary General Annual Report*, Various numbers.**Table 7. UAE oil production (mn.barrels)**

1972	440.2
1973	555.6
1974	611.6
1975	619.077
1976	708.88
1977	729.51
1978	667.77
1979	667.5
1980	626.39
1981	548.8
1982	460.79
1983	451.58
1984	468.78
1985	477.8
1986	500.05
1987	542.025
1988	571.23
1989	706.64
1990	774.89
1991	883.3
1992	835.85
1993	792.05
1994	788.4
1995	788.4
1996	788.4
1997	788.66
1998	831.47

Sources: *Petroleum Economist*, Various issues, O.APEC., *Secretary General Annual Report*, 1998.

**Table 8. UAE value added
in the crude oil sector (mn.dh.)**

1972	4099
1973	7870
1974	25070
1975	26364
1976	32275
1977	35575
1978	32618
1979	47884
1980	70532
1981	69814
1982	55982
1983	46145
1984	46604
1985	44707
1986	26171
1987	32423
1988	29643
1989	38792
1990	57632
1991	54260
1992	53753
1993	47341
1994	45154
1995	47949
1996	57123
1997	53314
1998	36951

Sources: UAE Ministry of Planning, *Main Features of Economic and Social Development in the United Arab Emirates 1972-1977*, 1978, 1975-1985 (1987), 1985-1990 (1993), 1990-1995 (1998), *Annual Economic Reports 1994, 1996, 1997, 1999*.

Table 9. UAE GDP, Oil GDP and AGDP (mndh)

	AGDP	OILGDP	NGDP
1972	2351	4099	6450
1973	3522	7870	11392
1974	6053	25070	31123
1975	13096	26364	39460
1976	18758	32275	51033
1977	27844	35575	63419
1978	28051	32618	60669
1979	32088	47884	79972
1980	39301	70532	109833
1981	51286	69814	121100
1982	56451	55982	112433
1983	56764	46145	102909
1984	55239	46604	101843
1985	54709	44707	99416
1986	53395	26171	79566
1987	54943	32423	87366
1988	57463	29643	87106
1989	61989	38792	100781
1990	67634	57632	125266
1991	72004	54260	126264
1992	77923	53753	131676
1993	84775	47341	132116
1994	89911	45154	135065
1995	108953	47949	156902
1996	118655	57123	175778
1997	127316	53314	180630
1998	133115	36951	170066

Source: based on Tables 1 and 8 in the annex.

Table 10. UAE population (number)

1972	309243
1973	364164
1974	428839
1975	505000
1976	580669
1977	667669
1978	767708
1979	882736
1980	1015000
1981	1079159
1982	1147375
1983	1219902
1984	1297014
1985	1379000
1986	1433001
1987	1489118
1988	1547432
1989	1608029
1990	1671000
1991	1908800
1992	2011400
1993	2083100
1994	2230000
1995	2411000
1996	2479000
1997	2624000
1998	2776000

Sources: UAE Ministry of Planning, *Annual Economic Reports, Economic and Social Development in the United Arab Emirates 1972-1997, 1975-1985, 1990-1995*.

Table 11. UAE per capita real GDP

	(dirhams per year)
1972	92333
1973	122342
1974	119111
1975	107777
1976	108838
1977	110732
1978	94529
1979	102716
1980	112742
1981	110722
1982	95276
1983	85323
1984	83551
1985	73482
1986	57419
1987	58670
1988	55138
1989	60194
1990	69245
1991	57187
1992	53885
1993	50077
1994	47132
1995	47103
1996	50572
1997	45730
1998	42808

Source: based on Tables 1 & 10.

	Table 12. UAE GDP structure by origin						(% of GDP)	
	1972	1975	1980	1985	1990	1995		
Agriculture	1.8	0.008	0.007	1.41	1.64	2.47		
Mining								
Crude Oil	63.49	66.52	63.27	43.83	46.01	34.17		
Others	0.001	0.002	0.002	0.003	0.002	0.003		
Manufacturing	2.73	0.009	3.76	9.07	7.74	8.68		
Electricity & Water	1.3	0.005	1.16	2.1	1.96	2.23		
Construction	6.33	10.87	8.82	8.71	7.73	9.24		
Whole Sale	7.6	8.19	8.16	8.54	8.97	12.36		
Transportation	7.38	3.17	3.35	4.14	4.95	5.9		
Finance, Insurance & Real Estate								
Finance and Insurance	0.007	1.58	1.9	5.05	4.09	4.96		
Real Estate & Bus. Ser.	3.72	4.02	3.59	5.08	5.48	8.13		
Other Services	0.005	0.009	0.007	1.61	1.97	1.14		
Government	4.48	3.44	5.37	10.78	10.35	11.34		
Domestic Services	0	0.001	0.002	0.004	0.004	0.008		
Less imputed bank services	0	-1.39	-1.26	-1.01	-1.57	-1.77		
Total	6450	39635	111470	101990	125266	143970		
Non-Oil Sectors	2355	13271	40938	57283	67634	94770		
% of total	36.51	44.57	36.24	56.17	53.99	65.83		

Sources: UAE Ministry of Planning, *Annual Economic Reports, Economic and Social Development in the United Arab Emirates 1972-1997*, 1975-1985, 1990-1995.

	Table 13. UAE nominal and real oil prices					US \$ per barrel	
	Index 72	Index 95	Nominal	Real 72	Real 95		
1970	85.19	23	2.1	2.47	9.13		
1971	92.59	25	2.57	2.78	10.28		
1972	100.00	27	2.8	2.80	10.37		
1973	122.22	33	3.14	2.57	9.52		
1974	148.15	40	10.41	7.03	26.03		
1975	166.67	45	10.43	6.26	23.18		
1976	166.67	45	11.63	6.98	25.84		
1977	181.48	49	12.6	6.94	25.71		
1978	203.70	55	12.91	6.34	23.47		
1979	233.33	63	29.19	12.51	46.33		
1980	266.67	72	36.01	13.50	50.01		
1981	255.56	69	34.17	13.37	49.52		
1982	244.44	66	31.71	12.97	48.05		
1983	240.74	65	30.05	12.48	46.23		
1984	233.33	63	28.06	12.03	44.54		
1985	229.63	62	27.52	11.98	44.39		
1986	266.67	72	12.97	4.86	18.01		
1987	296.30	80	17.73	5.98	22.16		
1988	318.52	86	14.24	4.47	16.56		
1989	318.52	86	17.31	5.43	20.13		
1990	344.44	93	22.26	6.46	23.94		
1991	344.44	93	18.62	5.41	20.02		
1992	351.85	95	18.44	5.24	19.41		
1993	333.33	90	16.33	4.90	18.14		
1994	344.44	93	15.54	4.51	16.17		
1995	370.37	100	16.86	4.55	16.86		
1996	359.30	97	23.3	5.65	20.9		
1997	329.70	89	18.7	5.67	21		
1998	314.80	85	12.3	3.91	14.5		

Sources: OAPEC. *Secretary General Annual Report 1995*, table1-18, p. 7. *Secretary General Annual Report 1998*, table1-16, p. 45.

**Table 14. UAE dirham exchange rate
(dirhams per US \$)**

1972	4.386
1973	3.996
1974	3.959
1975	3.961
1976	3.953
1977	3.903
1978	3.871
1979	3.816
1980	3.707
1981	3.671
1982	3.671
1983	3.671
1984	3.671
1985	3.671
1986	3.671
1987	3.671
1988	3.671
1989	3.671
1990	3.671
1991	3.671
1992	3.671
1993	3.671
1994	3.671
1995	3.671
1996	3.671
1997	3.671
1998	3.671

Source: IMF. *International Financial Statistics*, June 1999.**Table 15. UAE narrow M1 and broad money M2 in mndh and their growth rates in per cent**

	GRTHM1	GRTHM2	M1	M2
1972	NA	NA	NA	NA
1973	NA	NA	970.00	2,260.00
1974	58.76	167.26	1,540.00	6,040.00
1975	68.83	45.70	2,600.00	8,800.00
1976	81.92	90.91	4,730.00	16,800.00
1977	10.15	-7.74	5,210.00	15,500.00
1978	10.94	13.55	5,780.00	17,600.00
1979	8.48	3.41	6,270.00	18,200.00
1980	17.22	29.12	7,350.00	23,500.00
1981	22.04	23.83	8,970.00	29,100.00
1982	8.58	15.46	9,740.00	33,600.00
1983	-6.37	8.04	9,120.00	36,300.00
1984	-2.52	29.20	8,890.00	46,900.00
1985	6.97	6.40	9,510.00	49,900.00
1986	-3.26	4.41	9,200.00	52,100.00
1987	9.78	5.37	10,100.00	54,900.00
1988	6.93	6.01	10,800.00	58,200.00
1989	2.78	8.59	11,100.00	63,200.00
1990	-2.70	-8.23	10,800.00	58,000.00
1991	20.37	14.48	13,000.00	66,400.00
1992	15.38	4.67	15,000.00	69,500.00
1993	21.33	-1.58	18,200.00	68,400.00
1994	5.49	7.89	19,200.00	73,800.00
1995	8.33	10.30	20,800.00	81,400.00
1996	7.07	6.87	22,270.00	86,990.00
1997	13.92	9.05	25,370.00	94,860.00
1998	9.50	4.17	27,780.00	98,820.00

Sources: UAE Central Bank, *Annual Reports*, Various issues.