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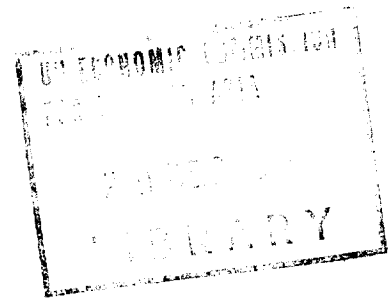
DEVELOPMENT TRENDS AND PROSPECTS IN SELECTED ECWA COUNTRIES



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DEVELOPMENT TRENDS AND PROSPECTS IN SELECTED ECWA COUNTRIES

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INTRODUCTION

A. Background and scope of the study

This study has been prepared pursuant to General Assembly Resolution 3508 (XXX) in which the regional economic commissions were called upon to prepare studies on the long-term trends in economic development and forecasts thereof.

In addition to the general and global justifications for undertaking these studies, as required by the Resolution, the preparation of such a study for the ECWA region is particularly needed for a number of reasons. For example, although development planning is by now an established practice in most of the countries of the region, well-defined development strategies and/or perspective planning hardly exist at the national or regional level. The only exception is Iraq, where a 20-year perspective plan has been prepared covering the period to 1995. Secondly, some of the major world economic changes, including the energy situation, which have taken place in the first half of the 1970s, are expected to have strong and long-term effects on the economy of the region. Thirdly, the state of economic development of the region is such that intra-regional coordination of development efforts, including industrialization, has become exceedingly urgent. Hence, an examination of long-term development trends should serve to highlight the issues involved.

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The period between 1960 and 1975 was chosen for the examination of long-term economic trends. However, for some countries economic data became available only in the late sixties. For this and other reasons complete series have not been possible to prepare. As to forecasts, the period for which economic projections are made extends through the 1980s.

The extent and depth of the study has been limited by the availability of data, research facilities and time. Hence, selectivity in coverage, particularly in the area of forecasts, was unavoidable. A few representative countries from the region have been selected for a more extensive treatment than what could be possible for the entire Region. However, a regional picture incorporating most ECWA countries for which relevant data are available has been attempted.

The ECWA region may be divided into three groups of countries: oil economies, non-oil economies and least developed countries 1/. For the purpose of this study Iraq, Kuwait and Saudi Arabia represent the first group, Jordan and the Syrian Arab Republic the second, and Yemen the third 2/. The choice of the representative countries took into account the accessibility to development plans and planning authorities and the availability of relevant statistical information.

1/ These groups are, respectively, (a) Bahrain, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates; (b) Jordan, Lebanon and the Syrian Arab Republic and, (c) Democratic Yemen and Yemen.

2/ These countries were visited during a period of a few weeks at an early state of the study to gather relevant data and information.

B. Salient features of the economy of the Region

To view development trends in the proper perspective, it is useful at the outset to identify, in general terms, the basic features that have characterized the economy of the region in the past two decades First, the most important feature of this economy is the preponderance of the oil sector. The significance of oil, whose production and prices are for the most part determined by factors exogenous to the Region, has taken a new proportion since 1973. Its influence is not confined to the major oil-producing countries; rather, it has many spill-overs into the rest of the Region, whether directly or indirectly. Therefore, the dominance of the oil sector has affected the choice of approach of this study. Second, due to high propensities to import and export, the degree of openness of the economies of the Region to outside factors is very high. This is partly explained by the very low level of intra-regional economic relations. Moreover, in countries where agriculture is a major sector and mainly rain-fed, as in the Syrian Arab Republic and the two Yemens, the economic performance is subject to fluctuating and uncontrollable weather conditions. This problem has been largely eliminated in Iraq through the wide use of irrigation. Third, the region remains a primary agricultural commodity producing area. While the share of the agricultural sector has been declining, that of the industrial sector has been steadily rising, but heavy and basic industries remain very limited. Similarly, the physical infrastructure has so far been relatively inadequately developed. Fourth, the role of the public sector has been expanding rapidly in some ECWA countries. This is the case in the socialist-oriented countries of the Region, and also in the oil economies due to the large oil revenues accruing to their governments.

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Fifth, the area suffers from political instability with its retarding effect on economic development. Needless to say, the Arab-Israeli conflict and the consequent wars have had a strong and disruptive effect on most countries of the Region. Other causes of instability which have hindered economic progress include the war between North and South Yemen, the cessationist movement in the western province of Oman, the armed struggle in Northern Iraq and lately the civil war in Lebanon. Sixth, as to human resources, and largely because of the traditional inactivity of women in the economic life of the ECWA region, the ratio of labourforce to total population is significantly below world average. However, this phenomenon is changing gradually, particularly in countries outside the Arab peninsula. In view of vast development efforts, the Region has been experiencing shortages of labour. As a result, labour migration within and from outside the area has increased rapidly and is likely to continue into the foreseeable future. Last, but not least, the ECWA region, like most other regions, has experienced strong inflationary tendencies in the first half of the present decade. Because of the peculiarities of the economy of the region, as it has emerged in recent years, the inflationary forces have been and are likely to continue to be strong and of long duration. In addition to external pressures, due to the openness of the economies, internal pressures are likely to remain until the oil boom is fully absorbed by the economies of the Region.

C. The plan of the study

An effort is made in the first chapter of this study to assess the major economic trends in the Region between 1960 and 1975. The Region's development strategies, goals and objectives, priorities, problems and

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constraints are also discussed. It should be noted here that, because of the drastic economic changes which took place in the early 1970s and their far reaching consequences, the reliability of historical trends, as a basis for projecting future trends, is questionable. Therefore, even though quantitative projections have been prepared for the selected countries, these should be viewed with caution bearing in mind the great break of the early 1970s. Hence, the qualitative discussion of the Region's development issues should offer better insights into future development trends.

The second chapter is devoted to projecting development trends for selected ECWA countries. The discussions center around the relationship between capital stocks and output. Thus the capital-output ratios are analyzed and used in the projections. Target GDP growth rates and implied investment rates are assessed.

D. The approach to projecting future trends

The approach to assessing future development trends in the ECWA region is derived from the fundamental development strategy or strategies in the area. In their efforts to build up their infrastructure and diversify their economies, the oil-producing countries have been and are expected to continue to aim at accelerating their investment rates, without having to show concern about financial limitations through the remainder of this decade and most of the succeeding one. While most constraints will manifest themselves in and lead to higher prices, the serious limiting factor will remain, for quite some time to come, to be the countries' absorptive capacity. By contrast, the non-oil economies will attempt to maximize the growth of their domestic products within the financial resources available to them.

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The study has examined planned investment rates in selected oil-economies and has checked their feasibility against historical achievements, taking into account the vast changes in the economic conditions of the oil countries in recent years. Whenever possible, the experiences of other countries which passed through similar stages of development were also used as a point of reference. As a result of this examination, maximum sustainable investment rates were determined. Also, on the basis of estimated incremental capital-output ratios (ICOR), the levels of GDP in bench-mark years (1980, 1985 and 1990) were estimated.

This investment output analysis has excluded the crude-oil sector which is exogenously determined. Its future trend was based on assumed rates of growth, taking into consideration world market conditions and the oil policies of the countries concerned.

For the non-oil economies, the analysis of future development trends was based on the examination of declared target growth rates in GDP. On the basis of estimated ICOR's, the necessary investment rates to achieve the desired growth rates were determined. These required investment rates were then contrasted with the countries' financing abilities from domestic and foreign sources. The propensities to save and the pattern of inflow of financial resources were also assessed. The projected levels of GDP in target years were then estimated on the basis of the attainable growth rates.

A methodological note on the technical aspects of the approach described above is given in the appendix of this study.

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I. THE ECONOMIES OF THE ECWA COUNTRIES

A. Historical Trends

1. Population and labour

Population growth rates in the ECWA region are among the highest in the world. Natural growth rates range between 2.5 and 3.6 per cent in comparison with an estimated world average of 2 per cent 1/. Due to migration, population growth rates in the oil countries have reached even higher levels. For example, population grew in Kuwait, Qatar and the United Arab Emirates at 5 to 9 per cent per annum over the period 1960-1975. The growth rate of urban population has reached 5.4 per cent reflecting a considerable migratory movements toward main urban centres. This rate has reached 10 per cent in Riyadh and 18 per cent in Kuwait city (see Table 1).

The population in the ECWA region has a very young age structure. On the average, 45 per cent of the total population is made up of age groups of 15 years and less. This means that, among other things, the active population must support a relatively larger inactive population. The dependency ratio 2/ varies between 1.12 (Qatar) and 4.62 (Saudi Arabia), averaging 2.73 in the Region compared to 1.5 in the developing countries.

1/ For more details on population indicators in the ECWA region, see ECWA's Population Bulletin, No. 9, July 1975. Much of the discussion here is based on this source.

2/ The dependency ratio is defined to be the number of inactive for each active person.

Table 1. Population growth and percentage of urban population

Country	1975 Population (millions)	Average annual rate of growth 1960-1975 (Percent)	Urban population as Per cent of total	Year
Bahrain	0.260	3.74	78	1971
Democratic Yemen	1.680	3.60	33	1973
Iraq	11.124	3.25	63	1974
Jordan	2.690	3.23	42	1974
Kuwait	0.995	8.64	86	1971
Lebanon	2.870	2.33	60	1970
Oman	0.770	3.05 a/	...	...
Qatar	0.090	2.83 a/	...	...
Saudi Arabia	8.970	2.74	...	...
Syrian Arab Republic	7.350	3.23	46	1974
United Arab Emirates	0.220	3.60 a/	...	...
Yemen	6.670	2.80 a/	...	...

Source : ECWA, based on international sources.

a/ 1966 - 1975 average.

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The illiteracy rate remains high in many countries. Illiteracy of the male population of 15 years and over in the Region ranges between 40 and 80 per cent, except in Lebanon, where it is about 21 per cent. The corresponding female rate is more than 70 per cent for the Region and 40 per cent for Lebanon. However, because of massive educational programmes in almost all the Region, illiteracy is diminishing very rapidly. One aspect of the educational efforts deserves special attention. Historically, enrolment in technical and vocational schools has been within 2 per cent of total enrolment. In view of the current and future demand for technically trained school graduates, present efforts in this area should be stepped up.

The working population in the ECWA region is characterized by a very low participation rate 1/ averaging about 30 per cent, compared with a world average of 42 per cent, and 40.7 per cent in the developing countries. The rate is significantly higher in the Gulf oil-countries, reaching, in some cases, over 40 per cent because of migrant workers. The main depressing factor on the participation rate is the traditional inactivity of females in economic life. As shown in Table 2, the female participation rate is below 10 per cent and is as little as 2.6 per cent in Jordan (East Bank) in 1971 2/. Male participation, however, is much higher, ranging between 39 and 61 per cent.

1/ Participation rate (or crude activity rate) is defined as the ratio of labour force to total population.

2/ The level of the participation rate of women may be understated, particularly in the agricultural sector, where it is believed to be substantially higher than what is usually revealed by labour statistics.

In terms of the net activity rate 1/, the percentages are naturally higher. For males, they vary between 65 and 70 per cent, reaching 85 per cent in the Gulf countries. The female net activity rates vary between 8 and 10 per cent, except in the Gulf countries and in the Syrian Arab Republic where they reach 15 per cent. Furthermore, the net activity rate reaches as high as 95 per cent for males and 20 per cent for females among migrants in the Gulf countries.

The trend of the overall participation rate between 1960 and 1975 has remained more or less stable, showing insignificant improvement. However, there are definite signs pointing to a higher rate in the future. Increased demand for labour, diminishing illiteracy and changing social customs are among the factors expected to raise this rate significantly.

The distribution of the labour force by branch of economic activity, (see Table 2), favours the agricultural and the services sectors. Agricultural labour accounted for about half the total in Iraq and the Syrian Arab Republic and to more than that in Yemen, while the largest segment of the labour force in Jordan, Lebanon and the Gulf oil-countries is employed in the services sector. Employment in the industrial sector is relatively low, but is expected to rise sharply in all countries of the Region.

2. Growth of gross product

The estimation of Gross Domestic Product (GDP) or Gross National Product (GNP) trends in constant prices for the ECWA Region is a difficult problem. Some countries do not have any GDP data and some others have such data for only a few years. Furthermore, series at constant prices are available for only four countries, namely, Iraq, Saudi Arabia, the

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1/ Net activity rate is defined as the ratio of labour force to manpower.

Table 2. Labour force and activity rates

Country	Labour force					Crude activity rate		
	Total	Agriculture	Industry	Construction	Services	Total	Male	Female
	(Number)	(Percent)				(Percent)		
Bahrain								
1965	53,021	...	...	...	...	29.1	...	...
1971	60,301	6.6	14.1	17.3	62.0	27.9	49.0	3.3
Democratic Yemen								
1970	...	...	...	...	...	23.1	...	...
1973	409,742	...	...	...	...	25.8	42.4	9.4
Iraq								
1957		...	...	...	...	24.4	...	...
1970	2,664,900	52.0	6.2	2.5	39.3	28.2	...	...
1973	2,962,300	52.0	6.3	2.5	39.2	28.4	...	...
Jordan								
1961	389,978	...	...	...	...	22.9	42.4	2.6
1971	541,000	32.9	6.9	2.0	58.2	23.1	43.1	2.6
Kuwait								
1965	184,299	1.1	13.5	15.6	69.8	39.4	61.3	4.8
1975	304,582	2.5	9.6	10.6	77.3	30.6	49.5	7.8
Lebanon								
1970	571,755	17.8	16.7	6.1	59.4	26.9	43.8	9.5
Oman								
1972	175,000	...	...	...	...	25.0	...	...
Qatar								
1970	...	...	...	...	...	43.5	...	...
1975	80,303	...	...	...	...	47.2	...	...
Saudi Arabia								
1966	1,013,200	40.4	5.5	12.8	41.3	14.6	...	...
1975	1,601,000	28.0	6.0	20.6	45.4	17.8	...	...
Syrian Arab Republic								
1970	1,570,776	47.9	12.7	7.3	32.1	24.8	43.4	5.5
1975	1,838,948	49.8	12.0	7.0	31.2	24.8	38.9	10.5
United Arab Emirates								
1968	...	...	...	...	...	43.3	...	...
1973	...	...	...	...	...	38.0	...	...
Yemen								
1972	...	...	...	...	...	29.0	...	...

Source: ECWA, based on data compiled from national and international sources.

Note: Working age is defined as:
Bahrain: 14 years and above
Kuwait : 12 years and above and 15 years from 1975
Lebanon: all ages
The Syrian Arab Republic : 10 years and above
Working age is not specified in the rest of the countries.

Syrian Arab Republic and Yemen. Therefore, different estimations have yielded different results. For example, according to a recent United Nations document 1/, the 'gross product' in the ECWA region grew at an average rate of 8.5 per cent between 1961 and 1974, and at 10 per cent between 1971 and 1974. By contrast, a preliminary compilation of GDP series by the Statistical Unit of ECWA 2/ shows the rates at 12.4 and 24 per cent for the periods 1960-1975 and 1970-1975, respectively.

Table 3 shows the growth rates for the ECWA countries for the period 1960-1975. Despite the carefulness that was exercised in choosing the particular series, the figures in this Table should be treated with caution. During the 1960s, growth rates varied considerably over time and between countries. It was the lowest in Democratic Yemen, where a negative growth rate of -2.8 per cent was recorded. The economic contraction in this country was mainly in the second half of the decade and in particular after the 1967 Arab-Israeli war. The closure of the Suez Canal cut drastically the activity of the sea-port of Aden, the most important economic establishment in the country. On the other hand, very high growth rates were achieved in Oman (19.4 per cent) and the United Arab Emirates (29.5 per cent). These two countries became important oil-producers during the decade. In the remaining countries, growth rates ranged between 5 and 10 per cent, with the non-oil countries performing closer to the lower end of this range and the oil economies closer to the upper end. An exception to this pattern is Jordan where a rate of 10 per cent was achieved between 1960-1966.

1/ United Nations, Economic and Social Council, E/5937, 17 March 1977.

2/ ECWA, National Accounts Studies, Bulletin No. 1, "Economic Growth of the ECWA Countries throughout the period 1960-1975", May 1977.

Table 3. Average annual growth rates of gross and per-capita product

(at constant 1970 prices)

Country	Growth rates (Percent)				Dollars		
	GNP	GDP	Popula-tion	Per-capita GNP	GNP Millions	GDP Millions	Per-capita GNP
Bahrain							
1960-70	6.4	...	...	...	...	...	...
Democratic Yemen							
1960-70	-2.8	...	...	...	...	...	...
1970-75	1.1	...	...	...	...	...	...
Iraq							
1960-70	5.86 a/	6.19	3.2	2.55 a/	...	...	...
1970-74	10.9	8.29	3.3	7.3	...	...	...
1975	13.65	18.37	3.3	9.9	5,253.8	5,926.1	532.7
Jordan							
1960-70	6.58	6.84	3.1	3.33	...	...	...
1970-74	2.92	2.26	3.3	-3.5	...	...	...
1974	4.35	6.98	2.7 b/	...	698.1	648.0	247.50
Kuwait							
1960-70	8.25	6.04	9.8	-1.39	...	...	...
1970-74	0.6	-0.5	5.8	-4.84	...	...	...
1974	29.47	-7.28	7.3 b/	...	2,612.8	2,671.5	2,888.1
Lebanon							
1960-70	4.69	4.78	2.0	2.64	...	...	...
1970-74	8.56	8.67	3.0	5.38	...	...	...
1974	9.4	9.0	3.2 b/	...	2,280.9	2,209.3	794.7
Oman							
1960-70	19.4	...	...	...	...	...	...
Qatar							
1960-70	9.6	...	...	...	...	...	...
Saudi Arabia							
1960-70	10.96 c/	8.56	2.6	8.17 c/	...	...	...
1970-74	12.5	16.03	3.0	9.24	...	...	...
1975	...	3.23	2.9	...	...	7,235.7	806.65
Syrian Arab Republic							
1960-70	4.64 c/	5.67	3.3	1.2 c/	...	...	...
1970-74	9.26	9.24	3.1	5.95	...	...	...
1975	...	25.60	3.2	...	...	3,112.8	423.5
United Arab Emirates							
1960-70	29.5	...	...	...	...	...	...
Yemen							
1960-70	3.0	...	...	...	...	...	...
1970-75	11.4	...	...	...	...	...	...

Source: ECWA, based on international and national sources.

Note: Growth rates of GNP in Bahrain, Oman, Qatar, United Arab Emirates, Yemen and Democratic Yemen are rough estimates.

a/ Growth rate between 1961 and 1970.
b/ Growth in 1975 over 1974.
c/ Growth rate between 1963 and 1973.

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a. Moderate growth in the 1960s

The economic performance in the Region, particularly in the non-oil sub-region and in Iraq, during the 1960s, was lower than what could have been achieved. A number of depressing or disruptive factors contributed to the relatively low performance. First, weather conditions and fluctuating rain precipitation remained a major unsettling factor. Second, the 1967 Arab-Israeli war and its aftermath 1/ had a serious disruptive and retarding effect on economic growth in the Region; the economies of Jordan, Democratic Yemen and the Syrian Arab Republic were hardest hit. Third, in some countries, such as Iraq and the Syrian Arab Republic, socio-economic changes 2/ made the 1960s a period of transition to a different economic system. In the short- and the medium-run, this transition is usually accompanied by economic slow-down until such time when the economy adapts to the new system. Finally, political strife in some countries and low absorptive capacity in some others are also among the depressing economic factors. The growth pattern in the 1960s, however, was characterized by a remarkable stability in prices.

b. Rapid growth in the 1970s

The development pattern in the first half of the present decade was one of rapid economic growth. Expanding world demand for oil, sharply increased oil prices, relative political stability, increased business confidence after the 1973 Arab-Israeli war, and intensified development efforts are the major factor which contributed to accelerated growth.

1/ The adverse effect of this war is reflected, inter alia, in the destruction and interruption of productive capacity, allocation of more resources for defence spending and in the reduction of business confidence.

2/ Of these changes, agrarian reform, nationalization of major industries and the expansion of the role of the public sector are important cases to cite.

According to a rough and perhaps liberal estimation, the GDP growth rate per annum in the first half of the 1970s was double that of the 1960s 1/. This doubling 2/ of the growth rate is observed at least in a few major countries. Table 3 shows that Lebanon (excluding 1975), Saudi Arabia, the Syrian Arab Republic and, to some extent, Iraq fit into this pattern. The same thing may be safely said of the Gulf countries, except Kuwait 3/.

Another country which showed low growth rate in the first half of the 1970s is Jordan. The average growth rate of GDP over 1970-1974 was a mere 2.26 per cent. The armed conflict with the Palestinians in 1970 and the drought of 1973 were among the causes.

An important feature of the growth pattern in this decade is the change in the relative growth of GNP to GDP. In the oil economies, bringing oil production under national control narrowed the gap between GDP and GNP by reducing income outflows and repatriated income of the multinational oil companies. However, new but more variable flows have emerged causing more fluctuations in GNP/GDP ratios, as in the case of Kuwait where investment incomes from abroad have been growing rapidly.

1/ ECWA, National Accounts Studies, op. cit.

2/ In Yemen, the growth rate of GNP almost quadrupled; increased inflow of income from abroad being a main factor.

3/ It is well established that Kuwait continued economic prosperity during the first half of the seventies. The no growth pattern is of course a matter of measurement of production at constant prices which may not be the most appropriate measure of development under the circumstances. More on this aspect is given later.

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The economic performance of the Region as a whole compares favourably with world and developing countries' performances during the period under study. The overall rate of growth of 'gross product' is about 3 percentage points higher than in the developing countries. Table 4 compares the growth rate in the Region with the other developing regions over the period 1961-1974. Obviously the oil boom in the present decade explains the accelerated growth. Another plausible reason for the better performance is the development stage the Region was passing through during the period. Considering the vast development needs and the great economic potentials of the Region, the achieved rate of growth was expected and was not remarkable.

c. An alternative to measuring growth

The sharp increases in the price of oil has created a unique situation in the oil economies which suggests a revision in the traditional method of measuring growth via the gross product at constant prices. These price increases have made the share of the oil sector in gross product, measured in current prices, as high as 70 or 80 per cent of the total. The oil sector is, for the most part, an export sector. Any relative increase in the world price of oil results in greater import capacity in the oil exporting countries. Development efforts in these countries depend, of course, on, and are a function of, the importation of capital goods. Furthermore, on account of oil, these oil economies have a high degree of openness, exporting the bulk of their gross product and importing most of their needs. Hence, the raising of the price of oil raises the import capacity and consequently the development potentials of the country. Therefore, it would seem reasonable to measure real growth not merely by growth at constant

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prices, but by the latter adjusted by a factor which reflects changes in the terms of trade 1/. Measuring the growth of output at constant prices without such an adjustment seems to under-estimate the development potentials of the oil economies.

The terms of trade effect may be measured by the difference between the value of exports deflated by an import price index and the value of exports deflated by an export price index 2/. This terms of trade effect is added to gross national product at constant prices to give the adjusted gross national product.

In the first half of the 1970s the terms of trade of the oil exporting countries improved tremendously. As a result, their effect was so large that it was bigger for some oil countries than GNP itself, measured at constant prices 3/. As a demonstration of the above-adjusted income measure, Table 5 contrasts GNP at constant prices with the adjusted GNP for the period 1970-1975 in Iraq, Kuwait and Saudi Arabia. The above approach to measuring income seems to offer an appropriate yard-stick in assessing real income and development potentials whenever the spread between the import price index and the export price index is big and the degree of openness of the economy is high. These conditions hold for the ECWA oil countries in the early 1970s.

1/ This alternative to measuring growth potential coincides with a similar stand taken in Saudi Arabia and expressed in its Second Development Plan, p. 27.

2/ Terms of trade effect $= \frac{Vx}{Pm} - \frac{Vx}{Px}$

where:

Vx = value of exports in current prices
Pm = import price index
Px = export price index

3/ Of course, in case of worsening terms of trade the effect will be negative and it would depress the constant price GNP or GDP.

Table 4. Average annual growth rates of gross product in the developing countries

(Percent)

Region	1961-1974	1961-1970	1971-1974	Change between 1971-1974 and 1961-1970
Western Asia	8.5	7.9	10.1	+2.20
Africa (excluding South Africa)	4.9	5.3	4.0	-1.30
Caribbean and Latin America	6.0	5.6	7.2	+1.60
South and South-East Asia (excluding Japan)	4.7	4.7	4.5	-0.20
Developing market economies	5.4	5.2	5.8	+0.60

Source: United Nations Economic and Social Council, Long-term trends in the economic development of the regions of the world, E/5937, March 1977.

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Table 5. Gross national product adjusted for the terms of trade effect for selected ECWA oil-economies

(in millions of national currency units)

	1970	1971	1972	1973	1974	1975
Saudi Arabia						
Vx	10,906.5	17,301.8	22,757.8	32,296.0	109,940.0	97,380.0
Px	100	130	140	204	781	804
Pm	100	108	118	145	185	195
$Vx\ (1 - \frac{1}{Pm}\ \frac{1}{Px})\times 100$	-	2,711.1	3,030.7	6,441.7	45,350.2	37,826.5
GNP (1970 prices)	13,573.0	14,867.5	16,462.2	18,742.0	21,789.8	...
Adjusted GNP	13,573.0	17,578.6	19,492.9	25,183.7	67,140.0	...
Iraq						
$Vx\ (1 - \frac{1}{Pm}\ \frac{1}{Px})\times 100$	-	89.2	66.1	153.3	900.9	956.8
GNP (1970 prices)	3,126.2	3,201.5	3,536.0	4,120.3	4,622.8	5,253.8
Adjusted GNP	3,126.3	3,290.7	3,602.1	4,273.6	5,523.7	6,210.6
Kuwait						
$Vx\ (1 - \frac{1}{Pm}\ \frac{1}{Px})\times 100$	-	114.3	144.0	252.4	1,404.7	1,041.5
GNP (1970 prices)	852.3	910.9	762.4	720.7	933.1	...
Adjusted GNP	852.3	925.2	906.4	973.1	2,337.8	...

Source: ECWA, based on national and international sources.

Note : Pm = Unit value of imports
Vx = Value of exports at current prices
Px = Unit value of exports

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d. Sectoral contribution to growth

It has been stated earlier that the ECWA region is basically a primary commodity producer and an area producing agricultural products. Table 6 shows the sectoral contributions to GDP for varying periods extending between 1960 and 1975 1/. The share of the agricultural sector varies from one country to another and ranges between less than one per cent in some oil-countries (Bahrain and Kuwait) and over fifty per cent in Yemen. The trend shows a definite decline in the contribution of this sector, particularly in the oil-producing countries.

The contribution of mining and quarrying is high in the oil-economies and is rising in almost all the countries of the Region. This sector is accounted for mostly by oil and, to a much lesser extent, by phosphate, asphalt, construction materials and salt. It has been indicated elsewhere in this study that the oil sector has grown sharply in the seventies. It was also indicated that some countries, such as the United Arab Emirates, although not shown in Table 6, became significant oil producers in the late sixties and early seventies, thus markedly raising the share of the sector in those countries. The doubling of the share of this sector in Jordan is a result of expansion of the phosphate extraction industry. In the Syrian Arab Republic, the increase of the contribution of the sector, about 20 times, is explained by the exploitation of newly discovered oil and by the expansion of the phosphate industry.

1/ According to ECWA's National Accounts series referred to earlier, the average annual growth rates of GDP by industrial origin and at current prices, were as follows:

	1960-65	1965-70	1970-75	1960-75
Agriculture, forestry and fishing	8.0	-0.3	2.2	3.2
Mining and Quarrying	8.3	9.2	41.0	18.7
Manufacturing	6.3	7.4	7.7	7.1
Electricity, gas and water	15.6	13.4	13.4	14.1
Construction	9.2	2.7	13.2	8.3
Wholesale and retail trade	5.3	4.2	9.3	6.2
Transport and communication	8.8	7.6	11.	9.1
Other	9.6	4.3	11.1	8.3
Gross domestic product	8.0	5.8	24.0	12.4

/.....

Table 6. Structure of gross domestic product at current market prices in countries of the ECWA region, 1960-1975.

(percentages)

Countries	Agriculture	Mining and Quarrying	Manufacturing	Construction	Transport and Communication	Trade	All other services
Bahrain							
1970-72	0.96	27.7	45.86	2.01	...	...	23.47 a/
Democratic Yemen b/							
1969-70	23.83	4.83 d/	...	1.61	...	...	69.73 a/ d/
1971-73	25.31	6.05 d/	...	3.85	...	...	64.79 a/ d/
1974-75	23.08	7.01 d/	...	6.43	...	...	63.48 a/ d/
Iraq b/							
1960-65 c/	18.0	34.5	9.0	3.5	6.8	6.6	21.6
1966-70 c/	18.0	31.0	9.0	3.5	6.3	8.2	24.0
1971-73	16.3	34.3	9.6	3.4	5.8	8.6	22.0
1974-75	7.2	59.0	5.7	2.2	3.8	6.4	15.7
Jordan b/							
1960-65	21.30	8.84 d/	...	4.88	10.33	21.50	33.25
1966-70	18.00	11.10 d/	...	5.27	8.6	19.63	37.4
1971-73	13.85	11.17 d/	...	4.87	8.14	18.98	39.99
1974-75	14.18	16.43 d/	...	6.36	8.58	17.34	37.11
Kuwait							
1966-70	0.50	58.85	3.78	4.24	...	...	32.63 a/ d/
1971-73	0.24	65.45	3.53	1.63	...	...	29.15 a/ d/
Lebanon							
1964-65	11.70	13.0 d/	...	5.6	8.2	31.4	30.1
1966-70	10.19	13.22 d/	...	4.93	8.4	31.2	32.06
1971-73	9.39	14.16 d/	...	4.39	7.6	31.7	32.7
Oman							
1967-70	18.0	66.2	0.1	9.28	...	...	6.42 a/ d/
1971-73	11.58	56.23	0.27	15.37	...	...	16.55 a/ d/
1974	3.06	65.45	3.52	10.2	...	...	17.77 a/ d/
Saudi Arabia							
1963-66 c/	8.76	45.58	8.04	4.55	...	...	33.07 a/ d/
1967-70	6.27	46.71	8.75	5.73	...	...	32.54 a/ d/
1971-73	3.50	71.24	6.94	4.35	...	...	13.97 a/ d/
1974-75	1.12	78.20	5.0	3.28	...	...	12.40 a/ d/
Syrian Arab Republic							
1960-65 c/	27.67	0.09	12.62	2.89	7.95	21.59	27.19
1966-70 c/	23.60	0.90 d/	13.31	2.95	9.1	22.7	28.4
1971-73	22.09	19.88 d/	...	3.97	9.94	10.2	25.92
1974-75	13.90	23.94 d/	...	5.42	6.82	22.5	22.43
Yemen							
1969-70	54.4	0.83	3.72	5.22	2.63	17.74	15.48
1971-73	50.32	0.71	4.90	5.23	3.23	16.6	19.01
1974-75	48.06	0.59	4.83	4.17	3.0	19.46	19.89

Source: ECWA, based on national and international sources.

a/ Including Transport and Communication and Trade.
b/ GDP at factor cost.
c/ According to former system of national accounts (SNA).
d/ Including Manufacturing.

At the regional level, the relative contribution of both agriculture and mining and quarrying is likely to decline in the future in favour of manufacturing, construction and the service sectors. This expectation is based on the declared development strategies of most of the countries in the Region; diversification through industrialization and building the infrastructure have been the two most important development objectives, especially in the oil economies.

According to table 6, although the relative contribution of the different sectors fits into more or less stable patterns, there are significant variations between countries or groups of countries (such as oil and non-oil) and between periods. It has been observed that the contribution of the service sectors in Jordan and Lebanon is particularly high 1/.

e. Trends of GDP components

Table 7 gives the percentage shares of expenditure on GDP for varying periods extending between 1960 and 1975 2/. Private consumption share is declining while that of the government is rising. The share of fixed capital formation is rising, except in the low-absorption oil-economies and when measured at current prices. If measured in constant prices, capital formation shows an overall rising trend in most of or

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1/ Electricity, water and finance are included under the category "All other services".

2/ According to alternative estimates, shown in a United Nations document cited earlier (Economic and Social Council, E/5937 of 17 March 1977), the growth rates of final demand components of gross domestic product for Western Asia were :

	In percent		
	1961-1974	1961-1970	1971-1974
Private consumption	7.2	6.3	9.7
Government consumption	14.6	12.5	20.1
Gross fixed capital formation	10.9	8.1	18.2
Exports of goods and services	9.8	9.4	10.3
Imports of goods and services	12.3	9.2	22.2
Gross domestic product	8.5	7.9	10.1

/...

Table 7. Expenditure on gross domestic product at current market prices in countries of the ECWA region, 1960-1975

(percentages)

Country	Private consumption	+ Government consumption	+ Gross capital formation	+ Exports	- Imports	= GDP (100 per cent)
Iraq						
1960-65	47.25	18.69	18.32	39.40	23.66	
1966-70	48.50	20.15	15.06	34.91	18.63	
1971-73	40.80	22.85	18.28	39.59	21.53	
1974-75	28.06	23.16	27.98	59.52	38.72	
Democratic Yemen						
1969-70	116.47	23.20	3.74	12.57	55.99	
1971-73	97.50	24.87	13.75	10.88	46.00	
1974-75	100.45	23.97	22.72	7.15	54.29	
Jordan						
1960-65	85.82	23.78	16.51	15.61	41.71	
1966-70	80.57	27.83	19.84	15.55	43.79	
1971-73	80.49	29.70	20.35	16.58	47.13	
1974-75	76.90	31.45	27.53	26.36	62.23	
Kuwait						
1962-65	27.31	13.18	13.77	65.96	20.22	
1966-70	30.31	14.92	18.17	63.18	26.58	
1971-73	17.09	16.89	8.37	74.14	16.40	
1974	11.24	14.96	5.11	84.82	16.14	
Lebanon						
1960-65	81.53	8.28	21.76	30.22	41.70	
1966-70	78.39	10.51	19.94	38.18	46.93	
1971-73	77.98	9.13	20.71	46.70	54.52	
1974	83.12	8.43	21.74	66.78	80.08	
Oman						
1967-70	24.24	7.18	13.78	70.40	15.44	
1971-73	22.31	30.03	28.03	61.68	41.97	
1974	8.72	34.69	30.62	69.15	43.20	
Saudi Arabia						
1963-65	37.08	16.48	12.40	57.63	23.60	
1966-70	32.32	19.12	18.58	58.60	28.62	
1971-73	23.14	14.62	12.87	70.93	21.56	
1974-75	10.60	10.46	9.40	85.33	15.78	
Syrian Arab Republic						
1960-65	74.66	14.51	12.25	21.59	23.01	
1966-70	72.53	17.59	14.28	19.28	23.67	
1971-73	66.17	19.41	18.37	22.06	26.02	
1974-75	66.90	19.54	25.63	25.99	38.06	
Yemen						
1969-70	101.78	8.81	10.71	2.22	23.52	
1971-73	92.0	11.64	18.54	4.63	26.81	
1974-75	89.59	12.41	23.27	7.84	32.31	

Source: ECWA, based on national and international sources.

/... ...

all the countries in the Region 1/. Again, measured in current prices, exports show an increasing trend, accelerating in the oil economies and in Lebanon. At constant prices, however, the rise in exports' share is minimal. As to imports, their share is rising and at an accelerated rate for most of the countries, particularly when measured in constant prices. Nevertheless, the decline in the share of imports in Kuwait and Saudi Arabia, as shown in Table 7 above, is a direct consequence of the sharp increase in exports and GDP at current prices.

Measured in current market prices, the changing pattern in the trends of GDP demand components is heavily influenced by the increases of the prices of oil. Another major influence is the expanding role of the public sector.

B. Development Problems and Constraints

The achievement of higher levels of economic development and progress depends on the degree of success in overcoming development problems and constraints. The ECWA region suffers from a number of such problems which vary in their nature, intensity and likely duration between one country, or a group of countries, and another. For the purpose of forecasting or assessing future development trends, the identification of long-term development problems is a necessary qualification to whatever conclusions quantitative analysis may yield. It also helps to understand development strategies and policies. This is particularly true where development problems exert their retarding pressure in an indirect manner. The following few pages focus attention on major development problems which are of long-term nature and are common to all or parts of the Region.

1/ More on investment behavior is given later in this study.

1. Labour shortages and efforts to ease the problem

One of the most important problems facing the countries of the Region is the shortage of skilled labour, including technological expertise and managerial know-how. Although this is not an unfamiliar problem in the Region and, for that matter, in most developing countries, what is new about it is the level of seriousness it has reached in recent years. It is experienced by almost all the countries in the area from the richest countries to the poorest. It is, for example, the most limiting development constraint in both Saudi Arabia and Yemen. Obviously, the oil boom is the major cause of this problem. The development programmes in the oil-rich countries have been generating and will continue to generate demand for skilled and technical labour far in excess of local supply which is rather meagre. Labour mobility and migration within the region is helping, to some extent, the oil rich countries, especially in the area of semi-skilled and construction labour, but it is making the problem worse for the exporting countries; Jordan and Yemen have so far suffered the most from labour migration 1/.

The solution to this labour constraint is a long-term proposition. It involves the educational and social structure requiring fundamental changes and improvements. To ease this problem through the importation of labour seems to be the only solution in the short- and medium-terms. Imported labour, however, has been a very costly alternative, particularly in the high skill areas. The oil countries have been paying exorbitant wages, including housing and other allowances to foreign labour from the industrialized countries. The cost of foreign labour is not just the financial remunerations but also indirect costs and social costs. The accommodation of foreign labour and the efforts of host countries to approximate, as much as possible, the living conditions of the migrant

1/ Of course, these labour exporting countries benefit in return from sizable transfers of income from their expatriate workers.

workers further increase the cost of foreign labour. In addition, the importation of labour from different cultures and environments involves social costs to the extent it gives rise to new problems or exerts undesirable influences on society. Furthermore, importing labour on a large scale may be politically undesirable, particularly where the local labour force is relatively small as in the Gulf oil countries. This consideration has instituted a ceiling for foreign labour in some of the oil countries.

So far, labour shortages in the Region have manifested themselves in sharply rising wages exerting a strong pressure on the level of prices. This pressure is most visible in services directly affected by the inflow of foreign labour. For example, the cost of housing increased up to 10 or 20 times in the space of 2 to 3 years. The agreement on a regional strategy designed to regulate the flows of labour, with minimum damages to the national economies, which export labour, is one of the important matters which deserve urgent attention.

2. Inadequacy of the infrastructure

Another major development constraint in many ECWA countries is the paucity or inadequacy of the infrastructure, both physical and administrative. It is a constraint in that it limits the absorptive capacity of the economy and gives rise to bottlenecks whenever development efforts exceed the handling capacity of the infrastructure. One of the most familiar bottlenecks in the area is port congestion where waiting time for unloading has often exceeded 2 to 3 months. Some countries, such as Saudi Arabia, have been successful in easing port congestion at high costs, using helicopters for unloading. Efforts to develop and improve the infrastructure to raise the absorptive capacity are causing strain on the existing capacity. At the present rate, it will take between

five to ten years to bring the infrastructure to planned level. Most of the countries are devoting sizable portions of their planned expenditure to the improvement of their infrastructure.

The weakness of the institutional and administrative structure is not any less serious than the inadequacy of the physical infrastructure. It can, and has been leading, to waste and inefficiencies due to port congestion, lack of appropriate transport and communication net-works, insufficient electricity and water supply, etc. Like the labour constraint, the inadequacy of the physical infrastructure has so far been reflected in further inflationary pressure. Furthermore, because of the long gestation period of infrastructural projects, expenditures on these projects are inflationary in the short- and medium-term.

3. Structural imbalances

A third major problem area relates to structural imbalances. The preponderance of oil in the oil-producing economies is over wholming. The effect of this sector on the rest of the economy has so far been mainly through Government spending, with little being generated in terms of economic externalitites and linkages. This situation reflects the nature of the crude oil sector which is capital intensive and whose local inputs, other than the natural resources, represent a small fraction of total inputs 1/.

1/ See the discussion under diversification in the following section.

In a few of the non-oil countries, namely Yemen and, to a lesser degree, the Syrian Arab Republic and Democratic Yemen, agriculture is similarly a dominant sector. Since most of the cultivated land is rain-fed, the agricultural output is subject to sharp fluctuations due to variations in weather and rain conditions 1/.

Another area of internal imbalance is inflation which is partly a consequence of other imbalances in the economy and partly imported from abroad. As mentioned earlier, the oil boom has been the main factor behind the accelerated inflation rate in the 1970s.2/ Iraq, Saudi Arabia and the Syrian Arab Republic have instituted subsidies of basic consumer needs, particularly of food items, as a tentative measure to lessen the negative impact of inflation on the consumer. These subsidies have grown sharply to match the spiral inflation, reaching a level that became a heavy burden in some non-oil countries, In the oil countries, they pose no problem since their costs do not really matter, given the large financial resource availabilities. Moreover, they are not objected to, particularly in Iraq, as they constitute a means to narrow the income gap by helping the low income groups.

Inflationary pressures began to build up in the ECWA region, like most other regions, in the 1970s. The 1960s were characterized by remarkably stable prices, where the inflation rate did not exceed two per cent per annum. By contrast, price indices between 1970 and 1975 grew by roughly two-thirds in about half the countries and more than doubled in the other half. Table 8 gives available price indices for the period 1960-1975. Table 9 shows the inflation rates in the first half of the 1970s, together with indicators of domestic and foreign inflationary pressures, namely, government spending, money supply and the import price index.

1/ The agricultural sector in the area suffers from a host of problems typical of developing countries, but these are not within the scope of the discussion here.

2/ The oil boom has manifested itself through increased government spending, money supply and availability of low cost credit.

4. Openness of the economies

The fourth major development problem relates to the external balance. The problem of the openness of the economies has already been alluded to. By and large, the Region depends on the export of a few primary and agricultural commodities and the import of most of the capital and consumer goods. Table 10 gives the balance on current account, including the trade balance, investment income and net transfers. Foreign trade as a percentage of real GDP reached as high as 80 per cent for imports (Lebanon, 1974) and 85 per cent for exports (Saudi Arabia, 1974-1975). Aside from increasing the vulnerability of the economies of the region to external impulses, the relatively high imports in some countries and high exports in others are leaving the countries concerned with huge trade deficits and surpluses. The deficit countries (non-oil economies) are constantly facing the problem of financing their net imports, while the surplus countries (oil economies), particularly since the early 1970s, face the problem of investing their surplus in secure and income-generating foreign investments whose value are guarded against devaluation and inflation.

5. Other problems and constraints

The above discussion singled out a few development problems for emphasis. Development constraints and obstacles are numerous and many of these are referred to directly or indirectly throughout the study. For example, problems relating to the efficiency of capital and the under-utilization of resources are discussed in connexion with the estimation of the capital output ratio in chapter II.

Table 8. Price indices for selected ECWA countries and years
(1970 = 100)

	1960	1965	1970	1971	1972	1973	1974	1975
Bahrain								
Consumer price index	...	89.7	100.0	105.8	111.2	127.3	158.3	185.6
Democratic Yemen								
Wholesale price index	...	...	100.0	110.4	113.2	152.9	217.4	256.0
Consumer price index	...	...	100.0	105.3	110.9	132.8	159.7	178.8
Iraq								
Wholesale price index	84.3	87.2	100.0	106.4	102.3	107.1	120.4	133.0
Consumer price index	79.6	84.2	100.0	103.6	109.0	114.3	123.8	135.5
Jordan								
Consumer price index	...	...	100.0	104.3	112.7	124.5	149.4	167.3
Kuwait								
Wholesale price index	...	...	...	...	100.0	117.6	135.0	145.0
Consumer price index	...	...	...	...	100.0	108.3	122.3	132.8
Lebanon								
Consumer price index	...	...	100.0	101.7	106.6	113.1	125.5	...
Saudi Arabia								
Consumer price index	...	91.6	100.0	104.5	109.0	127.0	154.2	208.9
Syrian Arab Republic								
Wholesale price index	87.8	81.5	100.0	109.7	104.0	138.7	157.3	169.4
Consumer price index	83.0	85.0	100.0	105.0	106.0	127.0	146.0	170.0
Yemen								
Consumer price index	...	...	...	...	100.0	143.0	181.0	225.0

Source: ECWA, based on international sources

/...

Table 9. Inflation: selected indicators, 1970-1975
(Average annual percentage rate of increase)

Country	Consumer price index	Imports price index	Government expenditure		Money supply b/
			Total a/	Current	
Bahrain	13.2	...	30.0	23.9	12.4
Democratic Yemen	12.3 c/	...	23.0	11.1	12.9
Iraq	6.3	13.9	25.9	19.3	21.8
Jordan	10.8	17.2	19.2	17.0	14.8
Kuwait	9.9 d/	13.9	24.4	23.2	21.3
Lebanon	5.8 e/	17.4 e/	15.4	12.7	14.3 e/
Oman	...	...	65.1	66.8	45.2 h/
Qatar	...	...	43.8	30.7	31.1
Saudi Arabia	15.9	14.3	53.0 f/	40.0 f/	72.0 f/
Syrian Arab Republic	11.2	16.1	30.3	24.6	22.9
United Arab Emirates	...	...	116.8 g/	92.9	22.4 i/
Yemen	31.0 d/	25.5 f/	23.0	24.5	33.6

Source: ECWA, based on data compiled from national and international sources.

a/ Current plus development expenditures.

b/ Defined as currency in circulation plus demand deposits.

c/ Wholesale price index growth rate is 20.7.

d/ Relates to the period 1972-75, while the wholesale price index for the same period is 13.2.

e/ Relates to the period 1970-74.

f/ Relates to the period 1971-75.

g/ Relates to the federal budget and the period 1972-74.

h/ Relates to the period 1970-72.

i/ Relates to the period 1972-74.

/...

Table 10. Current account balance in countries of the ECWA region, selected years

(in millions of dollars)

	1960	1965 a/	1970 b/	1973	1974	1975
Bahrain						
Current account balance	...	...	...	-29.2	110.0	112.9
Trade balance	...	...	...	-78.3	30.4	-24.2
Investment income	...	...	...	...	...	...
Services, transfers and net errors & ommissions	...	...	...	49.1	79.6	137.1
Democratic Yemen						
Current account balance	...	...	1.2	-50.7	-97.2	-81.3
Trade balance	...	...	-83.9	-104.5	-165.7	-162.1
Investment income	...	...	5.5	4.1	6.9	4.3
Transfers (net)	...	...	57.1	32.9	41.0	56.0
Iraq						
Current account balance	-9.0	10.0	101	800	2319	1428
Trade balance	93	154.5	635	1354	3926	3036
Investment income	-94	-129.6	....	.....	...	...
Transfers (net)	-3	0.3	2.0	-10.0	-235	-456
Jordan						
Current account balance	-1.9	2.6	-17.0	12.1	8.9	107.0
Trade balance	-37.5	-45.9	-124.0	-224.7	-277.0	-432.9
Investment income	...	...	17.1	15.4	....	...
Transfers (net)	26.9	29.5	108.7	199.3	270.7	474.7
Kuwait						
Current account balance	...	515.5	498.4	2844.6	6130.8	...
Trade balance(excl.oil)	...	-452.5	-599.8	-845.7	-1457.3	...
Oil sector	...	883.1	983.6	3655.6	8180.2	...
Investment income	...	210.6	287.8	476.6	699.5	...
Transfers (net)	...	-50.7	-114.5	-457.7	-1248.8	...
Lebanon						
Current account balance	...	-78.8	-15	-122	...	...
Trade balance	...	-349	-336	-668	...	...
Investment income	...	...	43	77	...	...
Transfers (net)	...	35.1	28	...	...	...
Oman						
Current account balance	...	...	17.1	-94.4	55.6	...
Trade balance(excl.oil)	...	...	-95.5	-232.2	-709.9	...
Oil sector	...	...	114.5	177.2	733.3	...
Investment income	...	...	0.5	1.2	5.2	...
Transfers (net)	...	...	-2.4	-40.6	-82.2	...

.../

Table 10 (contd.)

	1960	1965[a]	1970[b]	1973	1974	1975
Qatar						
Current account balance	...	...	107.2	260.7	1,612	...
Trade balance	...	...	194.2	465.2	1,802.1	...
Services and transfers	...	...	-87.1	-204.5	-188.8	...
Saudi Arabia						
Current account balance						
Trade balance	588	681	1,260	6,455	30,198	21,619
Investment income	-337	-417	-835	...	...	...
Transfers (net)	-32	-82	-264	-769	-1,365	-1,532
Syrian Arab Republic						
Current account balance	-19	25	-70	338	167	93
Trade balance	-100	-47	-136	-213	-256	-495
Transfers	30	20	10	401	460	706
United Arab Emirates						
Current account balance	...	...	...	546	4,502	3,861
Trade balance	...	...	...	1,261	5,277	4,847
Services and transfers	...	...	...	-715	-775	-986
Yemen						
Current account balance	...	...	-19.9	-14.5	0.5	...
Trade balance	...	...	-82.6	-146.2	-219.3	...
Investment income						
Transfers (net)	...	...	17.7	23.2	60.9	...

Source: ECWA, based on data compiled from national and international sources.

Note: The items mentioned under the current account balance do not cover all the components.

a/ The figures for Kuwait belong to 1966.

b/ The figures for Oman belong to 1971.

C. Development Strategies, Goals and Priorities

It is rather conjectural to speak of a long-term regional development strategy. As indicated earlier, many countries of the area do not have well-defined development strategies yet. With a few exceptions, these countries are pre-occupied with current and medium-term development issues, at the expense of long-term development strategies. Secondly, despite the many common characteristics among these countries, the economy of the Region remains fragmented. This phenomenon reflects, among other things, the low level of economic integration and coordination between the member countries. However, one can still make a few generalizations and identify some broad regional development strategies.

1. Accelerated growth

As part of the developing world, the ECWA region has emphasized economic development and growth. Given the influx of oil revenues in sizable quantities since 1973, the accent has been placed on rapid development and on accelerated growth. The scope, intensity and speed of the development efforts vary from one country to another, ranging from a very high level in the oil-rich countries to a modest rate in the countries with financial constraints. Industrialization is generally considered the quickest way to development and is highly stressed in development plans. Building, expanding or modernizing the physical infrastructure is another declared policy of most of the countries of the Region. Diversification of the economies is the third pillar of the development strategy among the countries of the Region. This diversification is emphasized in both

the oil economies and the non-oil economies, designed to widen the industrial base and reduce dependence on the production of one or a few major commodities. While new lines of industry are being established in some countries of the Region, their comparative advantage has to be studied carefully.

2. Regional coordination

Another major characteristic of the development strategy is the growing feeling among development planners that more effective economic coordination and integration among the countries of the Region is inevitable. Such economic cooperation has been a declared objective of all the countries for quite a long time. However, only recently have concrete and practical steps been taken towards this objective. The new framework for achieving greater economic cooperation involves important changes at different levels. For example, its scope has been extended beyond trade relations to include commodity and service sectors. A gradual and piece-meal approach, through the establishment of joint ventures, is being favoured to wide-ranging multilateral agreements which proved to be too difficult to implement. The existing institutional structure has been strengthened by the establishment of economic cooperation institutions, such as regional development funds and the Arab Monetary Fund. Furthermore, economic cooperation in the area is being experimented in different geographical sub-regions. In addition to arrangements at the regional level, sub-regional and bilateral economic cooperation agreements already exist and are growing among the Gulf member States of ECWA and between the countries of the Region's north-west. Finally, a further reflection of the economic cooperation strategy is the proposal to coordinate and harmonize national development plans by 1981.

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3. The oil strategy

Looking more closely at the development strategy in the oil-producing countries, a number of observations are offered below. Oil and oil revenues have been and are expected to continue to be the main driving force of these economies. As a major and net supplier of oil in the world market, this group of ECWA countries bears the important responsibility of maintaining, under normal circumstances, a steady flow of crude oil into the importing countries. Hence, the world oil market determines for the most part oil production levels. At the same time the Organization of Petroleum Exporting Countries (OPEC) has been the main authority on setting the price of oil. In other words, under the present world oil market structure, both oil production levels and prices are exogenously determined. This is not to say that the particular country does not have the final say in respect of its resources. Rather, it is a case where oil policies have developed to become internationally and collectively determined. Of course, and even under the present constraints of the oil market, individual oil countries still have some room for varying production levels and prices. Therefore, it can be assumed that the Region's oil production will continue to be responsive to world market conditions. Furthermore, one can safely assume that oil prices will at least be maintained at their present level in real terms, i.e., in terms of purchasing power and vis-a-vis other major classes of internationally traded commodities.

Given the nature of the oil market, as described above, the development strategy of the ECWA oil producers can better be examined. Within the limitations and constraints of the market structure, these

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oil-producers will attempt to maximize the benefits from oil over the longer time. In view of the low absorptive capacity of some of these producers, the maximization of these benefits may suggest reducing the level of oil production. This does not, however, seem to be possible at the present time. Hence, efforts have been concentrated not on the uncontrollable magnitude of oil revenues but on the proper utilization of these revenues. It turns out that the most reasonable development strategy is to maximize development spending. This is justified on the grounds that (a) development needs are numerous; and, (b) the accumulation of financial resources by holding foreign exchange balances has the inherent deficiency of loss of purchasing power due to devaluations and inflation. Thus, it is seen that these oil countries prepare development plans involving huge levels of expenditures which equal or even exceed oil revenues.

As indicated earlier, the central goals are economic diversification, industrialization and building the infrastructure, both human and physical. Diversification in the oil-economies is particularly important to reduce the dependence on oil and the vulnerability of the economy to exogenous factors. Industrialization is considered a top priority in most of the oil economies. The emphasis is placed on petrochemicals and oil related industries, as well as on capital-intensive industries and on those whose inputs are available in the Region.

4. Development of human resources

The development of human resources is another major goal of the development strategy in the ECWA region and, in particular, in the oil economies. Through education, training and improvement of health and other social conditions, it is aspired that not only the level of life and the standards of living will be raised, but that the development of a productive labour force will contribute to remove a serious constraint to development.

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5. Balanced development

An important feature of the development programmes in the Region is the emphasis on balanced development. This balance, for example, is sought in the structure of economy, in the geographical distribution of development projects and in industrial diversification. Furthermore, in the oil economies which have balance of payments surpluses, the balanced feature is reflected in the diversification of financial investment which is emphasized as a means to reducing the risk involved in investing abroad.

6. The strategies of oil versus non-oil countries

In the non-oil economies, the development strategy parallels, in many respects, that of the oil economies with differences relating to variation in the degree rather than the nature of development. In other respects, however, it does reflect different circumstances and problems. For one thing, the extent of development is constrained, among other things, by the availability of financial resources. The emphasis here is more on maximizing the growth rate of gross product rather than on maximizing spending. The strategy in these countries typically involves efforts to mobilize domestic and foreign financial resources.. Secondly, because of the agricultural potentials of this group of countries and of Iraq, the agricultural sector receives a greater attention in these countries. Developing more balanced agro-industrial economies is more feasible in these countries and development programmes therefore reflect this fact. Thirdly, improving the trade balance is another major goal of this group which aims at reducing the trade deficit, as in Jordan, or even achieving a surplus, as in the case of the Syrian Arab Republic. The strategy for reaching this goal

involves the reduction of imports through the promotion of import substitute industries, the expansion of exports, including invisibles, and the encouragement of the inflow of factor income from abroad. Fourthly, achieving full or high employment levels is another goal, in contrast to the oil economies whose problem is the opposite, namely, shortages of labour as will be discussed later.[1/] Finally, in a number of countries of the Region such as Iraq, the Syrian Arab Republic and Democratic Yemen, development strategies reflect the socialistic orientation of the economies. This entails, among other things, the determination of the desired share and role of the public sector in the economy.

1/ It should be pointed out that even in the non-oil economies shortages of skilled and technical labour do exist despite structural unemployment and unemployment or underemployment among the unskilled which the development plans address themselves to.

II. PROJECTIONS FOR SELECTED ECWA COUNTRIES: 1976-1990

In this chapter, future development trends of selected ECWA countries are assessed, using the capital-output ratio method. Implicit in the use of the capital-output ratio is the assumption that economic development is constrained by capital shortage. It would be, of course, too simplistic to assume that economic development is a matter of capital accumulation alone. Yet other important ingredients, such as entrepreneurship, skilled manpower and efficient public administration are seldom possible without some increase in the capital stock. Therefore, capital accumulation may well be regarded as the most strategic process which all other aspects of growth follow.

Although the capital-output ratio is usually calculated as the "average" capital-output ratio, what really matters is the incremental capital-output ratio (ICOR), which represents the value of the addition to capital (net investment) divided by the addition to income (net national income). The incremental ratio needs not, of course, equal the average ratio, and even though any change in the average ratio may be expected to be slow, the incremental ratio can vary a great deal more. However, we assume, for convenience, a fixed proportionality between capital and output, and hence the equality of the average and incremental ratios in this study.

The increase in output depends, ceteris paribus, not only on the volume of investment but also on the efficiency of its utilization. If the ICOR is viewed as an approximate measure of the efficiency of investment, then output is positively related to investment and inversely

to ICOR. In other words, higher levels of investment will generate higher levels of output for a given level of the ICOR and a lower ICOR will lead to higher output for a given volume of investment. In this study, gross investment figures are used to calculate the ICOR because of the obvious difficulty of estimating depreciation. The ICOR based on gross investment may introduce an upward bias in estimating the true ICOR, depending upon the magnitudes of parameters involved.1/

A. The investment ratio

The share of investment in GDP has shown an increasing trend in most ECWA countries over the last decade and a half and has accelerated in recent years. Table 11 gives the ratio of gross investment to G D P (at current and at constant prices) for a number of the ECWA countries for sub-periods. This ratio rose significantly in Iraq, Jordan, Oman, the Syrian Arab Republic and the two Yemens but remained stagnant in Lebanon. In the oil-economies, a closer look at the behaviour of the investment ratio is necessary. As indicated earlier, the recent drop in the ratio, as measured in current prices, is merely a result of valuation reflecting the sharp increases in oil prices, exports components and consequently GDP.

Measured in constant prices, the picture is different. The overall investment ratio, say, in Saudi Arabia, gained slightly between 1967 and 1975. The gain, however, is significantly higher in the non-oil sectors. Furthermore, the value of the investment ratio in the non-oil sector is about 50 per cent higher than the overall ratio that includes the oil sector.

1/ See the appendix for determining the extent of bias resulting from the use of gross investment figures rather than net figures.

Table 11. Gross investment as per cent of gross domestic product (1960-1975) at both current and constant (1970) prices for countries in the ECWA region

Country	Current		Constant		
	percentage share	period	percentage share		period
Democratic Yemen	3.74	1969-70	3.70		1969-70
	13.75	1971-73	15.40		1970-75
	22.72	1974-75	13.90		1969-75
Iraq a/	18.32	1960-65	14.87	(20.60)	1968-72
	15.06	1966-70	22.93	(28.91)	1972-74
	18.28	1971-73	18.51	(24.95)	1968-74
	27.98	1974-75			
Jordan	16.51	1960-65	18.25		1960-70
	19.84	1966-70	22.60		1970-75
	20.35	1971-73	20.01		1960-75
	27.53	1974-75			
Kuwait	13.77	1962-65	13.15		1966-72
	18.17	1966-70	12.36		1972-74
	8.37	1971-73	12.87		1966-72
	5.11	1974			
Lebanon	21.76	1960-65	21.27		1960-70
	19.94	1966-70	20.63		1970-75
	20.71	1971-73	21.18		1960-75
	21.74	1974			
Oman	13.70	1967-70	...		1960-70
	28.03	1971-73	...		1970-75
	30.62	1974	...		1960-75
Saudi Arabia a/	12.40	1963-65	17.45	(29.59)	1967-72
	18.58	1966-70	17.99	(34.37)	1972-75
	12.87	1971-73	18.20	(32.40)	1967-75
	9.40	1974-75			
Syrian Arab Republic	12.25	1960-65	14.72		1960-70
	14.28	1966-70	17.28		1970-75
	18.37	1971-73	16.24		1960-75
	25.63	1974-75			
Yemen	10.71	1969-70	10.24		1969-70
	18.54	1971-73	21.20		1970-75
	23.27	1974-75	19.45		1969-75

Source: ECWA, based on national and international sources.

a/ Figures in parentheses give the share of non-oil investment in non-oil GDP.

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Table 12. Distribution of gross fixed capital formation at current market prices, selected periods.

(average percentage shares)

	1960-62	1964-66	1968-70 [a]	1971-73	1974-75 [b]
Democratic Yemen					
Total fixed capital formation					
Private	...	...	40	11	6.5
Public	...	...	60	89	93.5
Iraq					
Total fixed capital formation					
Private	55	46	47.5	46.4	44
Public	45	54	52.5	53.6	56
Fixed capital formation in					
Construction of which:	72	65	59.22	59.33	56.20
Residential	(19)	(21)	(19)	(16.92)	(9.13)
Transport equipment	9	7	7.91	9.29	16.7
Machinery and equipment	19	28	32.87	31.38	27.1
Fixed capital formation in					
Agriculture	10	9	12.83	13.45	7.41
Mining	13	1	2.04	7.76	14.89
Manufacturing	12	20	24.52	23.25	25.64
Transport & communication	23	19	13.52	13.03	16.31
All others	42	51	47.09	42.51	35.75
Jordan					
Total fixed capital formation					
Private	68	59	57	59	56
Public	32	41	43	41	44
Fixed capital formation in					
Construction of which:	67	76	76	70.49	68.66
Residential	(31)	(30)	(30)	(29.79)	(26.62)
Transport equipment	9	9	8	15.55	17.52
Machinery and equipment	24	15	16	13.96	13.82
Kuwait					
Total fixed capital formation					
Private	...	60.5	58.9	37.0	35
Public	...	39.5	41.1	63.0	65
Lebanon					
Total fixed capital formation					
Private	...	83	81	84.5 [c]	...
Public	...	17	19	15.5 [c]	...
Oman					
Total fixed capital formation					
Private	...	...	...	64.7	82
Public	...	...	...	35.3	18

.../

Table 12 (contd.)

	1960-62	1964-66 d/	1968-70 a/	1971-73	1974-75 b/
Saudi Arabia					
Total fixed capital formation					
Private	...	...	51.7	60.7	54
Public	...	...	48.3	39.3	46
Fixed capital formation in					
Construction	...	...	77	78.40	78.99
Transport equipment	...	...	11	9.74	8.48
Machinery and equipment	...	...	12	11.86	12.53
Syrian Arab Republic					
Total fixed capital formation					
Private	...	62	36	40	32
Public	...	38	64	60	68
Fixed capital formation in					
Construction of which:	...	59	57.59	59.48	56.42
Residential	...	(24)	(25.20)	(22.95)	(19.32)
Transport equipment	...	10	11.53	7.88	14.66
Machinery and equipment	...	31	30.88	32.64	28.92
Fixed capital formation in					
Agriculture	...	17	15.92	20.92	12.58
Mining and manufacturing	...	22	25.81	32.87	43.1
Transport and communication	...	20	19.31	10.4	9.85
All others	...	41	38.45	35.81	34.47
Yemen					
Total fixed capital formation					
Private	...	...	42	34	32
Public	...	...	58	66	68
Fixed capital formation in					
Construction	...	...	95.97	82.34	66.59
Transport equipment					
Machinery and equipment	...	...	4.03	17.66	33.41
Fixed capital formation in					
Agriculture	...	...	3.53	12.39	14.72
Mining and manufacturing	...	...	4.03	4.39	6.33
Transport and communication	...	...	27.20	22.50	23.04
All others	...	...	65.24	60.72	50.92

Source: ECWA, based on national sources. The 1960-66 percentages are taken from: ECWA Mid-Term Review and Appraisal for the Second Development Decade, E/ECWA/13, 25 February 1975 (Mimeographed).

a/ For the two Yemens, 1969-1970.

b/ For Jordan, Kuwait and Oman, the percentages are for 1974 only.

c/ 1971-1972.

d/ For the Syrian Arab Republic, 1963-1965 should be substituted for 1964-1966.

B. Distribution of investment

Table 12 gives the distribution of gross fixed capital formation (at current market prices) by: (a) private and public sectors; (b) by production sectors; and, (c) by type of assets. There is a definite shift in the structure of investment in favour of the public sector in most of the countries in the Region. The biggest shift took place in Democratic Yemen where, in a span of seven years, the share of the private sector dropped from 40 per cent to about 6.5 per cent. The second biggest shift was in the Syrian Arab Republic, where, over a period of twelve years, the shift switched the position of the public sector with the private sector, lowering the share of the latter from 62 per cent to 32 per cent. Ranked by size and the speed of the shift, Democratic Yemen and the Syrian Arab Republic are followed by Kuwait, Yemen, Jordan and Iraq. In Lebanon, however, the private sector maintained its leading role, accounting for over four-fifths per cent of total investment. As to Oman and Saudi Arabia, the figures show a rising share of the private sector, and significantly in the former. However, for purposes of analyzing domestic productive capacity, this share is overstated as it includes investment in the oil sector, which is made either by the public sector or by the multinational oil companies. Furthermore, in Saudi Arabia, the private share also includes investment in public enterprises.

The strengthening of the economic role of the public sector, in general, and the increase of its share in investment, in particular, have economic and socio-political reasons. The economic reason is reflected in the nature and size of many development projects which are

beyond the capabilities of the private sector. This is particularly true in the oil countries where the new oil-generated wealth has prompted these countries to adopt vast development plans the execution of which necessitates not only the involvement of the public sector but also foreign participation. The Saudi experience is a case in point.

The socio-political considerations are pertinent to the cases of Iraq, the Syrian Arab Republic and Democratic Yemen where the expansion of the economic role of the state is promoted as a social and political objective. In these countries, the role of the public sector encompassed, not only new projects and investments, but also existing productive capacity, the most important of which reverted to the public sector through nationalization.

The distribution of gross fixed investment by industrial sectors is available for only three countries: Iraq, the Syrian Arab Republic and Yemen.[1/] In Iraq, the share of the agricultural sector dropped from 10 per cent to 7.4 per cent over the period under study, but fluctuated in between, reaching 13.5 per cent in the early 1970s. This pattern of change in the agricultural share is observed almost in an identical fashion in the Syrian Arab Republic, except that the share in the latter country is about 50 per cent higher than that in Iraq. In Yemen, the share of the agricultural sector has grown sharply, from 3.5 per cent in the late 1960s to about 15 per cent in the mid-1970s.

1/ See Table 12.

The share of the industrial sector has more than doubled in Iraq between the early 1960s and the mid-1970s, rising from 12 to 26 per cent. In the Syrian Arab Republic, this sector, combined with mining, rose from 16 per cent in the late 1960s to 43 per cent in 1974-75. In Yemen, manufacturing, mining, water and electricity represented but a small and increasing fraction of gross capital formation. The share went up to 6.3 per cent in 1974-75 from 4 per cent in 1968-70. Meanwhile, the share of transportation and communications, which varied between 10 and 28 per cent in the above three countries over the period 1960-75, does not seem to show any definite pattern. It fluctuated in Iraq, declined in the Syrian Arab Republic and showed no change in Yemen.1/

The category "all others" in the sectoral allocation which is a sizable 40 to 50 per cent and reaches 65 per cent in Yemen, includes such items as public administration and defence, wholesale and retail trade, personal and social services, etc.

As to the distribution of fixed capital formation by type of assets, it is available for Iraq, Jordan, Saudi Arabia, the Syrian Arab Republic and Yemen. The most conspicuous feature of this distribution is the preponderence in the relative size of construction. It ranged between 55 and 79 per cent and, in one case, reached an extremely high share of 96 per cent in Yemen in 1969-70. It was somewhat stable in the Syrian Arab Republic , at about 58 per cent, falling moderately from 68 per cent in 1960-62 to 56 per cent in 1974 in Jordan and also falling in Iraq from 72 to 56 per cent over the same period. It was similarly stable in Saudi Arabia, at about 78 per cent between 1968 and 1975. In Yemen,

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1/ The trend in Iraq is not conslusive. The seemingly declining share is probably the result of statistical variation rather than real decline.

it moderated between 1969 and 1975, dropping to 66.6 per cent.

Residential construction represents 20 to 40 per cent of total construction in Iraq, Jordan and the Syrian Arab Republic. Its share, which has shown a gradual decline, is highest in Jordan, followed by the Syrian Arab Republic and Iraq.

Transportation equipments account for 8 to 17 per cent of fixed investment. Their share is the highest in Jordan and the lowest in Saudi Arabia and has been rising except in the latter country. Finally, the share of machinery varies from over 30 per cent in Iraq and the Syrian Arab Republic to 12 per cent in Saudi Arabia and Yemen. It has been steadily rising in Iraq and Yemen, stable in Saudi Arabia and the Syrian Arab Republic, and declining in Jordan.[1/]

C. The efficiency of investment and the level of the ICOR

The efficiency of investment is influenced by a multiplicity of factors. Kuznets has concluded that it tends to fall with time and with the increase in per-capita income. That is to say, the ICOR rises with time and with per-capita income. Those factors which are known to exert pressure on the level of the ICOR, and seem to hold for the ECWA countries, are discussed below.

1/ The above description of the composition and allocation of fixed investment was based on incomplete data. Yet, a good knowledge of this allocation is necessary in assessing the efficiency of investment. The efficiency in utilizing capital stocks is no less important than their size as a factor contributing to economic progress. The efficient use of capital is of critical importance in countries where the availability of investment funds poses a development constraint.

First, the efficiency of investment is affected by the allocation of the latter to different types of assets. Ordinarily, construction, which accounts for roughly two-thirds of fixed investment in the ECWA region, has a lower output-generating potential in the short- and medium-term, relative to machinery and equipment. "Residential construction, which generally absorbs an important part of fixed investment, contributes directly very little to expanding the productive capacity of the economy. Investment in infrastructure tends to exert its influence on production over a long period of time, whereas its capital requirements are relatively large".1/ Investment efficiency is also influenced by the share of renewals and replacements in the total. The question here is the extent to which replacement provides an opportunity for technological advancement.

Secondly, the investment efficiency is significantly affected by the sectoral allocation of investment. Generally, the rate of return on investment would be probably higher in the industrial sector than in agriculture or services. These differential rates of return are partly explained by the fact that the productivity of investment in agriculture and service sectors depends on the availability of complementary resources to a greater extent than that in the industrial sector. For example, the return on agricultural investment tends to be sensitive to various external factors such as weather conditions and development of the transportation networks and storage facilities.

1/ Studies on Development Problems in Countries of Western Asia, 1974. ECWA, sales No. E.75.II.C.2, New York, 1975.

Thirdly, investment will be unproductive whenever excess capacity exists. Excess capacity is known to exist in some industries in many developing countries, including the countries of the ECWA region, due to insufficient or fluctuating demand, inadequate maintenance, production bottlenecks, or non-competitiveness of the particular industry.

Finally, the productivity of investment depends on other factors of production, including the availability of labour, suitability of technology, and many organizational and institutional factors which can enhance or inhibit productivity.[1/]

Recalling earlier discussions in respect of the Region's investment objectives, development strategy and constraints, the above analysis suggests that investment productivity is likely to decline in a number of ECWA countries, that is, the level of the ICOR is expected to rise.

Table 13 summarizes the historical growth trends for selected ECWA countries, showing the growth rate of GDP, the investment ratio, the savings ratio, the saving gap and capital output ratios calculated from both historical data and least squares fits. Whenever available, target growth rates are also given. Tables 14 and 15 give the results of regression analysis.

1/ Ibid.

Table 13. Growth rate of gross domestic product, investment ratio, savings ratio, ICOR and related indicators in selected countries of the ECWA region, a/ 1960-1975

(in constant 1970 prices)

(percentages)

Iraq	1960-70	1970-74	1960-74	Plan target
GDP growth rate	6.20	8.29	5.94	over 10.00
Investment ratio	17.51	16.90	17.32	...
Savings ratio	31.88	24.58	28.80	...
ICOR	2.82	2.04	2.92	...
	1968-72	1972-74	1968-74	Plan target
Non-oil GDP b/ growth rate	5.11	8.33	5.95	...
Non-oil investment ratio	20.60	28.01	24.95	...
Non-oil ICOR	4.03	...	4.13 (2.32)	...

Jordan c/	1960-70	1970-74	1960-74	Plan target
GDP growth rate	6.83	2.22	4.39	11.9
Investment ratio	18.25	21.04	19.23	32.35 d/
Savings ratio	-10.60	-8.99	-10.17	-3.59
Savings gap/GDP	28.85	30.03	29.40	35.94
Savings/investment	-58.08	-42.73	52.89	-11.10
ICOR	2.67	9.48	4.38 (7.45) d/	2.72

Kuwait	1960-70	1970-74	1960-74	Plan target
GDP growth rate	6.07	-0.46	5.26	6.5 e/
Non-oil GDP	...	...	...	10.8
Investment ratio	13.14	11.85	12.71	22.0 f/
Savings ratio	50.14	47.25	48.56	...
ICOR	2.16	...	2.42	3.6

Saudi Arabia	1960-70	1970-75	1967-75	1960-75	Plan target
GDP growth rate	8.56	14.13	12.62	10.15	10.2
Investment ratio	17.31	17.15	18.20	17.30	31.68 d//
ICOR	2.02	1.21	1.44	1.70	3.11
	1967-72	1972-75	1967-75		
Non-oil GDP growth rate	6.62	15.0	9.3		11.30
Non-oil investment ratio	29.59	34.37	32.40		106.51
Non-oil ICOR	4.47	2.29	3.48 (2.73)		9.43

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Table 13 (contd.)

Syrian Arab Republic	1960-70	1970-75	1960-75	Plan target
GDP growth rate	5.67	11.96	7.03	12.00
Investment ratio	14.72	17.78	16.24	29.42 e/
Savings ratio	11.20	8.35	9.74	23.04
Savings gap/GDP	3.52	9.43	6.50	6.38
Savings/investment	76.09	46.96	59.98	78.31
ICOR	2.60	1.49	2.31(1.94)	2.45

Yemen	1969/70-70/71	1970/71-75/76	1969/70-75/76	Plan target
GDP growth rate	20.60	6.45	7.76	8.20
Investment ratio	10.24	21.20	19.45	54.15
Savings ratio	-11.00	1.37	-0.67	10.11
Savings gap/GDP	21.24	19.83	20.12	44.04
Savings/Investment	-107.42	6.46	-3.44	18.67
ICOR	0.50	3.29	2.51(3.09)	6.60

Source: ECWA, based on national and international sources.

a/ GDP growth rate is the constant average annual growth rate r, from $Q_t = Q_0 (1+r)^t$; investment ratio is the ratio of gross domestic capital formation to GDP; savings ratio is the ratio of domestic savings to GDP; savings gap/GDP is the ratio of the difference between investment and savings to GDP; and the ICOR is calculated as

$$\text{ICOR} = \frac{\text{Average investment ratio}}{\text{GDP growth rate}}$$

b/ Non-oil GDP consists of all GDP sectors except crude petroleum and natural gas. Non-oil investment is the difference between total gross domestic capital formation and gross domestic capital formation in the oil sector.

c/ Historical trends relate to East and West Banks; plan targets relate to East Bank only.

d/ The ratio of public investment to GDP.

e/ This ratio is a weighted average of 5 per cent in the oil sector and 10.8 per cent in the non-oil sector.

f/ A maximum target ratio earmarked for 1980.

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Table 14. Estimated regression equations for the ICOR[a/]

Country	Period	Q_t	=	a (Sa)	+	b (Sb)	K_t	(R^2)
Democratic Yemen	1970-75	Q_t	=	67.33	+	0.3822	K_t	(0.9930
			=	(0.4336)		(0.01599)		
Jordan	1961-75	Q_t	=	165.31	+	0.1342	K_t	(0.5486)
				(9.9517)		(0.0329)		
Lebanon	1961-74	Q_t	=	2696.61	+	0.3017	K_t	(0.9579)
				(132.45)		(0.0183)		
Saudi Arabia	1967/68-1975/76	Q_t non-oil	=	5556.80	+	0.3665	K_t non-oil	(0.9761)
				(310.8945)		(0.0216)		
Syrian Arab Republic	1961-75	Q_t	=	3372.08	+	0.5156	K_t	(0.9185)
				(297.99)		(0.0427)		
Yemen	1970/71-1975/76	Q_t	=	1732.77	+	0.3236	K_t	(0.9241)
				(53.3226)		(0.0464)		

Source: ECWA, based on national and international sources.

a/ Numbers in parentheses represent the standard error, R^2 is the coefficient of determination and K_t is the cumulative gross investment;

i.e., $K_t = \sum_{i=0}^{t-I} Ii$. The least-squares estimate of the ICOR is obtained

by taking the inverse of the regression coefficient, i.e., (1/b).

.../...

Table 15. Estimated consumption functions a/

Country	Period	C_t = a (Sa)	+ b (Sb) Q_t	(R^2)
Democratic Yemen	1969-75	C_t = 37.32 (24.304)	+ 0.7735 (0.3262) Q_t	(0.5293)
Jordan	1960-75	C_t = 15.77 (8.2313)	+ 1.0215 (0.0420) Q_t	(0.9769)
Lebanon	1960-74	C_t = 375.6 (62.97)	+ 0.8019 (0.01) Q_t	(0.9962)
Syrian Arab Republic.	1960-73	C_t = 95.13 (157.88)	+ 0.8736 (0.026) Q_t	(0.9878)
Yemen	1969/70-1975/76	C_t = 890.71 (87.5026)	+ 0.5499 (0.0444) Q_t	(0.9685)

Source: ECWA, based on national and international sources.

a/ Numbers in parenthesis represent the standard error, R^2 is the coefficient of determination and C stands for total consumption. The direct estimation of saving functions is highly desirable, but due to the virtual non-existence of savings statistics, consumption functions are estimated. Needless to say, the disposable income instead of GDP should be used in estimating the consumption and savings functions when such data are available.

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D. Country projections

1. Iraq

As shown in Table 13, the historical growth rates in the non-oil sector are almost identical to the overall rate for the economy,[1] but the respective investment ratio and ICOR are higher for the former than for the latter. As to the target rates under the current development plan, little information is available. It is understood, however, that the GDP growth rate will be at least 10 per cent. It is also believed that the future investment ratios will be much higher than the past ratios.[2]

Because of the structural characteristics of the Iraqi economy, which is much more diversified than other oil-economies in the Region, and the relatively well-developed infrastructure, the future level of the ICOR is expected to remain within its historical range.

Table 16-B gives three alternative projections for the non-oil sector on the basis of three different levels of ICOR: 3.5, 4.0 and 4.5. The investment ratio is assumed at between 36 and 42 per cent.[3] The first alternative is the most optimistic variant. It assumes both high investment ratio (42 per cent) and relatively high level of efficiency of investment (an ICOR of 3.5). This variant probably corresponds to what Iraqi development planners have in mind, as they aim at a GDP growth rate of 12 per cent.

1/ The discussion here distinguishes between oil and non-oil sectors and follows the pattern set forth in the analysis of the Saudi Arabian economy.

2/ The historical ratio is about 25 per cent in the non-oil sector and 17 per cent in the total economy. Meanwhile, the plan calls for development spending of ID 10 billion.

3/ An investment ratio of this magnitude is not unreasonable for Iraq which has embarked on a large investment programme, particularly in the non-oil sector, designed to be financed by a high rate of domestic savings.

Table 16-A. Iraq: Gross domestic fixed capital formation (I), cumulative gross domestic fixed capital formation (K), and Gross Domestic Product (Q), 1968-1975

(millions of Iraqi Dinars at constant 1970 prices)

Year	I non-oil	K non-oil	Q non-oil	I oil	Q oil
1968	147.8	-	761.3	1.3	356.5
1969	160.9	147.8	803.1	1.2	360.8
1970	177.5	308.7	826.8	7.6	370.5
1971	179.3	486.2	854.3	10.2	402.4
1972	198.3	665.5	947.4	12.9	350.1
1973	247.0	377.6	952.6	29.4	481.3
1974	426.3	624.6	1,114.5	75.0	466.2
1975	...	1,050.9	1,329.0	...	541.9

Source: Ministry of Planning, Central Statistical Organization: Response to ECWA's Questionnaire, dated 12 March 1977; and international sources.

Note: Non-oil GDP consists of all GDP originating in all sectors except mining and quarrying. Non-oil investment is gross domestic fixed capital formation in all sectors except mining and quarrying.

$K_t = \sum_{i=0}^{i=t-1}$ Ii; is taken to be the cumulative lagged investment.

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Table 16-B. Iraq: Alternative projections of non-oil gross domestic product and non-oil investment to 1990

(millions of Iraqi Dinars at constant 1970 prices)

	Average annual growth rate 1976-90 (per cent)	1976	1980	1985	1990
Alternative I					
ICOR = 3.5					
Investment ratio		42.0	42.0	42.0	42.0
GDP	12.0	1488.5	2342.2	4127.7	7274.4
Domestic investment	12.0	625.2	983.7	1733.6	3055.2
Alternative II					
ICOR = 4.5					
Investment ratio		36.0	36.0	36.0	36.0
GDP	8.0	1435.3	1952.7	2869.2	4215.8
Domestic investment	8.0	516.7	703.0	1032.9	1517.7
Alternative III					
ICOR = 4					
Investment ratio		40.0	40.0	40.0	40.0
GDP	10.0	1461.9	2140.4	3447.1	5551.6
Domestic investment	10.0	584.8	856.2	1378.8	2220.6

Source: See Table 16-A.

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The second alternative puts the ICOR at 4.5 and the investment ratio at 36 per cent. This alternative is considered to be the most conservative projection which yields a growth rate of 8 per cent. Barring unforeseen events, this rate should be easily achieved. The third alternative is simply a compromise of the first two alternatives with the ICOR, of 4, the investment ratio of 40 per cent and with a resultant growth rate of 10 per cent. The alternative is quite likely to materialize, assuming no drastic changes in the economic conditions.

The oil sector is assumed to grow at a rate of about 9.2 per cent to year 1985.1/

2. Jordan

Table 13 shows the historical levels of the ICOR in Jordan between 1960 and 1974. The Table also contains the implied ICOR of the current development plan of the East Bank. The exceptionally low growth rate of GDP in the first half of the seventies suggests a very high level of the ICOR. The level of the latter in the 1960s is more representative of the Jordanian experience although it is probably lower than what can be expected in the future. Our regression estimated ICOR for the period 1960-74 of about 7.5 is somewhat high, because of the unusually low growth of the early seventies, and is not, therefore, suitable for projections.

1/ For further details see the section on Saudi Arabia below. The resulting GDP-oil will (in constant 1970 prices) be:

1976 ID 591.8 million
1980 ID 841.8 million
1985 ID 1,307.8 million

The level of the ICOR in the target period is assumed to be moderate and in the range of three to four. This assumption has taken into consideration the investment strategy of the country as outlined in the current development plan. Ordinarily, one would expect a gradual rise in the level of the ICOR for a country like Jordan which has embarked on strengthening the physical infrastructure and on building an industrial base. Obvi usly, there are many factors at work which influence the level of the ICOR upward or downward. It is particularly notable that on one hand, the emphasis on commodity producing industry should help moderate the level of the ICOR and on the other hand, the emphasis on capital intensive industries in the face of labour shortages should drive the ICOR upward. It is difficult to predict the net effect of these two opposing forces but it would not be too far-fetched to assume that the ICOR during the projection period will probably be above the plan's implied level of 2.72 but will not exceed 4.0.

Table 17-B offers four alternative projections on the basis of assumed levels of the ICOR. The first alternative, with an assumed ICOR of 3 and an investment ratio equal or slightly below the historical ratio, yields a growth rate of GDP of 6 per cent. This alternative implies a higher level of self-reliance in financing investment requiring proportionately less foreign financing. The estimated ratio of the saving gap to GDP drops from 26.5 to 23 in the projection period, compared with the historical ratio of 29 to 30 per cent. Hence, this alternative may be viewed as an attainable low variant whose realization is quite feasible even if no improvement in economic performance over historical achievements is expected.

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Table 17-A. Jordan: Gross domestic capital formation (I), cumulative gross domestic capital formation (K), gross domestic product (Q), consumption (C) and domestic savings (S_D) 1960-1975

(millions of Jordanian Dinars at constant 1970 prices)

Year	I	K	Q	C	S_D
1960	20.1	-	115.2	137.0	-21.8
1961	21.8	20.1	138.7	152.7	-14.0
1962	24.3	41.9	142.5	159.8	-17.3
1963	23.3	66.2	150.3	177.2	-26.9
1964	29.9	89.5	176.6	187.1	-10.5
1965	32.7	119.4	196.9	210.4	-13.5
1966	31.3	152.1	202.4	226.4	-24.0
1967	29.7	183.4	223.6	238.8	-15.2
1968	43.5	213.1	215.2	247.6	-32.4
1969	69.0	256.6	234.7	254.6	-19.9
1970	40.4	325.6	209.9	227.0	-17.1
1971	46.1	366.0	210.5	228.2	-17.7
1972	45.7	412.1	221.5	236.5	-15.0
1973	41.2	457.8	216.3	240.9	-24.6
1974	55.9	499.0	231.4	255.0	-23.6
1975	65.2	554.9	213.3	238.8	-25.5

Source: ECWA, based on international sources. Constant values for 1975 were obtained by using the cost of living index as deflator.

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Table 17-B. Jordan: Alternative projections of gross domestic product, investment and savings to year 1990

(millions of Jordanian Dinars at constant 1970 prices)

	Average annual growth rate (per cent) 1976-1990	1976	1980	1985	1990
ICOR = 3					
Investment ratio	...	18.0	18.0	18.0	18.0
GDP	6.00	247.5	312.5	418.2	559.6
Domestic investment	6.00	44.6	56.3	75.3	100.7
Domestic savings	-	-21.1	-22.5	-24.8	-27.8
Savings gap	4.91	65.7	78.8	100.1	128.5
(Savings/Investment)	-	-47.3	-40.0	-32.9	-27.6
ICOR = 3					
Investment ratio	...	36.0	36.0	36.0	36.0
GDP	12.00	276.3	434.8	766.3	1,350.5
Domestic investment	12.00	99.5	156.5	275.9	486.2
Domestic savings	-	-21.7	25.1	-32.2	-44.8
Savings gap	11.14	121.2	181.6	308.1	531.0
(Savings/Investment)	-	-21.8	-16.0	-11.7	-9.2
ICOR = 3.5					
Investment ratio	...	28.0	28.0	28.0	28.0
GDP	8.00	257.0	349.6	513.7	754.7
Domestic investment	8.00	72.0	97.9	143.8	211.3
Domestic savings	-	-21.3	-23.3	-26.8	-32.0
Savings gap	7.09	93.3	121.2	170.6	243.3
(Savings/investment)	-	-29.6	-23.8	-18.6	-13.2
ICOR = 3.5(76-80) = 4.0(81-90)					
Investment ratio	...	28.0	28.0	32.0	32.0
GDP	8.00	257.0	349.6	513.7	754.7
Domestic investment	9.24	72.0	97.9	164.4	241.5
Domestic savings	-	-21.3	-23.3	-26.8	-32.0
Savings gap	8.16	93.3	121.2	191.2	273.5
(Savings/investment)	-	-29.6	-23.8	-16.3	-13.3

Source: See Table 17-A.

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The second alternative, which corresponds to the target growth rate of the development plan of 12 per cent, may be viewed as a high variant whose achievement implies a high investment ratio and saving gap. The required investment ratio would be at least 36 per cent, assuming a moderate ICOR level of only 3. Similarly, the saving gap, as a percentage of GDP, could reach over 43 per cent, compared with its historical level of less than 30 per cent.

The third and fourth alternatives are considered as more likely variants, as they are based on a moderate and gradual increase of the investment ratio and as they allow for higher levels of the ICOR,. The relative size of the saving gap, while it exceeds its historical level by only 15 per cent, is about the same level as suggested by the development plan. The resulting GDP growth rate of 8 per cent is somewhat high but is not unattainable. It is below the Plan's growth rate of 12 per cent and within the historical range of 6 to 10 per cent under the normal economic conditions of the 1960s.

3. Kuwait

As an oil economy it would have been more useful to analyze the non-oil sector separately, but since it has not been possible to break down the investment series into oil and non-oil components, the discussion below relates to the economy as a whole.

Table 13 shows that the economy grew between 1960 and 1974 at a relatively moderate rate of 5.3 per cent. This rate, however, underestimates the country's economic potential since it reflects deliberate oil production cut-backs in the first half of the 1970s during which

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a negative growth rate was recorded. Therefore, the historical ICOR of 2.16 realized during the 1960s is more indicative of the country's experience than the 1960-74 ICOR of 2.42.

The target growth rate under the current development plan is given at 6.5 per cent which is composed of 5 per cent for the oil sector and 10.8 per cent for the non-oil sector. According to the planning authority, the expected ICOR will be 3.6.

The Kuwaiti economy is relatively more developed in comparison with other oil-economies in the Region. The construction boom has relatively subsided after it peaked in the 1960s. The country's absorptive capacity is much more limited than its neighbours. Furthermore, the Kuwaiti Government is under no pressure to force an accelerated rate of growth. Finally, since its infrastructure is fairly well-established, both the investment ratio and the level of the ICOR are not likely to exceed moderate levels.

On the basis of the above discussion, Table 18-B shows three alternative projections of the whole economy. These alternatives are all feasible since they are within the desired growth level and assume moderate and likely ICOR levels. The second alternative, which implies a rate of investment higher than what Kuwaiti planning authorities may consider desirable, is an exception.

The first alternative corresponds to historical ICOR of 2.5 and the target growth rate of 6.5 per cent. The required investment ratio of over 16 per cent falls within its target level of the development plan. The third alternative probably ranks first in terms of its

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Table 18-A. Kuwait: Gross domestic capital formation (I), cumulative gross domestic capital formation (K) and gross domestic product (Q), 1966-1974

(millions of Kuwaiti Dinars at constant 1970 prices)

Year	I	K	Q	Q(oil)[a/]
1966	106.4	-	783.3	467.8
1967	128.9	106.4	788.0	428.3
1968	118.4	235.3	873.6	486.9
1969	129.1	353.7	896.8	505.1
1970	110.0	482.8	962.0	652.0
1971	114.2	592.8	1,060.4	710.1
1972	142.6	707.0	1,097.2	657.5
1973	131.5	849.6	1,029.0	705.3
1974	106.5	981.1	954.1	...

Source: ECWA, based on national and international sources.

a/ Consists of the mining and quarrying sector

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Table 18-B. Kuwait: Alternative projections of gross domestic product and investment to year 1990

(millions of Kuwaiti Dinars at constant 1970 prices)

	Average annual growth rate (per cent) 1976 - 1990	1976	1980	1985	1990
ICOR = 2.5					
Investment ratio		16.25	16.25	16.25	16.25
GDP	6.5	1,243.0	1,599.1	2,190.8	3,001.6
Investment	6.5	202.0	259.9	356.0	487.8
ICOR = 3.5					
Investment ratio		28.0	28.0	28.0	28.0
GDP	8.0	1,296.2	1,763.5	2,591.2	3,807.3
Investment	8.0	362.9	493.8	725.6	1,066.0
ICOR = 3.5					
Investment ratio		22.75	22.75	22.75	22.75
GDP	6.5	1,243.0	1,599.1	2,190.8	3,001.6
Investment	6.5	282.8	363.8	498.4	682.9

Source See Table 18-A.

Note : The base year for projections of GDP is 1973.

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likelihood, since, it allows for an expected increase in the ICOR to 3.5, and uses the target growth rate and results in an investment ratio which is also expected to be reached by the 1980s.

4. Saudi Arabia

Projections for the oil economies, including Saudi Arabia, are attempted for the non-oil sector only. The crude oil sector (including natural gas) is assumed to grow at an exogenously determined rate. The breakdown of the time series data on GDP and investment into oil and non-oil components is, therefore, required for the non-oil sector projections.

Table 19-A gives a breakdown of the two series for the period 1967 to 1976. When investment in the oil sector is regressed on total investment it is readily seen that the share of the oil sector approaches a maximum of 35.7 per cent.[1/] The share of the non-oil sector, therefore, is 64.3 per cent at a minimum. Applying this percentage share to total investment (SR 318.4 billion) under the current development plan gives an investment ratio of 106.5 per cent.[2/] This ratio plus the implied ICOR are shown in Table 13. The Table also gives historical and planned GDP growth rates, investment ratios and the ICOR for both the total economy and the non-oil sector.

Table 13 shows that both the investment ratio and ICOR are higher for the non-oil sector than for the total economy. Similarly, the plan target values of these two indicators are considerably higher than their historical values. Specifically, the ICOR level for the economy was

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1/ The regression equation is: $I_{oil} = -463 + 0.35\ I_{oil + non\text{-}oil}$, $R^2 = 0.99$

2/ This ratio is found by dividing non-oil investment by the cumulative sum of the non-oil GDP which is calculated using the plan growth rate of 11.3 per cent for this sector.

1.44 for the period 1967-75. The corresponding non-oil ICOR was 3.5 (2.7 when estimated by linear regression). The relatively low ICOR for the economy is explained by the fact that, in the production of crude oil, once the extraction facilities are installed, the expansion of output involves only minimal incremental costs.

The alternative projections are given below for the non-oil sector only since the growth of the oil sector is assumed to be exogenously determined. Furthermore, as the economy is expected to be unconstrained by the availability of external finances throughout the planning period, the discussion of savings is irrelevant.

Table 19-B gives three alternative patterns of growth of the non-oil sector. The first alternative assumes an ICOR of 5 which is higher than the historical ICOR but is considered moderate when the composition of planned investment is taken into account. In fact, this ICOR level should be viewed as a minimum attainable level. When GDP is taken to grow at the plan target rate of 11.3 per cent, the investment ratio becomes 56.5 per cent. While this ratio is about 66 per cent greater than the historical ratio, it is far below the planned investment ratio of 107 per cent. It is clear that, with an ICOR of 5, the planned growth rate is inconsistent with the planned investment ratio. To make these two variables consistent with each other, an ICOR of 9.43 will have to be assumed.

The second alternative sets the ICOR value at 6 and the planned investment ratio at 107 per cent. This combination yields a GDP growth rate of almost 18 per cent, which is perhaps too unrealistically high to attain.

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Table 19-A. Saudi Arabia: Gross domestic capital formation (I), cumulative gross domestic capital formation (K), gross domestic product (Q), 1967-1976

(millions of Saudi Rials at constant 1970 prices)

Year	$I_{non-oil}$	$K_{non-oil}$	$Q_{non-oil}$	I_{oil}	Q_{oil}
1967	1,969.7	-	6,378.5	520.3	6,957.4
1968	2,237.0	1,969.7	6,918.7	429.1	7,616.2
1969	2,349.7	4,206.7	7,527.6	351.2	8,100.4
1970	2,269.6	6,556.4	7,805.4	327.4	9,347.2
1971	2,271.8	8,826.0	8,304.9	557.2	11,277.4
1972	2,461.9	11,097.8	8,889.7	604.3	13,731.4
1973	2,985.1	13,559.7	10,198.6	1,666.0	16,934.4
1974	4,564.0	16,544.8	11,671.1	1,909.5	19,575.3
1975	5,220.2	21,108.8	13,558.0	1,762.8	18,676.4
1976		26,329.0	15,527.0		19,601.0

Source: ECWA, based on national sources.

Note: Fiscal years ending June 30.

Non-oil GDP consists of all GDP sectors except crude oil and natural gas.

Non-oil investment is the difference between total gross domestic capital formation and gross domestic capital formation in the oil sector.

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Table 19-B. Saudi Arabia: Alternative projections of non-oil gross domestic product and non-oil investment to year 1990 a/

(millions of Saudi Riyals at constant 1970 prices)

	Average annual growth rate (per cent) 1976-1990	1976	1980	1985	1990
ICOR = 5.0					
Investment ratio		56.5	56.5	56.5	56.5
GDP	11.3	15,090.1	23,156.4	39,550.1	67,549.6
Domestic investment	11.3	8,525.9	13,083.4	22,345.8	38,165.5
ICOR = 6.0					
Investment ratio		107.0	107.0	107.0	107.0
GDP	17.8	15,971.3	30,755.4	69,766.7	158,261.3
Domestic investment	17.8	17,089.3	32,908.3	74,650.4	169,339.6
ICOR = 6.0					
Investment ratio		90.0	90.0	90.0	90.0
GDP	15.0	15,591.7	27,270.0	54,849.7	110,322.3
Domestic investment	15.0	14,032.5	24,543.0	49,364.7	99,290.1

Source: See table 19-A.

a/ Base year of projections is 1975 (non-oil GDP = SR 13558.0 million)

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The third alternative retains the assumption of an ICOR of 6 but reduces the investment ratio to 90 per cent. The implied GDP growth rate in this case is 15 per cent. While this rate is still high, it is considered as attainable. In fact, it was realized in the period 1972-75. Likewise, although the investment ratio is quite high it is by no means beyond the realm of possibility in view of the immense financial resources and the growing absorptive capacity of the economy.

A variant of the third alternative is also postulated which permits a decline of the investment ratio to 72 per cent in 1985 and 60 per cent in 1990. This assumption may be justified on the ground that, on one hand, the investment boom cannot be expected to continue that far into the future and, on the other hand, the present rate of investment in the capital-intensive infrastructure will have to decelerate as the latter approaches its desired level. Assuming no change in the level of the ICOR, growth rates of 12 and 10 per cent would be realized in 1985 and 1990, respectively. If the ICOR declined, as might very well happen when the many major projects become operative, the growth rate could remain at the 15 per cent level.

As to the oil sector, it can be projected on the basis of anticipated crude oil production. According to one estimation, output will grow from 7.1 million barrels per day in 1975 to 16 million barrels and 18 million barrels per day in 1980 and 1985, respectively.[1/] Assuming that production will grow gradually, the implied averages annual rate of growth is 9.53 per cent. This rate is significantly lower than the corresponding rate in the non-oil sector. However,

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1/ Oil and Gas Journal, 25 April 1977.

it is consistent with the country's strategy to diversify the economy. Historically, the movement of the oil sector component in the GDP is highly correlated with crude oil production.[1/] Therefore, it is assumed that the GDP originating in the oil sector will grow at the same rate of 9.53 per cent. Applying this rate to the base year yields the projected values of the sector at constant 1970 prices.[2/]

5. Syrian Arab Republic

The historical level of ICOR in the Syrian Arab Republic has been estimated to be in the neighbourhood of 2.5 over the past 15 years. Alternative estimations yield figures ranging between 2.0 and 2.8. When extreme values are eliminated, alternative calculations give the ICOR level of 2.6 which is very close to the historical level in the 1960s. The regression results provide an ICOR of 2.8 in the 1960s, 1.27 in the first half of the 1970s, and 1.94 for the two sub-periods combined. However, the regression results based on data pertaining to the first half of the 1970s which reflects unusual circumstances cannot be taken as representative. For a variety of reasons (such as the coming on stream of oil production, improved business outlook resulting from the economic liberalization policies, hightened business confidence after the 1973 Arab-Israeli war, and the recovery from sluggish economic performance in the late sixties), the country had undergone a rapid

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1/ The coefficient of correlation is 0.989.

2/ These projected values imply no change in the price of oil in real terms. If, however, it is believed that the real price will grow relative to other prices, then the stipulated price increase can simply be applied to the sectors' projected real term values which are:

1976	SR 20,456 million
1980	SR 29,440 million
1985	SR 46,407 million

economic growth in this period, attaining a dazzling growth rate of 19.3 per cent in 1974 and 25.6 in 1975. Meanwhile, the ratio of investment to GDP grew, but much more moderately than the economy; hence, a very low ICOR.

The level of the ICOR is assumed to rise to 3.0 by the end of this decade. Until that time, it should remain more or less at about 2.5 or increase only slightly. Anticipated moderation in the rise of the ICOR is based on the fact that the current development plan focuses on the manufacturing sector and that during this period many projects which had been started in the previous plan period are expected to be completed. Furthermore, the emphasis on commodity producing industries should help to keep the level of the ICOR from rising at a faster rate.

Table 20-A presents historical data and Table 20-B summarizes three different projections of the economy on the basis of alternative ICORs and target growth rates.

The first alternative assumes a low ICOR of only 1.94.[1/] With an ICOR this low, the achievement of the target growth rate of 12 per cent is feasible. The implied investment ratio of over 23 per cent should pose no special problems. The implication is that a very efficient utilization of investment could lead to a rather high rate of growth of 12 per cent. However, this would entail heavy reliance on foreign resources to complement domestic savings in financing the required investment.

1/ This is a least-squares estimate of the ICOR without eliminating extreme values.

Table 20-A. Syrian Arab Republic: gross domestic capital formation (I), cumulative domestic capital formation (K), gross domestic product (Q), and domestic savings (S_D), 1960 - 1975

(millions of Syrian Pounds at constant 1970 prices)

Year	I	K	Q	S_D
1960	416.3	-	3,417.0	122.2
1961	529.1	416.3	3,715.0	314.1
1962	721.6	945.4	4,564.3	646.1
1963	659.6	1,667.0	4,560.8	602.7
1964	664.6	2,326.6	4,982.1	616.3
1965	574.1	2,991.2	5,089.6	556.1
1966	698.5	3,565.3	4,950.3	430.7
1967	722.4	4,263.8	5,216.0	575.9
1968	898.3	4,986.2	5,439.2	717.8
1969	1,170.9	5,884.5	6,304.6	817.3
1970	990.0	7,055.4	6,433.0	723.0
1971	1,170.9	8,045.4	7,100.5	497.8
1972	1,271.4	9,216.3	7,784.3	958.5
1973	1,218.7	10,487.7	7,937.4	884.9
1974	1,569.2	11,706.4	9,465.9	223.8
1975	2,779.0	13,275.6	11,890.1	939.8

Source: ECWA, based on national and international sources.

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Table 20-B. Syrian Arab Republic: alternative projections of gross domestic product, investment and savings to year 1990

(millions of Syrian Pounds at constant 1970 prices)

	Average annual growth rate (per cent) 1976-1990	1976	1980	1985	1990
ICOR = 1.94					
Investment ratio		23.28	23.28	23.28	23.28
GDP	12.0	13,316.9	20,954.4	36,928.8	65,081.2
Domestic investment	12.0	3,100.2	4,878.2	8,597.0	15,150.9
Domestic savings	12.4	1,587.5	2,552.3	4,570.2	8,126.5
Savings gap	11.6	1,512.7	2,325.9	4,026.8	7,024.4
(Savings/investment)		51.2	52.3	53.2	53.6
ICOR = 2.5					
Investment ratio		30.0	30.0	30.0	30.0
GDP	12.0	13,316.9	20,954.4	36,928.8	65,081.2
Domestic investment	12.0	3,995.1	6,286.3	11,878.6	19,524.4
Domestic savings	12.4	1,587.5	2,552.3	4,570.2	8,126.5
Savings gap	11.7	2,407.6	3,734.0	6,508.4	11,397.9
(Savings/investment)		39.7	40.6	41.3	41.6
ICOR: 1976-80 = 2.5 1981-90 = 3.0					
Investment ratio		20.0	20.0	24.0	24.0
GDP	8.0	12,841.3	17,470.5	25,669.8	37,717.4
Domestic investment	9.7	2,568.3	3,494.1	6,160.8	9,052.2
Domestic savings	8.3	1,527.4	2,112.2	3,148.0	4,669.9
Savings gap	11.5	1,040.9	1,381.9	3,012.8	4,382.3
(Savings/investment)		59.5	60.5	51.1	51.6

Source: See Table 20-A.

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A more realistic ICOR of 2.5 makes the attainment of the target growth rate unlikely as it implies an investment ratio of 30 per cent.[1/] Such an investment ratio is extremely high for the Syrian Arab Republic, compared with the historical ratio of only 16.2 per cent over the last 15 years and 18 per cent over the first half of the 1970s. Foreign financing requirements under this alternative are even higher than under the first.

A more reasonable forecast is given in the third alternative. With an ICOR of 2.5 rising to 3.0 and raising moderately the investment ratio from 20 to 24 per cent, a growth rate of 8 per cent is attainable. Furthermore, foreign financing is, on the average, lower than in the first two alternatives and is appreciably below the historical level.

6. Yemen

The pattern of historical GDP growth rates, investment ratio, saving gap and the ICOR in Yemen have been shown in Table 13. The corresponding rates under the current development plan were also shown. Despite the short period of time examined[2/] the historical rates, including the size of the ICOR, appear to be reasonable and consistent with general economic conditions which have prevailed in the first half of the seventies.

1/ It should be noted that the plan assumes an investment ratio (at current prices) of over 29 per cent in the base and target years.

2/ Due to the unavailability of data, the period covered for this country, which is the shortest among the selected ECWA countries, extends back only to 1969/70.

As shown in Table 13, a target GDP growth rate of 8.2 per cent, which is moderately higher than the historical rate, was planned with an extremely high investment ratio, yielding an implied ICOR of 6.6.[1/] The doubling of the ICOR can be reasonably expected in the light of the concentration of the investment programme on building the country's physical infrastructure almost from scratch.

Table 21-B gives three alternative projections for Yemen. The first alternative is a projection based on the development plan; it over-estimates the investment ratio and consequently the ICOR. The projected ratio is about three times higher than its historical level. Because of a low level of domestic savings, the ratio of the saving gap to GDP increases to more than twice its historical level. However, this saving gap is expected to be closed easily by the inflow of rapidly rising overseas earnings by Yemeni expatriates mainly in Saudi Arabia, together with other capital inflows. It is with the expectation of continuous inflows of this external financing that the Plan's investment ratio was projected at 54 per cent.[2/]

The second alternative assumes a more moderate ICOR level (4.5) and investment ratio (35 per cent). This combination yields a GDP growth rate of 7.8 per cent, which is about equal to the rate achieved over the period 1969-1976. The corresponding saving gap is relatively small and gradually diminishes to a mere 2.3 per cent in 1990. Given

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1/ The expectation of rising and even doubling of the size of the ICOR was confirmed by planning officials during a visit to the country.

2/ Of planned public investment of YR 8 billion, 72 per cent is to be financed from foreign sources, three-quarters of which is already committed.

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the recent pattern of net factor income (NFI) from abroad and capital inflows, this variant is rather conservative, since it yields a sizable surplus of financing capacity over investment requirements. Yet, this may well happen because of a limited absorptive capacity of the economy to absorb sizable capital inflows. It should be also noted that ICOR and investment ratio assumed under this alternative take into account the prospect of decreasing NFI, as domestic economic opportunities improve, and the repayment of foreign debt.

The third variant presents a middle of the road position between the other two variants. An ICOR of 5 and an investment ratio of 40 per cent yield a GDP growth rate of 8 per cent. The implied saving gap is significant and decreases at a slower rate than that implied by the second alternative.

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Table 21-A. Yemen: gross domestic capital formation (I), cumulative gross domestic capital formation (K), gross domestic product (Q), consumption (C), and domestic savings (S_D), 1969/70-1975/76 a/

(millions of Yemeni Riyals at constant 1970/71 prices)

Year	I	K	Q	C	S_D
1969/70	68.06	-	1,447.82	1,706.13	-258.31
1970/71	259.00	68.06	1,746.00	1,839.00	- 93.00
1971/72	305.42	327.06	1,832.68	1,905.04	- 72.36
1972/73	411.18	632.48	1,994.32	1,992.88	1.44
1973/74	413.98	1,043.66	1,964.43	1,938.73	25.70
1974/75	591.75	1,457.64	2,295.38	2,113.18	182.20
1975/76	604.88	2,049.39	2,369.09	2,245.91	123.18

Source: ECWA, based on national and international sources.

a/ Fiscal years ending on June 30.

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Table 21-B. Yemen: alternative projections of gross domestic product, investment and savings to year 1990

(millions of Yemeni Riyals at constant 1970 prices)

	Average annual growth rate (per cent) 1976-1990	1976	1980	1985	1990
ICOR = 6.6					
Investment ratio		54.1	54.1	54.1	54.1
GDP	8.2	2,563.4	3,513.3	5,210.2	7,726.6
Domestic investment	8.2	1,387.3	1,901.4	2,818.7	4,180.1
Domestic savings	17.4	263.1	690.6	1,454.4	2,587.1
Savings gap	2.5	1,124.2	1,210.8	1,364.3	1,593.0
Savings gap/GDP		43.9	34.5	26.2	20.6
Savings/investment		19.0	36.3	51.6	61.9
ICOR = 4.5					
Investment ratio		35.1	35.1	35.1	35.1
GDP	7.8	2,553.9	3,448.9	5,020.8	7,309.1
Domestic investment	7.8	896.4	1,210.6	1,762.3	2,565.5
Domestic savings	16.9	258.8	661.7	1,369.2	2,399.2
Savings gap	-9.0	637.6	548.9	393.1	166.3
Savings gap/GDP		25.0	15.9	7.8	2.3
Savings/investment		28.9	54.7	77.7	93.5
ICOR = 5					
Investment ratio		40.0	40.0	40.0	40.0
GDP	8.0	2,558.6	3,481.0	5,114.7	7,515.2
Domestic investment	8.0	1,023.4	1,392.4	2,045.9	3,006.1
Domestic savings	17.2	260.9	676.1	1,411.5	2,491.9
Savings gap	-2.8	762.5	716.3	634.4	514.2
Savings gap/GDP		29.8	20.6	12.4	6.8
Savings/investment		25.5	48.6	69.0	82.9

Source : See Table 21-A.

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APPENDIX

A Methodological Note

The objectives of the present study are to describe the overall performance of selected economies of the ECWA region for the past 7 to 15 years, to identify long-term trends of some major economic variables based on the historical trend, and to make aggregate growth projections, using a simple aggregate model. Projections based on a simple aggregate model should not be construed as predictions of future events but as a planning exercise conducted as a check on the consistency between a given set of targets and constraints. In case of the oil-producing countries of the Region, the exercise is carried out for the non-oil sector of the economy whenever the appropriate breakdown of statistical data is available. The oil sector is treated altogether exogenous and its growth is projected on the basis of assumed rates of increase in production and prices.

The model used for the planning exercise in this study is a variant of the well-known Harrod-Domar model. Despite its severe limitations, numerous variants of the Harrod-Domar model have been used almost everywhere as the most basic tools of plan formulation. The Harrod-Domar model postulates the most simplifying assumption about technology, that the ratio of output to capital is constant:

$$K(t) = kQ(t) \qquad (1)$$

where $K(t)$ is capital stock at time t, and $Q(t)$ is output (GDP or a similar concept), and k is the capital-output ratio. The above formulation assumes the constant average (and marginal) productivity of capital, full utilization of productive capacity and the capital formation as the only source of output growth. Non-capital factors

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of production including labour, investments in human capital, technological changes, and others, are assumed to be highly correlated to changes in output and capital stock during the projection period to the same degree as they were during the reference period. If we further assume that a constant share of output is saved, i.e.,

$$S(t) = sQ(t) \tag{2}$$

where $S(t)$ is saving at time t, then we have a saving-investment equality

$$I(t) = K(t+1) - K(t) + \delta K(t) = sQ(t) \tag{3}$$

where $I(t)$ is gross investment and δ is the fraction of capital stock depreciated each period.

Now let us define the growth rate of output, γ as:

$$\gamma = [\, Q(t+1) - Q(t) \,]/Q(t) = \Delta Q(t)/Q(t). \tag{4}$$

Because of (1), capital and output must grow at the same rate

$$\Delta K/K = (k \Delta Q)/K = (k \Delta Q/Q)/(K/Q) = \Delta Q/Q \tag{5}$$

substituting (3) into (5) will yield the basic Harrod-Domar equation, namely:

$$\gamma = \frac{sQ - \delta K}{K} = \frac{s}{k} - \delta \tag{6}$$

Alternatively the Harrod-Domar equation can be written as:

$$\gamma = (i_g/k) - \delta \tag{7}$$

where i_g is the ratio of gross investment to output. From (7) we can readily obtain:

$$k = \frac{i_g - \delta}{\gamma} = \frac{i_n}{\gamma} + \frac{i_g}{\gamma} = k_g \tag{8}$$

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where i_n is the ratio of net investment to output, i_g represents the gross investment-output ratio and k_g is the gross ICOR, i.e., the gross investment-output ratio divided by the output growth rate. Thus the gross ICOR, k_g, is always greater than the net ICOR, k, for . 0.

Basically, equation (7) is used for our various planning exercises. For instance, eq. (7) permits growth forecasts based on historical data about the investment-output ratio and the capital-output ratio. Alternatively, various growth rates can be projected corresponding to different combinations of k, i_g , and and compared with planned target growth rates for a consistency check on the plan formulation. Needless to say, given the values of a target growth rate and a capital-output ratio, we can also readily estimate the gross investment or savings requirements, savings gap, the external finance needs and so on.

Finally, equation (7) can be further modified in the following useful form:

$$(9) \qquad n + p = (s/k) - \qquad = (i_g/k) - \delta$$

where n is the expected rate of growth of the labour force and p is the rate of growth of productivity. Given information on population growth and productivity trends, we can readily determine whether or not the planned target growth rate is sufficient to absorb expected employment growth.

In addition to a simple ratio method, regression analysis was also applied to the time series of cumulative gross fixed investments

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and GDP to estimate the ICOR's and to the time series data on consumption to estimate the consumption functions for selected member countries. Regression results are shown in tables 14 and 15. Because of a relatively short period of time series observations, which are too short to reveal slowly changing trends, and relatively poor quality of statistical information, the regression results should be interpreted with extreme caution. They may represent, at best, rough approximations or order of magnitude to the true values.

For the purposes of this study, the most simplifying form of production function is assumed, namely:

$$(10) \qquad Q = (1/k)K$$

where k is the capital-output ratio. Further, this capital stock at time t is assumed to be:

$$(11) \qquad K(t) = K(0) + (1 - \delta) \int_0^t I(\tau)\,d\tau$$

where K(0) is the initial capital stock and I is the total gross domestic fixed capital formation. From equations (10) and (11), output equation can be expressed as a function of the cumulative gross fixed capital formation,

$$(12) \qquad Q(t) = (1/k)\, K(0) + (1/k)\,(1-\delta) \int_0^t I(\tau)\,d\tau$$

Discretizing equation (12) will yield

$$(13) \qquad Q(t) = (1/k)\, K(0) + (1/k)\,(1-\delta) \sum_{i=0}^{t-1} Ii$$

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The constant term of the equation $(1/k)K(0)$ and the slope $k(1-\delta)$ can be estimated by fitting least squares; if one further assigns a numerical value either to the initial capital stock, K(o) or to the depreciation rate, δ, the constant capital output ratio, can be readily calculated.

For consumption, an aggregate consumption function of the following form is postulated

$$(14) \qquad C = \alpha + \beta Q$$

Where C is aggregate consumption and Q is GDP. The parameters of the equation are then estimated by ordinary least squares.

Data collection and constraints

The data base includes the years from 1960 to 1975 or a sub-period of 1960-75. Parts of the limitations imposed in the choice of the regression equations are due to severe data limitations of various types. The data collection for the projections at their present and extended stage consists of:

- national accounts series of GNP, GDP and expenditure on GDP, i.e., total consumption, gross domestic capital formation, changes in stocks, imports and exports of goods and services;
- imports and exports by major SITC categories; and,
- import and export unit prices.

The major problems faced in the process of compiling and processing the data can be summarized as follows:

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- No national accounts statistics are available for Qatar or the United Arab Emirates. Incomplete national accounts estimates for short periods are available for Bahrain and Oman. Other countries of the ECWA region have national accounts series covering periods varying between 7 and 15 years.

- Even when sufficiently long statistical series are available, inconsistencies exist between different sources of information and further inconsistencies arise from the fact that countries like Iraq and Kuwait shifted from the old SNA to the new SNA without converting the whole series into the new SNA.

- Constant prices series of GDP, by type of expenditure, which are required in the projection exercise in order to eliminate inflationary effects, are not available from national sources in Iraq, Jordan, Lebanon, Kuwait and Saudi Arabia. This problem was overcome by the supply of constant price series of GDP and its components from United Nations sources. 1/

- The appropriate breakdown of the data is not always available. Fixed capital formation is not separately available in some countries but is combined with changes in stocks to constitute gross domestic capital formation. In order to adopt a unified approach, capital stock in year (t) was taken in all countries, except in Iraq, to be the cumulative lagged capital formation and not the cumulative lagged fixed investment, as originally intended. In doing so, it is implicitly assumed that the effect of changes in stocks is null over time. As for the oil countries, gross domestic capital formation in the oil sector is not available separately for Kuwait; projections of the non-oil sector of the economy have been carried out only for Saudi Arabia and Iraq.

1/ The method used in the computation of the deflators was not specified.

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