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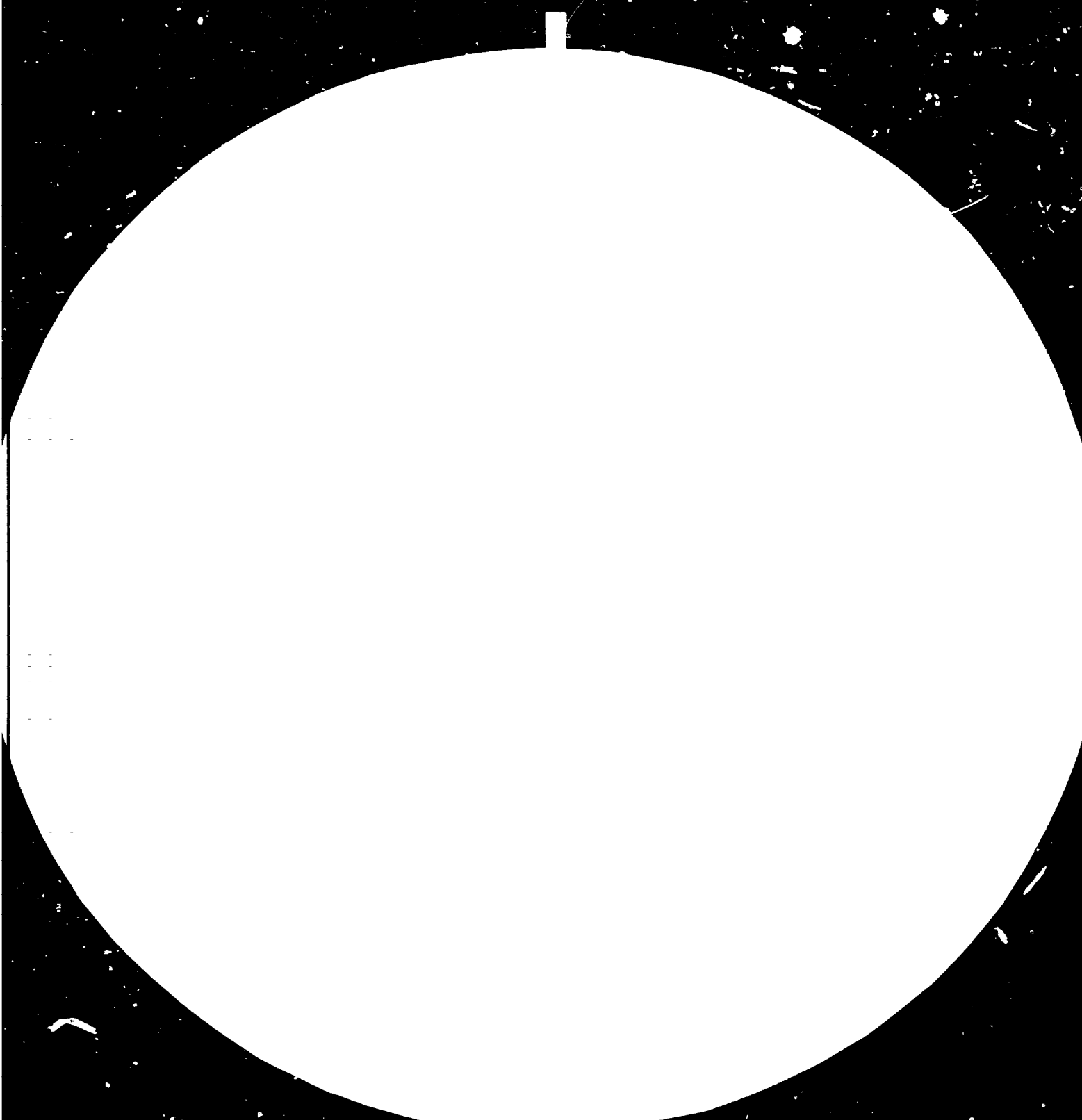

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LONG-TERM PROSPECTS OF INDUSTRIAL DEVELOPMENT IN KUWAIT

prepared by
the Secretariat of UNIDO
in co-operation with ECWA

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Chapter I

An Overview of the Kuwaiti Economy

General Characteristics and History of Kuwait

The origin of Kuwait may be traced back to a clan of the Anaizz tribe from the northern part of Central Arabia that settled this area in the early part of the 16th century.[1/] In 1765 a Danish traveller visited Kuwait, and described it as inhabited by some 10,000 people owning 800 vessels engaged in trading, fishing and pearling. At that time Kuwait was part of the province of Al Hasa and under the dominance of the Bani Khaled tribe.[2/]

The Sheikhdom of Kuwait appears to have emerged as early as the 1750's when the Wahabis of Saudi Arabia and the Bani Khaled tribe were locked in a prolonged struggle. The first Sheikh was a member of the Sabah family which since then has provided the ruling dynasty.

Kuwait, which had a long history as a caravan junction and as a trade post on the East-West trade routes, did not emerge as the main port in the Gulf until after the occupation of Basra by the Persians and Basra's devastating plague in the 1770's.

Prior to the oil era, Kuwait's main importance came from her role in the rivalry between the "Great Powers". In the late 1980's Sheikh Mubarak exploited this rivalry.[3/] A crucial element in the struggle for world power at the time was the German goal to establish a railway between Germany and the Gulf through Europe to counter Britain's control of the sea route to the east via the Mediterranean and the Suez Canal. The railway plan depended on the support of the Turks who dominated the area. Mubarak who had taken power from his half brothers who were pro Turks, moved very quickly

to consolidate his position by inviting Britain to sign an agreement by which Kuwait became a British Protectorate in 1899. Under the terms of the agreement Kuwait "agreed not to lease, dispose of, or give concessions to any individual power of land in the Sheikhdom for any purpose without British permission, nor to receive agents or representatives of foreign governments without British agreement"[4/]. This agreement gave Britain effective control over Kuwait's resources and foreign policy[5/].

In June 1961 Kuwait terminated the 1899 agreement and became an independent country and a full fledged member of the League of Arab States. Kuwait now covers an area of less than 18,000 square kilometers. The terrrain is mainly desert with little or no rainfall.[6/] Lack of fresh water is a basic constraint and the only usable water is trapped in subsurface sedimentary beds and is generally brackish to very salty and, therefore, unsuitable for drinking or irrigation.

The population of Kuwait is slightly over 1 million, with expatriates accounting for more than 53 per cent of the total. There are four major cities in Kuwait. The largest is Kuwait, the capital of the Sheikhdom, with a population of 325,000.

The single most important resource in Kuwait is oil, which was first exploited commercially in 1946. Kuwait accounts now for almost 2 per cent of total world production and over 10 per cent of world oil reserves. The development and growth of Kuwait since 1946 mirror the exploitation of oil. Oil revenues, which amounted to less than $1 milllion in 1946, increased to more than $9.8 billion in 1976. Within this short span of time, oil has transformed the economy of Kuwait from a simple network of pearling, fishing and

seafaring activities with very low per capita income into an economy whose standard of living is second to none.[7/] The dependence on oil, however, is rather excessive and in some respects still growing. In 1975/1976, oil revenues were 98 per cent of total government revenues, 93 per cent of total export receipts and over 70 per cent of Gross Domestic Product (GDP). In 1965/1966 oil revenues were only 92.3 per cent of total government revenues, 63.1 per cent of GDP but contributed 97.2 per cent of export receipts.

Gross Domestic Product and the level of economic activity

It is an understatement to say that the Kuwaiti economy is dominated by the oil sector, and that developments in this sector generally set the pace for overall economic and financial activity.

The share of the oil sector in GDP has varied widely, especially in the 1970's, as oil prices and output changed drastically. In 1967/68 it reached its lowest value (54.6 per cent) on account of the Arab-Israeli war and reached its highest value (77.2 per cent) in 1974/75 following the significant increases in the price of oil in 1974. The first significant increase in the oil share occurred in 1970/71 as a result of the combined effect of higher production and prices. In the following two years the oil impact spread to other sectors in the economy causing oil's share in GDP to fall from 67.8 per cent in 1970/1971 to 60.0 per cent in 1972/1973. The events in October 1973 and the continued increases in 1974 raised the contribution of oil to GDP to the peak value of 77.2 per cent in 1974/1975. In 1975/1976 oil production was reduced and so was its share in GDP.

National accounts statistics for Kuwait have been collected since 1964/1965 by the Planning Board. These accounts are expressed in current prices due to the lack of information on prices prior to 1972. While the Ministries of Finance and Oil provide reliable data on the contribution of oil, the coverage of the other sectors is perhaps less adequate and these data should, therefore, be interpreted with caution. The time series data on national income and product presented in the tables are not fully comparable, particularly between the two periods 1965/1966 - 1969/1970 and 1970/1971 - 1977/1978.

The Kuwaiti economy stagnated in the late 1960s. It started to recover in 1970/1971 and gained momentum in 1971/1972 registering a growth rate of 40.1 per cent. It slowed down a bit in 1972/1973 showing a growth rate of 16.0 per cent, but an upswing came with the rise in oil prices in 1973 and 1974. GNP grew by over 35.1 per cent in 1973/1974 and by 63.4 per cent in 1974/1975, declined a bit in 1975/1976, and continued to expand in 1976/1977 and 1977/1978 but not at the rates of the early seventies.

The slackening in the growth rate of the economy in the late 1960s was mainly the result of cutbacks in government domestic expenditures occasioned by the slowdown of government oil receipts and a growing commitment of aid to Arab states affected by the 1967 Arab-Isreali war. The upswing in the 1970s, on the other hand, is directly related to higher oil revenues.

There are a number of interesting features displayed by the structure of production in Kuwait. First, the dominance of oil masks important developments in other sectors of the economy. The

non-oil GDP in 1975/76 was higher than the total GDP in 1970/71, and was more than three times its value in that year, growing at an annual compound rate of more than 26.1 per cent over this period. Manufacturing GDP more than quadrupled between 1971/72 and 1975/76 growing at the high annual rate of 40.6 per cent. GDP in electricity and water, and transport and communications almost doubled within the same period. The highest rate of growth was achieved by the finance, insurance and real estate sector which grew from KD 151 million in 1975/1976, which translates into an annual rate of growth of 63.8 per cent. Only construction GDP fell in value during this period. This is mainly due to the fact that the construction boom of the sixties came to a halt by the end of the decade. In the seventies the sector remained dormant despite the presence of excess demand for housing following the fourfold rise in the price of oil. Finally, it is worth noting that the total value added of the non-oil sectors represents a larger proportion of GNP than of GDP. This was especially true before the nationalization of the oil companies in 1975.

Second, net factor payments from abroad account for a difference between GNP and GDP that amounted to more than 20 per cent of GDP during the period 1968/69 - 1972/73. However, this difference has significantly fallen in the years since 1972/73 on account of the rise in Kuwait's share in oil export proceeds. In fact, Kuwait has had positive net factor payments from abroad since 1975/76, following the government nationalization of the Kuwait Oil Company. Thus GNP is now higher than GDP and this difference is likely to rise with the increase in net factor receipts from abroad.

Third, there is a discernible decline in the relative size of disposable income in GNP. In 1968/69 disposable income represented 55 per cent of GNP, in 1974/75 it fell to 33 per cent of GNP. This points out to an increasing portion of GNP being retained by the public sector. The reasons for this may very well be the desire of the government to limit aggregate demand given the limited absorptive capacity of the economy.

Fourth, agriculture, which often contributes the largest part of GNP in most developing countries, has the lowest share of GDP in Kuwait. In fact, from 1965/66 to 1976/77 its share was never above one per cent of the total GDP.

Fifth, expressing GDP in current prices is not necessarily a drawback, because the standard methods of calculating real domestic product, i.e., deflating each component by its specific price index, generally underestimate the Kuwaiti purchasing power, since the contributions of crude and refined petroleum to the real growth of the economy will be understated. Since a large portion of petroleum products are exported, a rise in their prices, other things being equal, increases the purchasing power of exports in terms of imports. This is what is generally referred to as the terms of trade effect, which is defined as the difference between the value of exports deflated by an imports price index and the value of imports deflated by an exports price index. An adjustment of this sort to Kuwait's national product will lead to significant increases in real product over what would result from a simple direct deflation by each component price index.[8/]

Investment and Savings

Kuwait's savings rate is one of the highest in the world. In 1965/1966 savings were 50 per cent of GNP and reached a peak of 61 per cent in 1975/1976. This is mainly the result of a very high per capita income and a very high government saving which accounted for about 75 per cent of total savings in 1975/1976. Domestic utilization of these savings, i.e., the gross domestic capital formation is, however, very low reflecting inadequate domestic absorptive capacity and the attraction of higher yielding foreign assets. Over the period 1971/1972 - 1972/1973 only 24 per cent of savings were utilized domestically.

Gross domestic capital formation has increased in absolute terms from KD 109 million in 1970/1971 to KD 682 million in 1977/1978. This represents an annual rate of growth of 30 per cent which is higher than the corresponding GDP rate of growth of 21.9 per cent. Thus the gross fixed capital formation share of GDP increased from 11.3 per cent in 1970/1971 to 17.7 per cent in 1977/1978. The major part of gross fixed capital formation (GFCF) is undertaken by the public sector, which has also increased its share over time. In 1970/1971 the public share of total GFCF was about 58 per cent and in 1977/1978 it reached 76 per cent.

An interesting but serious observation on capital formation in Kuwait is that net fixed capital formation is rather low due to a very high rate of depreciation resulting from poor maintenance procedures and a harsh climate. In fact, in 1970/1971 net fixed capital formation was nil; it was negative in 1972/1973 and 1974/1975 but only slightly positive, (KD 58 million) in 1975/1976.

Moreover, public GFCF has been concentrated mainly in infrastrucutre, including electric power generation and desalinization facilities, whereas private GFCF has been mainly in the area of construction.

Population and Employment

Population in Kuwait was estimated at 994,837 in 1975. Of these 451,069 were female and 543,768 were male. Of the total population, 522,749 or 53 per cent were non-Kuwaitis and 472,088 or 47 per cent were Kuwaitis. The population has increased by more than 6 per cent per year since 1970 (one of the highest rates of population growth in the world). The proportion of non-Kuwaitis to Kuwaitis remained constant between 1970 and 1975 which implies a rate of growth of 6.2 per cent for Kuwaitis and a rate of growth of 6.0 per cent for non-Kuwaitis. This does not seem possible unless several non-Kuwaitis were naturalized - which appears to be the case during the said period.

The labour force participation rate, the proportion of the population in the labour force, was as low as 30.6 per cent in 1975. The Kuwaiti participation rate was 19.5 per cent and this was on account of a very low female participation rate of 3.2 per cent. The corresponding male participation rate for the same period was 35.7 per cent. The non-Kuwaitis' male participation rate was 60.2 per cent, and the non-Kuwaitis' female participation rate was 12.9 per cent.

Over the period 1965-1975, the Kuwaiti labour force participation rate of males decreased from 37.2 per cent to 35.7 per cent, whereas the females' participation rate increased from 1.0 per cent to 3.2 per cent. The non-Kuwaitis' male participation rate for

the same period declined from 76.9 per cen to 60.2 per cent, whereas the female participation rate increased from 10.4 per cent to 12.9 per cent.

The proportion of people not in the labour force is high indeed, especially that of Kuwaitis. This has sparked some concern among economists in regards to attitudes of Kuwaitis towards work and participation in production.

Of the total of 304,582 people in the labour force in 1975, 6,167 were unemployed. Of those employed in 1975, 55.9 per cent were in the services sector, less than 1.6 per cent in the oil sector, 8.2 per cent in manufacturing, 10.8 per cent in construction, 2.4 per cent in electricity, gas and water, 13.3 per cent in wholesale and retail trade, 5.3 per cent in transportation and communications and less than 2.5 per cent in agriculture, fishing and hunting. The commodity producing sector show a share of 25.5 per cent of total employment.

The corresponding percentages in 1965 were as follows, services 48.5 per cent, oil 3.9 per cent, manufacturing 7.6 per cent, construction 16.0 per cent, electicity, gas and water 3.9 per cent, wholesale and retail trade 12.9 per cent, transportation and communications 5.6 per cent, and agriculutre 1.6 per cent. The structure of employment in Kuwait appears to have undergone little change between 1965 and 1975 except in construction, whose share has declined due to the contraction of the costruction boom of the sixties, and in oil whose share has also declined. On the other hand, the percentage of employment in the services sector increased slightly, while the percentages in agriculture, manufacturing and

trade also increased but to a lesser extent.

The majority of the Kuwaiti nationals in the labour force are on the government payroll; the remainder are mostly in commerce. The percentage of Kuwaitis employed in the services and trade sectors in 1975 exceeded 80 per cent of the total Kuwaiti employment. The non-Kuwaitis are predominant in the petroleum industry, manufacturing and professional services.

Although unemployment is not a problem in Kuwait, being lower than 2 per cent of the labour force, there is a serious problem of disguised unemployment particularly in public administration.[9/] Efforts are being made to rectify this situation as is manifested through training programmes designed to increase the productivity and efficency of public services. The level of skills and skill formation procedures and institutions are not adequate in Kuwait despite the efforts mentioned above. This question will be addressed in detail in another section.

Wages and Prices

Wages and salaries in the 1960s have generally remained stable in Kuwait. They began to rise in 1972 when the government raised its wage payments retroactively to 1st April of 1971. The increases ranged from 20 to 30 per cent and were primariliy designed to defray part of the rise in the cost of living specially that of housing. Government wages are generally lower than those in the private sector and Kuwaitis receive higher wages than non-Kuwaitis performing similar jobs. For instance, in 1976 Kuwaiti drivers in the public industrial sector received an average KD 205 per month

while non-Kuwaiti drivers received KD 115 per month; Kuwaiti mechanics received KD 225 per month while non-Kuwaiti mechanics received KD 125 per month, etc.[10/]

The Planning Board now publishes two price indices in Kuwait: a wholesale price index and a cost of living price index. The two series were first published in 1972. Between 1972 and 1978 the cost of living index shows an increase of 67.6 per cent. The sharpest increase was experienced in food and beverages followed by durable goods, and the slowest increase was in the cost of transport and communications. Housing costs increased by very little until 1977 and then increased by more than 40 per cent in one year. The small increases in the cost of housing prior to 1978 were due to the fact that rent was not allowed to increase except for new tenants or after five years of occupancy; new housing rents were controlled.

The prices of imported goods rose by more than the corresponding increase in the prices of similar goods on the domestic market. Food and live animal prices nearly doubled between 1969 and 1975. Mineral fuel and lubricant prices more than doubled, as did the prices of animal fats and vegetable oils and fats. Import prices of manufactured goods increased by 60 per cent and over the same period import prices of machinery and transport equipment increased by almost 55 per cent.

To lessen the impact of foreign inflation on the domestic market the Kuwaiti government introduced two measures. First, a new company was set by the government as of 1 January, 1979 to import and distribute goods subject to fluctuations in supply. The programme was designed to provide ample supplies at reasonable prices of such staples as sugar and rice. As a further measure to

insulate the domestic economy from the vagaries of imported inflation, Kuwait decided in March 1975 to maintain the exchange value of the Dinar in terms of weighted average of a basket of currencies of Kuwait's major trading partners, thus allowing the Dinar to appreciate vis-a-vis the United States dollar.

Public Finance

The public sector financial system consists of the Government's general budget, the annexed budgets, the independent budgets and the extrabudgetary accounts. The latter includes the special account, the reserve account, the general account and the retirement fund. The annexed budgets are those of the National Assembly and the municipality of the City of Kuwait.[11/] The independent budgets are those of the Kuwait Central Bank, the Kuwait Fund for Arab Economic Development, the Credit and Savings Bank, the Kuwait Airways, the Kuwait Investment Board, the Shuaiba Industrial Organization, the Kuwait University and the General Organization for Southern Arabia and the Arab States in the Gulf.[12/] There are a number of complicated procedures that preclude consolidating these budgets and simplifying the pattern that governs their interrelationships. In recent years there have been some improvement in budgetary procedures, however, the overall fiscal system remains complex and fragmented in the absence of a comprehensive system encompassing the whole myriad of budgets and financial operations of the public sector.[13/]

The financial operations of the Kuwati government reflect primarily the large and rising oil revenues. The government budget is characterized by large budgetary surpluses despite sharp increases

in domestic and foreign expenditures. These surpluses have been mainly invested abroad due to the limited domestic absorptive capacity. The initial sharp increase in the budget surplus occurred in 1971-1972 when oil receipts were increased following the Tehran agreement. The surplus continued to increase throughout the period between 1972 and 1978 as revenues increased at a much faster rate than expenditures. Whereas the budget surplus was as low as KD 77.1 million in 1971/1972, it reached KD 2,192.3 milion in 1976/1977. This represents an annual rate of growth of 95.3 per cent, almost doubling each year.

Between 1971/1972 and 1976/1977 government revenues increased by almost eight-fold. Investment income apparently has also increased by roughly the same amount. Other receipts (taxation and levies, etc.) almost quadrupled. The dominance of oil revenue cannot be overstated; it represents an exceptionally high percentage of total revenues exceeding 90 per cent for most of the years between 1961 and 1978. However, this high ratio is expected to decrease as foreign investments made possible by further surpluses will obviously have accelerating effects. Non-oil revenues were rising as a percentage of total revenues. In 1971/1972 they accounted for 16.5 per cent while in 1973/1974 they were almost 20 per cent of the total revenues Sharp increases of the oil price in 1974/1975 reduced this percentage to 9.5 per cent but it continued to rise thereafter reaching 13.7 per cent in 1976/1977. The rise in the base on which the percentages were calculated increased rather sharply in 1974/1975, a fact which masks the growing absolute importance of non-oil revenues.

Government expenditures are divided into two categories: domestic expenditures and foreign expenditures. Domestic expenditures consist of current expenditures, development expenditures and land purchases. These expenditures are part of the general budget and are directly financed from the reserve account. Foreign expenditures are financed, in part, through the general budget.

Total government expenditures have increased steadily between 1970/1971 and 1976/1977 except for the year 1975/1976. Between 1971/1972 and 1974/1975 total government expenditures almost tripled. In 1975/1976 they declined rather substantially from KD 1,085.2 million in 1974/1975 to KD 779.9 million. The sharp increases in government expenditures in 1971/1972 and 1972/1973 were mostly on account of the large wage and salary increases granted by the government to its employees.

Current government expenditures in the 1970s varied between 70 per cent and 80 per cent of total expenditures, whereas development expenditures varied between 13 per cent and 30 per cent of total expenditures during the same period.[14/] The ratio of current to total expenditures was falling, whereas that of development total expenditures was rising.

Land purchases fluctuated rather markedly over the period. The programme was implemented in the 1960s as a means of affecting a better distribution of wealth. Its impact has been generally considered as inadequate. First, it distributes incomes towards those who already own property and, therefore, are in less need for it than others. Secondly, it was felt that those who received it

often invested abroad denying the local economy of any invigorating effects. Thirdly, some felt that the practice tended to strengthen dependence on the government and may have frustrated local initiative and entrepreneurial ability. The programme has been revived in 1974 on a "seemingly more rational and systematic basis" and represented about 10 per cent of total government expenditures.[15/]

Government expenditures on education far exceed any other current expenditure item accounting for almost half the total expenditures in the early 1970s. In absolute amounts expenditures on education have increased from KD 10.4 million in 1960/1963 to KD 59.6 million in 1974/1975. In per capita terms this represented an expenditure of KD 59.3 per person in 1974/1975.

Public Health expenditures represent the second largest expenditure item out of current expenditure. Its share had been in the neighbourhood of around 25 per cent in the 1970s. This represents a decline from its share of 30 per cent of total current expenditures in the early 1960s. In absolute amounts expenditures on public health have almost tripled between 1964/1965 and 1974/1975, from KD 10.6 million to KD 28.1 million.

Expenditures on information and social welfare were almost equal, each representing about 7.5 per cent of the total expenditure. Housing showed a declining share from about 8 per cent in 1962/1963 to less than 4 per cent in 1974/1975.

Foreign expenditures of the central government of Kuwait varied between 10 and 20 per cent of total expenditures in the late sixties and early 1970s. Transfers under the Khartoum Agreement of 1967,

the two Rabat agreements of 1969/1970 and 1974/1975 and aid to Gulf States and Southern Arabia account for the largest portion of these expenditures and are included in the general budget. In 1976, Kuwait foreign aid amounted to US $1,347.9 million, or about 11.5 per cent of that year's GNP. This is one of the highest ratios in the world. Foreign expenditures and transfers consistently increased between the years 1973 and 1976 and total commitments for these years totalled $8.23 billion, of which 40 per cent was provided on a concessional basis. Even between 1969/1970 and 1973/1974 Kuwaiti government transfers abroad were about 33 per cent higher than the government's development expenditures.

The External Sector

The external sector of Kuwait reflects its basic historical role as a trading post as well as the overwhelming dominance of the oil sector. A significant portion of Kuwait's imports are re-exported representing part of the entrepôt services on which much of Kuwait's past has depended. The export of indigenously produced goods are but a small fraction of total exports where oil accounts for over 93 per cent of total exports. Non-oil exports including re-exports have increased rapidly although their performance is overshadowed by the sharp increases in oil export proceeds. Using 1954 as a base, non-oil exports were eight times higher by 1971 and 54 times higher in 1978. Of the non-oil exports net of re-exports, chemicals account for the largest share reaching 79 per cent in 1975. However, this share dropped to as low as 55.2 per cent in 1976 due to the oil conservation policy and greater use at home.

Manufactured goods account for the second largest share, which averaged 12 per cent over 1971-1975. In 1976 the share of manufactured goods increased to 28.4 per cent.

The pattern of exports of the non-oil sector is not totally independent of oil given that the largest share is attributable to chemicals. It is also true that the manufactured goods exported are primarily processed oil products such as plastics and fertilizers. However, substantial exports of shrimps and building materials are now recorded.

Of the total non-oil exports almost 60 per cent are sold in Arab markets, with Saudi Arabia taking 45 per cent. Asian countries, mainly China and Iran, absorb 31 per cent of the total non-oil exports.

Kuwait imports comprise almost most of its required consumption, intermediate and capital goods. Imports grew at an annual rate of 7 per cent between 1969 and 1973 but this rate increased sharply in 1974, registering 47 per cent over 1973. In 1975 the increase exceeded 2 per cent but started to fall in 1976 and 1977. The composition of imports has fluctutated only moderately between 1965 and 1978. The consumer goods share varied between 40 per cent and 50 per cent, the intermediate goods share between 39.5 per cent and 28.4 per cent, and the capital goods share between 10.2 per cent and 26.3 per cent. Capital goods' imports are primarily machinery and equipment; intermediate goods' imports are industrial supplies, and consumer goods' imports are spread over a broad category of manufactured consumer goods.

The European Community continues to be the major supplier of Kuwait's imports, whereas Japan and the United States are the main individual countries from which Kuwait buys most of its imports. The balance of trade shows a substantial surplus that has continued to grow despite significant increases in imports and conservationist oil policies. The percentage increase has tapered off recently, but the absolute increase continues to be large.

While commodity trade estimates are generally reliable, data on private sector entries for services and transfers are subject to wide margins of error and should be interpreted with caution. On the invisible side, the major credit item is that of foreign investment income accruing primarily to government.[16/] This investment income accounts for one-half of the import bill despite the rapid rise in imports and their costs. This is the result of an intelligent and systematic policy of earmarking funds for future generations.[17/] Shipping income is now a substantial credit item reflecting the rapidly growing Kuwait shipping industry. The main debit item is that of travel abroad and insurance.

On the capital account, Kuwaiti foreign aid and capital for investment abroad account for the substantial deficits on this account. In 1976 the deficit on the capital account was as high as KD 1,268 million. Capital transfers were KD 806 million. Private remittances of the expatriot working force, which represents a large portion of Kuwait's labour force, amounted to KD 92.0 million. Loans accounted for KD 591 million and the monetary sector accounted for KD 836 million.

The balance of payment, however, has consistently shown large surpluses. The cumulative surplus reached the value of KD 6.7 billion or about US $23 billion in 1978. About KD 1.3 billion was held by the monetary system and the rest (KD 5.4 billion) was held by the Government. Between 1950 and 1977 the cumulative current account surpluses have been estimated at KD 11.5 billion, after adding foreign investment income and deducting private remittances, other current private transfers and current government transfers. The utilization of these accumulated surpluses assumed the following pattern: capital transfers stood at KD 4.8 billion, of which concessional and non-concessional flows to developing countries and the private sector accounted for KD 2.0 billion. The balance of KD 2.8 billion has been invested abroad. The remaining KD 6.7 were used to add to the financial assets of Kuwait in the manner described above.

Since independence, Kuwait has maintained a liberal trade policy with low or insignificant tariffs and an exchange system free of restrictions. With the establishment of the Kuwaiti dinar in 1961 to replace the Indian Rupee, its value was pegged to the British Pound. Following the British devaluation in 1967 the Kuwaiti dinar was effectively pegged to the US dollar with minor revaluations in 1971 and 1973. In March 1975, Kuwait started quoting exchange rates for the dinar on the basis of its value in terms of a weighted average of exchange rates of Kuwaiti's main trading partners. This led to the appreciation of the dinar in terms of the US dollar to $3.51 per dinar. By July 1979, the exchange value of the dinar in terms of the US dollar has appreciated to $3.63.

Growth and Distribution Shares[18/]

Using a generalized linear production function to explain output in terms of labour and capital, Al-Qudsi shows that the output elasticity with respect to capital over the period 1960-1975 was around 63 per cent. The output-labour elasticity averaged 37 per cent. This implies that a 10 per cent increase in the capital stock would lead to a 6.3 per cent increase in output. A simialr 10 per cent increase in labour would generate only a 3.7 per cent increase in output.[19/]

The elasticity of substitution between capital and labour for the whole economy is estimated to be less than one. This implies that increases in capital will result in a lower distribution share for capital and that the share of labour should rise. This is at variance with the national accounts statistics that show that the labour share is declining. But this is perhaps due to the inordinate importance of oil in GDP that increased in price with no significant changes in labour and capital in that sector.[20/]

Introducing a time-element in order to observe technical change in the economy and to resolve the contradiction of the estimated values with observed data, Al-Qudsi shows that only Hicks' neutral technical change resulted in acceptable estimated results.[21/] The tentative conclusions reached include: (1) output in Kuwait is more eelastic with respect to capital than with respect to labour; (2) for the economy as a whole the production processes appear to be characterized by constant returns to scale; (3) technical progress is credited with explaining 20 per cent of the growth of output between 1960 and 1975; (4) the elasticity of susbtitution

between capital and labour for the economy as a whole appears to vary betweem 0.64 and 0.81 which implies a rise in the labour share of GNP and a decline in the capital share; (5) Hicks' neutral technical change is judged to best represent dynamic change in the system.

Income Distribution

Despite its high per capita income, Kuwait has not developed a pattern of income distribution commensurate with the rank of its per capita income. As a matter of fact, Kuwait suffers from a significant degree of income inequality. This is not to mention the inordinate wealth inequality. These inequalities have increased over time. This is evident from the 1972/1973 structure of family income. The top 6.3 per cent of the households receive about 30 per cent of total income compared with only 25 per cent of income received by over 56 per cent of households whose monthly income is less than KD 200. The degree of inequality is higher among the Kuwaitis than it is among the non-Kuwaitis. The top 10 per cent of Kuwaiti households appear to receive more than 40 per cent of total income of Kuwaitis compared to the 30 per cent for the non-Kuwaitis.

There is also another aspect to the inequalities of income distribution in Kuwait. This relates to the fact that the incomes of Kuwaiti families are generally higher than those of non-Kuwaiti families. The median family income of Kuwaitis is KD 225 per month compared with about KD 150 per month for non-Kuwaitis. Furthermore, only 44.3 per cent of the Kuwait families received a monthly income of less than KD 200 per month, whereas over 65 per cent of the non-kuwaiti families have smaller incomes.

Since 1972/1973 the income distribution inequality have worsened perhaps on account of the sharp increases in rent and the significant rise in the cost of living.

Government land purchases policies have apparently aggravated the inequalities rather than reduced them. Given that they were intended to bring about the lessening of these inequalities, a new system is perhaps needed for this purpose. As there are no taxes to speak of and as government revenue is collected directly, a non-tax scheme may have to be developed for this purpose.[22/]

The Development Plans

The heavy reliance of Kuwait on non-Kuwaiti labour and the country's heavy dependence on oil production and imports have caused understandable concern. The need for planning to bring about a meaningful diversification of the structure of production and demand was urgent. In 1962, a planning machinery was created. This machinery consisted of an autonomous Planning Board attached to the Council of Ministers and assisted, at the technical level, by the planning secretariat and ministerial planning committees. In 1974, the Planning Board and its secretariat were upgraded to a Ministry of Planning.

The Planning Board drafted its first Five-Year Plan covering the period 1967/1968-1971/1972.[23/] The Plan aimed at an annual GDP growth rate of 6.5 per cent, diversification of the economy and development of Kuwaiti human resources. The total investment envisaged exceeded KD 837 million. The Plan was never ratified by the National Assembly but was used a general guide in preparing annual development budgets.

The actual development expenditures fell far below those targeted by the Plan. For the five-year period ending in 1971/1972 total development expenditures were only KD 233 million or about 46 per cent of the target. Most of the projects executed under the development budget were of the infrastructure type with primary emphasis on schools, hospitals, road construction and development of water and electricity systems.

A second Five-Year Plan was drafted for the period 1976/1977 - 1980/1981. But again it was not approved and remained a general guideline for annual development budgets. It envisaged total expenditures of KD 4,441 billion of which KD 3,392 was expected to be undertaken by the public sector. Whereas manufacturing received the highest allotment under the first plan, it was the service sector that had the highest share under the second plan. Manufacturing was second with about 32 per cent of the total targeted investments of the public sector.

Plan of the Study

The preceding sketch of the Kuwaiti economy is intended to present a general overview of the economy within which the manufacturing sector, which constitutes the main interest of the study, operates. In Chapter Two, the non-manufacturing sectors will be studies with particular emphasis on the oil sector. The manufacturing sector, particularly non-oil manufacturing, will be treated in Chapters Three and Four. Chapter Five is devoted to the consideration of the general and specific industrialization problems and policies in Kuwait. Chapter Six presents the future prospects and outlook of the manufacturing sector. Finally Chapter Seven summarizes the results and presents some concluding remarks.

TABLE 1.1 KUWAIT: NATIONAL EXPENDITURE ESTIMATES AT CURRENT MARKET PRICES (MILLION KD.)

	1960/62	1961/62	1962/63	1963/64	1964/65	1965/66	1966/67	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77 1/	1977/78 2/
Consumption expenditure			268	281	302	303	350	415	441	456	447	504	565	656	828	1 111	1 569	1 724
(a) Private			188	192	200	198	232	290	297	303	245	254	287	316	423	597	735	917
(b) Public			80	89	102	105	118	135	144	153	202	250	278	320	405	519	654	813
Gross fixed capital formation			78	92	96	113	135	163	157	149	109	120	52	147	176	246	460	602
(a) Private and semi private			45	47	49	70	85	95	100	89	46	48	52	54	63	106	135	165
(b) Public			33	45	47	43	50	68	57	60	63	72	102	93	113	140	327	517
Increase in stock			7	3	3	7	16	23	14	21	1	1	1	- 1	6	9	13	16
Expenditure on consumption and gross capital formation			353	376	401	473	501	601	612	625	557	625	720	782	1 010	1 366	1 842	2 422
Exports and re-exports excluding oil and oil products			2	2	3	3	20	21	28	33	34	50	70	117	170	215	2 718	2 755
Exports of oil and oil products			414	434	468	490	541	498	559 1/	592 1/	612 2/	908 2/	1 050 2/	1 550 2/	2 822 2/	2 435 2/	197	
Expenditure on GDP and imports			769	812	872	916	1 062	1 120	1 199	1 256	1 202	1 582	1 828	2 457	4 002	4 016	4 757	5 177
Less imports of goods and services			-116	-133	-132	-164	-208	-248	-248	-269	-241	-256	-266	-326	-552	-737	-1 085	-1 523
Expenditure on GDP			653	679	740	752	854	872	951	987	961	1 346	1 562	2 111	3 450	3 279	3 672	3 654
Net factor income transactions with rest of the world			-224	-215	241	-240	-172	-138	-158	-147	-109	-264	-336	-342	-280	224		
Expenditure on GNP			429	464	499	512	682	734	793	840	852	1 082	1 226	1 769	3 170	3 503		
Less depreciation			- 19	- 25	- 28	- 34	- 40	- 42	- 45	- 50	-109	-116	-121	-143	-178	-188		
Net national product or national income			410	439	471	478	642	692	748	790	743	966	1 105	1 626	2 992	3 315		

Sources: (1) Kuwait. Central Statistical Office. Planning Board. Annual Statistical Abstracts. 1968-1972 for the years 62-70
(2) Kuwait. Central Statistical Office. Ministry of Planning. Annual Statistical Abstracts 1975-1978 for the years 1970-1976.
(3) Kuwait. Central Bank of Kuwait. Quarterly Statistical Bulletin 1979.

1/ Including net exports of refined oil products by Kuwait National Petroleum Company.

2/ Calculated.

3/ Estimates, Central Bank of Kuwait. Quarterly statistical bulletin 1979.

N.B. : The two series are not fully comparable.

TABLE 1.2 KUWAIT: ESTIMATES OF GDP BY INDUSTRIAL ORIGIN 1966-1976 (KD. MILLION)

S E C T O R S	1960/61	1961/62	1962/63	1963/64	1964/65	1965/66	1966/67	1967/68	1968/69	1969/70 1/	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78
Agriculture, hunting, forestry & fishing						5	4	5	5	5	4	4	4	4	6	8		
Mining and quarrying						471	510	474	530	557	652	902	936	1 447	2 662	2 294		
Manufacturing						24	30	34	37	36	39	42	60	75	158	164		
Electricity, gas and water						16	22	28	31	32	39	42	36	43	62	77		
Construction						50	58	43	42	39	34	40	21	21	22	30		
Wholesale and retail trade						59	23	80	84	85	81	90	107	113	140	190		
Transport, storage and communications						21	25	30	33	35	36	41	59	66	65	85		
Finance, insurance and real estate						10	12	15	17	18	19	21	123	134	114	151		
Other services 2/						112	137	160	168	175	58	159	216	208	221	280		
GDP at factor costs						746	851	869	947	985								
Indirect taxes less subsidies						3	3		4	4								
GDP at market prices						749	854	872	951	989	961	1 346	1 562	2 111	3 450	3 279		
Non-Oil GDP						278	344	398	421	432	309	444	626	664	788	985		

Source: Kuwait. Central Bank of Kuwait. Quarterly Statistical Bulletin, October/December 1975 and April/June 1976.

1/: (1) The two series (1965/66 - 1969/70) and (1970/71-1975/75) are not fully comparable.
(2) Including government services.

TABLE 3:3 . KUWAIT: PERCENTAGE SHARES OF INDUSTRIES IN GDP (IN %)

	1960/61	1961/62	1962/63	1963/64	1964/65	1965/66	1966/67	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78
Agriculture, hunting, forestry & fishing						0.4	0.5	0.6	0.5	0.5	0.4	0.5	0.3	0.2	0.2	0.2		
Mining and quarrying						63.1	59.9	54.6	56.0	56.7	67.8	67.0	60.0	68.5	77.2	70.0		
Manufacturing						3.2	3.5	3.9	3.9	3.7	4.0	3.1	3.8	3.6	4.6	5.0		
Electricity, gas and water						2.1	2.6	3.2	3.3	3.7	4.0	3.5	2.3	2.0	1.8	2.4		
Constructions						4.0	4.5	5.0	4.4	4.1	3.5	3.0	1.3	1.0	0.6	0.9		
Wholesale and retail trade						7.9	8.6	9.2	8.9	8.6	8.5	6.7	6.8	5.4	4.0	5.8		
Transport storage and communications						2.8	2.9	3.5	3.5	3.6	3.7	3.0	3.8	3.1	1.9	2.6		
Finance insurances and real estate						1.3	1.4	1.7	1.8	1.8	2.0	1.6	7.9	6.3	3.3	4.6		
Other services						15.0	16.1	18.3	17.7	17.4	6.1	11.8	13.8	9.9	6.4	8.5		
						100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		

Table No. (1.4) KUWAIT: Net National Product and Income: 1970/71 - 1975/76 (In Thousands K.D.)

Components	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76
Private final consumption	266 202	313 790	309 396	353 251	519 780	705 700
Government final expenditure	256 700	308 100	322 124	410 700	691 470	602 679
Net savings	220 429	343 690	474 157	862 506	1 780 865	2 006 800
Appropriation of Net National Product	743 331	965 580	1 105 677	1 626 457	2 992 115	3 315 179
Payments to households	240 155	265 000	342 255	347 790	416 468	561 460
Net property and enterpreneurial income to the rest of the world	-109 745	-264 520	-336 394	-342 207	-280 820	224 000
Operating surplus	524 296	853 500	970 976	1 489 479	2 405 258	2 497 715
Indirect taxes	88 625	111 600	128 840	131 395	451 209	32 004
Net National Product	743 331	965 580	1 105 677	1 626 457	2 992 115	3 315 179

Source: Central Statistical Office - Ministry of Planning - Annual Statistical Abstract 1978. p. 216.

TABLE 1.5 . KUWAIT: SAVING AND INVESTMENT 1970/71 - 1975/76 (in thousands KD.)

Components	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76
Government gross fixed capital formation	62 600	71 500	101 628	92 800	112 900	139 700
Private gross fixed capital formation	46 495	48 000	51 683	53 891	63 060	106 645
Change in stocks	849	1 000	1 262	-1 007	6 668	9 334
Net purchases of intangible assets from the rest of the world	121 340	251 930	275 510	729 650	1770 560	1851 180
Net lending to the rest of the world	- 2 690	- 3 070	9 650	- 630	20 150	64 000
Residual (errors and omissions)	-	66 020	41 420	6 080	28 480	50 000
Gross accumulation	228 594	435 380	481 153	880 784	2001 818	2220 859
Consumption of fixed capital	108 385	116 500	120 096	142 808	177 413	188 059
Net savings	220 429	343 690	474 157	862 506	1780 865	2006 800
Net capital transfers	-100 220	- 24 810	-113 100	-124 530	43 540	26 000
Finance of gross accumulation	228 594	435 380	481 153	880 784	2001 818	2220 859

Source: Kuwait: Central Statistical Office. Ministry of Planning. Annual Statistical Abstracts 1978, p.216.

TABLE 1.6: KUWAIT. CHANGES IN LABOUR STRUCTURE

	Kuwaitis			Non-Kuwaitis			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
				1 9 5 7 Census					
Population	55 111	52 135	107 246	66 680	16 868	83 548	121 791	69 003	190 794
Population 15 - 60	29 563	27 014	56 577	58 968	10 570	69 538	88 531	37 584	126 115
Labour force	24 218	384	24 602	53 993	1 693	55 686	78 211	2 077	80 288
Inactives	5 345	26 630	31 975	4 975	8 877	13 852	10 320	35 507	45 827
Labour participation rate	43.3%	0.7%	22.9%	81.0%	1. 0%	66.7%	64.2%	3.0%	42.1%
Proportion of inactives	18.1%	98.6%	56.5%	8.4%	84.0%	19.9%	11.7%	94.5%	36.3%
				1 9 6 5 Census					
Population	112 569	107 490	220 059	173 743	75 537	247 280	286 312	181 027	467 339
Population 15-60	52 254	49 352	101 606	135 854	38 823	174 677	188 108	88 175	276 283
Labour force	41 936	1 092	43 018	133 603	7 676	141 279	175 529	8 768	184 297
Inactives	10 328	48 260	58 588	2 251	31 147	33 398	12 579	79 407	91 986
Labour participation rate	37.2%	1.0%	19.5%	76.9%	10.4%	57.1%	61.3%	4.8%	39.4%
Proportion of inactives	19.8%	97.8%	57.7%	1.7%	80.2%	19.1%	6.7%	90.1%	33.3%
				1 9 7 0 Census					
Population	175 513	171 883	349 396	244 368	146 898	391 266	419 881	381 781	738 662
Population 15-60	79 688	78 472	158 160	166 792	73 754	240 546	246 480	152 226	398 706
Labour force	63 314	2 055	65 369	162 206	14 542	176 828	225 600	16 597	242 197
Inactives	16 374	76 417	92 791	4 506	59 212	63 718	20 880	135 629	156 509
Labour participation rate	36.1%	1.2%	18.0%	66.4%	9.9%	45.2%	53.7%	5.2%	32.8%
Proportion of inactives	20.6%	97.4%	58.7%	2.7%	80.3%	26.5%	8.5%	89.1%	39.3%
				1 9 7 5 Census					
Population	236 600	235 488	472 088	307 168	215 581	522 749	543 768	451 069	994 837
Population 15-60	109 497	111 271	220 768	196 990	110 188	307 178	306 487	328 956	527 946
Labour force	84 367	7 477	91 844	185 009	27 729	212 738	269 376	35 206	304 582
Inactives	25 130	103 794	128 924	11 981	82 459	94 440	37 111	293 7 0	223 364
Labour participation rate	35.7%	3.2%	19.5%	60.2%	12.9%	40.7%	49.5%	7.8%	30.6%
Proportion of inactives	22.9%	93.3%	58.4%	6.1%	74.8%	30.7%	12.1%	89.3%	42.3%

Source: Central Statistical Office - Ministry of Planning - Annual Statistical Abstract 1976 p.44 and 91.

TABLE 1.7 . KUWAIT: POPULATION 12 YEARS AND OVER AND LABOUR FORCE BY SEX & EMPLOYMENT
CENSUS 1957, 1965, 1970 and 1975

Employment, status and Sex		1957 Kuwaiti	1957 Non-Kuwaiti	1957 Total	1965 Kuwait	1965 Non-Kuwaiti	1965 Total	1970 Kuwaiti	1970 Non-Kuwaiti	1970 Total	1975 1/ Kuwaiti	1975 * Non-Kuwaiti	1975 1/ Total
Employers	M	228	272	500	1 357	3 139	4 496	2 044	4 503	6 547	2 173	5 482	7 655
	F	-	2	2	-	16	16	6	30	36	16	37	53
	T	228	274	502	1 357	3 155	4 512	2 050	4 533	6 583	2 189	5 519	7 708
Self employed	M	5 855	5 514	11 369	5 171	18 340	23 511	6 022	28 479	34 501	6 964	21 445	28 409
	F	47	30	77	30	108	138	20	100	120	25	93	118
	T	5 902	5 544	11 446	5 201	18 448	23 649	6 042	28 579	34 621	6 989	21 538	28 527
Employees	M	17 278	47 324	64 602	32 463	109 647	142 110	49 226	126 656	175 882	70 124	156 797	226 921
	F	334	1 655	1 989	911	7 417	8 328	1 935	13 813	15 748	7 261	27 388	34 649
	T	17 612	48 979	66 591	33 374	117 064	150 438	51 161	140 469	191 630	77 385	184 185	261 570
Unpaid workers	M	179	163	342	157	214	371	239	410	649	405	195	600
	F	3	-	3	61	72	133	56	505	561	3	7	10
	T	182	163	345	218	286	504	295	915	1 210	408	202	610
Unemployed	M	678	720	1 398	2 778	2 263	5 041	5 783	2 238	8 021	4 701	1 090	5 791
	F	-	6	6	90	63	153	38	94	132	172	204	376
	T	678	726	1 404	2 868	2 326	5 194	5 821	2 332	8 153	4 873	1 294	6 167
Total labour force	M	24 218	53 993	78 211	41 926	133 603	175 529	63 314	162 286	225 600	84 367	185 009	269 376
	F	384	1 693	2 077	1 092	7 676	8 768	2 055	14 542	16 597	7 477	27 729	35 206
	T	24 602	55 686	80 288	43 018	141 279	184 297	65 369	176 828	242 197	91 844	212 738	304 582
Not in labour force	M	12 104	6 555	18 659	22 790	7 868	30 658	37 338	15 103	52 441	34 142	16 113	50 255
	F	34 903	10 430	45 333	60 675	35 499	96 174	96 852	68 844	165 696	112 637	86 429	199 066
	T	47 007	16 985	63 992	83 465	43 367	126 832	134 190	83 947	218 137	146 779	102 542	249 321
Not stated	M	2 139	1 121	3 260	30	267	297	85	214	299	20	3	23
	F	-	-	-	8	25	33	7	11	18	3	1	4
	T	2 139	1 121	3 260	38	292	330	92	225	317	23	4	27
Grand total	M	38 461	61 669	100 130	64 746	141 738	206 484	100 737	177 603	278 340	118 529	201 125	319 654
	F	35 287	12 123	47 410	61 775	43 200	104 975	98 914	83 397	182 311	120 117	114 159	234 276
	T	73 748	73 792	147 540	126 521	184 938	311 459	199 651	261 000	460 651	238 646	315 284	553 930

1/ For 1975 only: population 15 years and over
* Employment status as of reference day in each census year

Source: Kuwait. Central Statistical Office, Ministry of Planning, Annual Statistical Abstracts 1977, p.82.

TABLE 1.8. KUWAIT: LABOUR FORCE BY SEX AND DIVISION OF ECONOMIC ACTIVITY IN CENSUS YEARS. CENSUS 1957 - 1965 - 1970 - 1975

Sections of economic activity and sex		1957 Kuwaitis	1957 Non-Kuwaitis	1957 Total	1965 Kuwaiti	1965 Non-Kuwaiti	1965 Total	1970 Kuwaiti	1970 Non-Kuwaiti	1970 Total	1975 Kuwaiti	1975 Non-Kuwaiti	Total
Agricul.,fishing & hunting	M	603	446	1 049	666	1 408	2 074	798	3 253	4 051	3 970	3 522	7 402
	F	-	-	-	7	2	9	4	5	9	13	9	22
	T	603	446	1 049	673	1 410	2 083	802	3 258	4 060	3 983	3 531	7 514
Mining & quarrying	M	1 211	4 088	5 299	1 337	5 241	6 578	1 627	4 828	6 455	1 767	2 958	4 720
	F	-	106	106	12	402	414	48	668	716	12	127	139
	T	1 211	4 194	5 405	1 349	5 643	6 992	1 675	5 496	7 171	1 779	3 080	4 850
Manufacturing industries	M	1 009	5 539	6 548	1 823	16 103	17 926	6 100	25 876	31 976	2 237	21 889	24 126
	F	20	43	63	2	14	16	9	106	115	21	320	341
	T	1 029	5 582	6 611	1 825	16 117	17 947	6 109	25 982	32 091	2 258	22 209	24 467
Construction	M	378	8 025	8 403	1 262	27 566	28 828	2 186	31 418	33 604	1 755	30 357	32 112
	F	-	-	-	2	18	20	2	66	68	1	143	144
	T	378	8 025	8 403	1 264	27 584	28 848	2 188	31 484	33 672	1 756	30 500	32 256
Electricity,gas & water	M	-	-	-	1 645	5 341	6 986	2 130	5 106	7 236	2 029	5 230	7 259
	E	-	-	-	-	5	5	3	13	16	5	7	12
	T	-	-	-	1 645	5 346	6 991	2 133	5 119	7 252	2 034	5 237	7 271
Wholesale & retail trade	M	4 107	4 058	8 165	5 115	17 769	22 884	7 261	25 181	32 442	6 297	32 364	38 661
	F	44	15	59	14	147	161	37	534	571	30	868	898
	T	4 151	4 073	8 224	5 129	17 916	23 045	7 298	25 715	33 013	6 327	33 232	39 559
Transportation & communic.	M	1 513	2 053	3 566	2 612	7 336	9 948	2 357	9 640	11 997	4 305	10 853	15 158
	F	-	-	-	1	76	77	5	136	141	262	265	527
	T	1 513	2 053	3 566	2 613	7 412	10 025	2 362	9 776	12 138	4 567	11 118	15 685
Services	M	14 365	27 697	42 062	24 571	50 123	74 694	34 919	54 401	89 320	57 306	76 751	134 057
	F	316	1 522	1 838	948	6 892	7 840	1 907	12 909	14 816	6 959	25 786	32 745
	T	14 681	29 219	43 900	25 519	57 015	82 534	36 826	67 310	104 136	64 265	102 537	166 802
Activities not adequately defined	M	4 803	3 583	8 386	232	611	843	236	559	795	-	-	-
	F	4	7	11	17	64	81	5	21	26	2	-	2
	T	4 807	3 590	8 397	249	675	924	241	580	821	2	-	2

Continued...

TABLE 1.8 . KUWAIT: LABOUR FORCE BY SEX (CONTINUED....)

		1957			1965			1970			1975*		
		Kuwaiti	Non-Kuwaiti	Total	Kuwaiti	Non-Kuwaiti	Total	Kuwaiti	Non-Kuwaiti	Total	Kuwaiti	Non-Kuwaiti	Total
Total activity	M	27 989	55 489	83 478	39 163	131 498	170 661	57 614	160 262	217 876	79 666	183 919	263 585
	F	384	1 693	2 077	1 003	7 620	8 623	2 020	14 458	16 470	7 305	27 525	34 830
	T	28 373	57 182	85 555	40 166	139 118	179 284	59 634	174 720	234 354	86 971	211 444	298 415
Inactive	M	10 472	6 180	16 652	25 583	10 240	35 823	43 123	17 341	60 464	38 863	17 206	56 069
	F	34 903	10 430	45 333	60 772	35 580	96 352	96 894	68 938	165 832	112 812	86 634	199 446
	T	45 375	16 610	61 985	86 355	45 830	132 175	140 017	86 279	226 296	151 675	103 840	255 515
Total population	M	38 461	61 669	100 130	64 746	141 738	206 484	100 737	177 603	278 340	118 529	201 125	319 654
	F	35 287	12 123	47 410	61 775	43 200	104 975	98 914	83 396	182 310	120 117	114 159	234 276
	T	73 748	73 792	147 540	126 521	184 938	311 459	199 651	260 999	460 650	238 646	315 284	553 930

Source: Kuwait. Central Statistical Office, Ministry of Planning. Annual Statistical Abstract 1977, p.86

* The labour force in the census of 1975 includes those 15 years of age and over.

Table No. 1.9 Kuwait: Wholesale Price Index

Major divisions	Weights	1972	1973	1974	1975	1976	1977	1978
Food and beverages	706.56	100	115.2	134.8	150.5	163.0	175.6	172.6
Clothing and goods for personal care	182.02	100	134.3	138.8	126.9	130.2	129.9	132.2
Household Appliances	38.38	100	106.3	132.0	158.1	162.4	164.6	171.7
Medicine and stationary	73.04	100	104.3	128.9	148.0	149.0	158.2	169.6
General Index	1 000.00	100	117.5	135.0	146.3	156.0	165.6	165.0

Source: Kuwait, Central Bank of Kuwait - Quarterly Statistical Bulletin, July/Sept. 1978. p. 23 and Central Bank of Kuwait - Economic Report 1978, p. 87.

Table No. 1.10 Kuwait: Cost of Living Index (1972 = 100)

Major Division	Weights	1972	1973	1974	1975	1976	1977	1978
Food and beverages	370.82	100	115.3	135.9	153.7	163.7	175.4	184.0
Clothing and goods for personal care	145.25	100	105.5	116.7	124.4	135.6	151.8	158.6
Household appliances	25.94	100	101.6	124.7	146.5	149.7	157.2	161.0
Housing	176.65	100	100.4	102.8	106.0	113.4	124.1	164.3
Durable consumer goods	140.16	100	107.7	125.1	136.8	138.8	150.9	166.3
Transport and communications	95.66	100	105.9	121.5	120.8	119.2	130.5	139.4
Medical, educations & recreation	45.51	100	103.1	108.0	118.6	126.0	132.1	141.9
General Index	1 000.00	100	108.4	122.8	133.7	141.0	152.7	167.6

Source: Kuwait, Central Bank of Kuwait, Quarterly Statistical Bulletin July-September 1978, p. 22 and Central Bank of Kuwait: Economic Report for 1978, p. 89.

Note : Index for housing and related services for 1976-1977 have been adjusted as they include recent adjustments in rentals under this division, consequently totals differ from each other in the said two years.

Table No. 1.11 Kuwait: Unit Value Index of Imports by SITC Section 1969-1975 (1969=100)

Major Divisions	1969	1970	1971	1972	1973	1974	1975
Food and live animals	100	99	98	105	117	157	193
Beverages and tobacco	100	102	113	112	122	128	142
Minerals fuels, lubricants and related materials	100	101	106	109	118	170	205
Animal and vegetable oils and fats	100	106	126	121	163	167	202
Chemicals	100	105	119	122	119	169	179
Manufactured goods	100	109	110	109	119	175	161
Machinery and transport equipment	100	110	122	120	132	136	154
Miscellaneous manufactured articles	100	106	113	124	131	159	186
Total	100	106	112	115	118	164	166

Source: Kuwait, Central Bank of Kuwait - Quarterly Statistical Bulletin, Oct/Dec. 1976, p. 33

Table No. 1.12 Kuwait: Government Revenues. Million KD's

Years	OIL REVENUES			Total Oil Revenues	Other Revenues	Total Revenues
	Divided Zone Oil	Income Tax	Royalties			
1960/1961	-	102.7	56.8	159.5	14.4	173.9
1961/1962	-	118.1	48.8	166.9	13.9	180.8
1962/1963	-	118.3	54.7	173.0	16.8	189.8
1963/1964	-	132.7	57.9	190.6	16.8	207.4
1964/1965	-	144.2	62.0	206.2	15.9	222.1
1965/1966	-	161.8	63.5	225.3	19.5	244.8
1966/1967	-	164.1	67.6	231.7	19.5	251.2
1967/1968	-	194.2	68.9	263.1	49.7	312.8
1968/1969	-	170.7	72.3	242.0	25.3	268.3
1969/1970	-	203.7	76.7	280.4	26.1	306.5
1970/1971	-	215.3	82.4	297.7	46.1	343.8
1971/1972	-	240.5	113.6	354.1	29.3	383.4
1972/1973	-	386.7	119.3	506.0	42.5	548.5
1973/1974	-	412.3	131.7	544.0	44.0	588.0
1974/1975	1 368.0	450.1	298.3	2 056.4	64.8	2 121.3
1975/1976	1 143.2	347.3	212.8	1 703.3	33.3	1 736.6
1976/1977	2 457.2	109.2	32.0	2 598.4	107.9	2 706.3
1977/1978*	2 067.9	93.1	20.9	2 181.9	90.8	2 272.7

Source: Kuwait, Central Statistical Office - Ministry of Planning - Annual Statistical Abstracts 1975 (p. 172) - 1977 (P. 221) - 1978 (P. 222).

* Estimated Revenues

Table No. 1.13 Kuwait: Current Expenditure on Public Services 1962/63-1974/1975

Total	Housing	Religious services	Social Welfare	Information	Public health	Education	Years
In Thousand Dinars							
27 439	2 160	457	2 386	3 311	8 731	10 394	1962/1963
30 870	2 415	525	2 629	3 057	9 809	12 435	1963/1964
34 579	2 300	569	3 046	4 217	10 642	13 805	1964/1965
38 033	2 284	730	3 680	3 943	11 599	15 797	1965/1966
44 256	2 341	917	3 832	4 135	12 888	20 143	1966/1967
50 564	2 578	1 054	3 959	4 338	14 691	23 944	1967/1968
55 586	2 504	1 094	4 756	4 465	15 246	27 521	1968/1969
60 175	2 556	1 143	5 171	4 803	15 769	30 733	1969/1970
63 174	2 726	1 196	5 226	4 797	16 060	33 169	1970/1971
72 391	2 844	1 329	6 610	5 187	17 721	38 700	1971/1972
82 277	3 191	1 685	7 107	6 343	20 912	49 382	1972/1973
96 876	3 747	1 887	7 655	7 394	23 897	52 296	1973/1974
110 227	4 289	1 977	8 226	8 067	28 066	59 602	1974/1975
Percentage							
100.0	7.9	1.7	8.6	12.1	31.8	37.9	1962/1963
100.0	7.8	1.7	8.5	9.9	31.8	40.3	1963/1964
100.0	6.7	1.6	8.8	12.2	30.8	39.9	1964/1965
100.0	6.0	1.9	9.7	10.4	30.8	41.5	1965/1966
100.0	5.3	2.1	8.7	9.3	29.1	45.5	1966/1967
100.0	5.1	2.1	7.8	8.5	29.1	47.4	1967/1968
100.0	4.5	2.0	8.6	8.0	27.4	49.5	1968/1969
100.0	4.2	1.9	8.6	8.0	26.2	51.1	1969/1970
100.0	4.3	1.9	8.3	7.6	25.4	52.5	1970/1971
100.0	3.9	1.8	9.1	7.2	24.5	53.5	1971/1972
100.0	3.9	1.9	8.0	7.2	23.6	55.4	1972/1973
100.0	3.7	2.0	7.9	7.6	24.8	54.0	1973/1974
100.0	3.9	1.8	7.5	7.3	25.4	54.1	1974/1975
Per Capita (K.D.)							
74 790	5 887	1 246	6 503	9 025	23 798	28 331	1962/1963
76 638	5 996	1 303	6 527	7 589	24 352	30 871	1963/1964
78 163	5 199	1 286	6 685	9 532	24 056	31 205	1964/1965
78 380	4 707	1 504	7 564	8 126	23 904	32 555	1965/1966
83 299	4 406	1 726	7 213	7 783	25 258	37 913	1966/1967
86 872	4 429	1 611	6 802	7 453	25 270	41 137	1967/1968
87 129	3 925	1 715	7 455	6 998	23 098	43 138	1968/1969
85 997	3 653	1 633	7 390	6 864	22 536	43 921	1969/1970
83 580	3 607	1 582	6 914	6 346	21 248	43 883	1970/1971
90 597	3 559	1 663	8 272	6 492	22 178	48 433	1971/1972
101 757	3 677	1 942	8 191	7 310	24 102	56 535	1972/1973
102 330	3 958	1 993	8 085	7 810	25 242	55 240	1973/1974
109 645	4 266	1 966	8 689	8 024	28 451	59 288	1974/1975

Source: Kuwait, Central Statistical Office, Ministry of Planning, Annual Statistical Abstracts 1976 (p. 182).

Figures represent the Final Accounts

TABLE 1.14 KUWAIT: SUMMARY OF GOVERNMENT REVENUES AND EXPENDITURE (MILLION KD)

	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77
Receipts	424.0	597.7	675.3	2271.4	2838.3	3224.7
Oil Receipts	354.1	506.0	543.9	2056.4	2509.7	2800.8
Investment Income	42.3	50.8	89.1	152.2	265.1	317.0
Others	27.6	40.9	42.3	63.0	68.5	106.9
Expenditures	346.9	396.9	536.7	1085.2	779.9	1031.8
Current	276.3	313.3	438.4	821.5	554.1	678.0
Development	50.7	60.2	73.2	128.7	165.4	304.9
Land Purchase	19.9	23.2	25.1	135.0	60.4	48.9
Surplus	77.1	201.0	138.6	1186.2	2058.4	2192.3
Includes Transfers Abroad	(32.9)	(43.5)	(153.2)	(332.0)	(57.1)	(70.5)

Source: Kuwait Annual Statistical Abstracts.

Table 1.15 KUWAIT: SUMMARY OF FOREIGN TRADE
(million KD) 1960-1978

Year	Oil exports	Other exports[1]	Total exports	Imports	Balance of trade	% growth of imports 1954 = 100	% growth of Non-oil exports 1954 = 100
1965	437.2	14.1	451.3	134.7	316.6	451	332
1966	465.8	13.6	479.4	165.3	314.1	553	321
1967	469.1	15.3	484.4	211.9	272.5	709	307
1968	496.8	16.7	513.5	218.3	295.2	731	393
1969	527.0	23.1	550.1	231.7	318.4	772	542
1970	564.5	26.4	590.9	223.3	367.6	747	620
1971	859.4	34.4	893.8	232.3	661.5	777	808
1972	931.7	49.6	981.3	262.2	791.1	878	1 166
1973	1 059.9	69.8	1 129.7	310.6	819.1	1 039	1 639
1974	3 097.5	117.2	3 214.7	455.1	2 759.6	1 522	2 743
1975	2 492.6	170.4	2 663.0	693.2	1 969.8	2 319	3 999
1976	2 658.9	215.5	2 874.4	972.0	1 902.4	3 552	5 057
1977	2 557.1	235.5	2 792.6	1 387.1	1 405.5	5 068	5 526
1978	2 638.5	233.3[2]	2 871.8	1 268.9[2]	1 602.9	4 636	5 474

Sources: Central Bank of Kuwait. Quarterly Statistical Bulletin, October/December 1975 and July/September 1978 p.27 and Economic report 1978 p.94.
Central Statistical Office, Ministry of Planning, Annual Statistical Abstract 1976 p.270.

1/ Including re-exports

2/ Preliminary figures.

Table 1.16 KUWAIT : IMPORTS BY TYPE OF COMMODITY 1965 - 1976 (In thousand KD.)

Type of Commodity	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
Capital goods:												
Machinery & other capital equip.	19 289	20 516	36 749	30 735	36 074	34 277	30 265	26 926	33 648	37 290	77 336	151 184
Passenger motor cars per indus- government & non-profit serv.	2 564	3 603	4 004	4 138	3 919	4 308	4 926	6 816	7 253	5 020	8 726	9 220
Transport equipment, industrial	3 357	7 957	8 773	6 238	8 084	8 062	7 806	3 697	14 771	4 083	96 359	83 201
Total capital goods	25 210	32 086	49 526	41 111	48 077	46 647	42 997	37 439	55 672	46 393	182 421	243 605
Intermediate goods:												
Food & beverages for industry (primary)	4 465	5 121	6 347	5 789	4 972	5 622	7 467	8 940	10 040	17 967	15 694	20 052
Food & beverages for industry (processed)	1 447	329	411	419	161	207	239	262	863	1 250	1 607	1 352
Other industrial supplies	30 770	41 504	55 372	50 848	55 508	50 054	55 447	65 676	71 375	118 929	135 857	228 559
Fuels & Lubricants primary	8	10	14	13	7	5	17	26	15	58	30	48
Motors spirit for vehicles equired by industries, govt. and non profit services	10	26	19	20	15	21	28	52	35	38	6	2
Parts & accessories for machinery	5 069	3 284	4 126	10 900	4 792	4 348	4 437	6 161	7 668	10 015	18 021	24 810
Parts & accessories for transport equipment	2 447	8 246	8 632	4 346	12 557	10 868	11 719	13 686	14 573	20 946	21 526	39 379
Fuels, lubricants, processed (other than motor spirit)	1 268	1 484	1 867	1 766	2 708	1 850	2 991	2 753	3 335	5 586	4 036	5 646
Total intermediate goods	45 504	59 993	76 791	74 101	80 718	72 975	82 646	97 556	107 904	174 789	196 767	319 848
Consumption goods:												
Foods & beverages for household consumption (primary)	7 092	8 813	11 184	13 516	15 325	16 730	15 131	17 068	20 921	26 527	50 220	50 029
Food & beverages for household consumption (processed)	15 459	12 630	11 674	16 297	14 210	15 720	18 953	17 173	21 504	33 016	52 885	52 153
Passenger motor cars (other than government & industries)	10	26	19	20	15	20	28	52	35	28 445	49 390	52 248
Motor spirit (other than govt. and industries)	5 206	7 315	3 130	8 402	7 956	8 746	10 000	13 633	14 726	5 160	11	5
Non industrial transport equip.	121	214	243	259	201	218	148	236	192	23 134	359	476
Other consumer goods	35 062	44 170	54 264	64 575	63 926	61 839	62 895	78 444	86 254	114 178	156 852	234 660
Total consumer goods	63 950	73 167	85 515	103 070	101 634	103 253	107 155	126 606	143 637	239 460	309 711	389 571
Goods not elsewhere specified	32	35	60	42	348	392	509	577	3 359	3 448	4 251	18 568
Total Imports	134 698	165 282	211 893	218 325	230 777	223 267	232 307	262 178	310 582	455 090	693 150	971 592

Source: Central Statistical Office. Ministry of Planning, Annual Statistical Abstract 1976, p.267 and 1977 p.308 (for 1975) and 1978 p. 306 (for 1976).

Table 1.17 KUWAIT: INDIGENOUS EXPORTS AND IMPORTS RETENTIONS 1971-1976 (value in thousand KD)

		1971		1972		1973		1974		1975		1976	
		Exports	Retentions	Exports	Retentions	Exports	Retentions	Exports	Retentions	Exports	Retentions	Exports	Retentions
Food and live animals	Value	1 002	35 365	898	40 129	3 107	47 181	2 377	64 551	2 110	100 636	1 640	109 800
	(%)	11.7	17.1	5.5	17.5	11.3	17.6	4.0	16.3	2.6	16.7	2.9	13.5
Beverages and tobacco	Value	2	5 183	3	5 091	-	5 292	11	5 801	10	7 139	-	11 750
	(%)	-	2.5	-	2.2	-	2.0	-	1.5	-	1.1	-	1.5
Raw materials	Value	376	3 643	480	3 522	1 230	4 274	2 657	8 166	1 938	6 576	2 100	13 030
	(%)	4.4	1.8	2.9	1.5	4.5	1.8	4.5	2.1	2.4	1.1	3.7	1.6
Minerals, fuels and lubricants	Value	50	1 865	40	2 405	21	2 779	16	5 088	13	3 521	-	7 230
	(%)	0.6	1.0	0.3	1.1	0.1	1.0	-	1.3	-	0.6	-	0.9
Animal and vegetable oil	Value	13	1 094	13	1 006	18	1 029	35	1 811	28	2 420	50	2 870
	(%)	0.1	0.5	0.1	0.4	0.1	0.4	0.1	0.5	-	0.4	-	0.4
Chemicals	Value	5 824	10 025	11 549	11 952	18 889	12 644	45 800	18 000	64 655	2 573	31 200	27 760
	(%)	67.9	4.9	70.4	5.2	69.0	4.7	77.5	4.5	79.3	0.4	55.2	3.4
Manufactured goods	Value	1 051	48 197	3 034	50 400	3 526	55 732	6 761	102 930	10 104	106 104	16 040	169 770
	(%)	12.3	23.3	18.5	22.0	12.9	20.8	11.5	25.9	12.4	17.6	28.4	20.9
Machinery and transport equip.	Value	33	64 996	21	71 285	127	89 945	459	125 156	1 521	264 209	3 390	331 500
	(%)	0.4	31.5	0.1	31.1	0.5	33.6	0.8	31.5	1.9	43.8	6.0	40.8
Unclassified commodities	Value	220	36 127	365	42 194	433	42 266	943	58 723	1 150	79 446	2 090	139 280
	(%)	2.6	17.5	2.2	18.4	1.6	15.8	1.6	14.8	1.4	13.3	3.7	17.1
Total	Value	8 571	206 495	16 403	228 984	27 351	268 040	59 079	356 990	81 529	603 856	56 510	813 010
	(%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Khouja and Salder, The Economy of Kuwait. MacMillan Press, London 1979, p.54.

TABLE 1.18 KUWAIT: VALUE OF IMPORTS AND EXPORTS SITC SECTIONS (MILLION KD)

Period / Section	Food and live animals	Beverages and tobacco	Crude materials inedible except fuels	Mineral fuels lubricants & related materials	Aminal fuels & vegetable oils and fats	Chemicals	Manufac-red goods clae-sified by materials	Machinery and transport equipment	Miscel-laneous manufac-tured articles	Commodities & transac-tions not classified according to kind	Total Imports	Total Exports
Imports												
1971	40.92	6.09	4.02	2.15	1.12	10.68	51.34	77.50	37.98	0.50	232.26	
1972	46.13	6.51	3.96	2.16	1.04	12.74	56.32	85.55	46.82	0.51	262.18	
1973	53.06	7.65	5.48	2.89	1.06	13.49	65.57	106.91	51.10	3.37	310.58	
1974	69.32	9.44	8.69	5.47	1.85	19.11	112.91	156.22	68.63	3.45	455.09	
1975	106.05	9.04	8.40	4.09	2.49	26.83	123.76	316.22	92.02	4.25	693.15	
1976	121.26	13.21	16.54	7.25	3.18	30.12	214.66	406.73	140.12	18.92	971.99	
1977	147.69	14.08	21.54	9.90	2.63	41.87	299.77	631.24	207.91	10.51	1 387.14	
Exports												
1971	6.56	0.91	0.75	859.74	0.04	6.50	4.19	12.54	1.97	0.60		893.80
1972	6.90	1.42	0.91	931.93	0.05	12.33	8.95	14.29	3,85	0.66		981.29
1973	6.09	2.46	1.94	1 059.91	0.05	19.74	13.31	17.10	6.02	0.07		1 129.69
1974	7.14	3.65	3.18	3 097.38	0.07	46.90	16.76	31.53	7.47	0.07		3 214.75
1975	7.51	1.93	3.78	2 492.74	0.10	65.90	27.79	53.52	9.57	0.14		2 662.98
1976	13.00	1.46	5.65	2 658.74	0.34	33.57	61.11	78.72	21.68	0.09		2 874.37
1977	14.87	1.16	5.03	2 557.08	0.41	34.39	64.79	78.87	35.86	0.14		2 792.60

Source: Central Bank of Kuwait - Quarterly Statistical Bulletin, January-March 1979, p.28/29.

TABLE 1.19 KUWAIT : IMPORT COMPOSITION BY TYPE OF COMMODITY 1965 - 1976 (PERCENTAGE)

Type of Commodity	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
Capital goods												
Machinery & other capital equipment	14.32	12.41	17.34	14.07	15.63	15.35	13.03	10.27	11.13	8.19	11.16	15.55
Passenger motor cars, for industries, government and non-profit service	1.93	2.18	1.89	1.90	1.70	1.93	2.12	2.60	2.54	2.10	1.26	0.95
Transport equipment, industrial	2.49	4.82	4.14	2.86	3.50	3.61	3.36	1.41	4.75	0.90	13.90	8.56
Total capital goods	18.72	19.41	23.37	18.83	20.83	20.89	18.55	14.28	18.22	10.19	26.32	25.06
Intermediate goods:												
Food & beverage for industry (primary)	3.31	3.09	3.00	2.65	2.15	2.52	3.21	3.41	3.23	3.95	2.27	2.06
Food & beverage for industry (processed)	1.07	0.20	0.19	0.19	0.07	0.09	0.10	0.10	0.28	0.27	0.23	0.14
Other industrial supplies	22.84	25.10	26.13	23.29	24.06	22.42	23.87	25.05	22.98	26.13	19.60	23.52
Fuels and lubricants primary	0.01	0.01	0.01	0.01	-	-	0.01	0.01	-	0.01	0.00	0.01
Motors spirit for vehicles acquired by industries, government & non-profit serv.	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Parts & accessories for machinery	3.78	1.99	1.95	4.99	2.08	1.95	1.91	2.35	2.17	2.20	2.60	2.55
Parts & accessories for transport equipment	1.82	4.99	4.07	1.99	5.44	4.87	5.05	5.22	4.71	5.61	3.10	4.05
Fuels & lubricants, processed (other than motor spirit)	0.94	0.90	0.88	0.81	1.17	0.83	0.99	1.05	1.07	1.23	0.58	0.58
Total Intermediate Goods	33.78	36.30	36.24	33.94	34.98	32.69	35.15	37.21	39.45	38.41	28.39	32.91
Consumption Goods:												
Food & beverage for household consumption (primary)	5.27	5.33	5.28	6.19	6.63	7.48	6.51	6.51	6.74	5.83	7.24	5.15
Food & beverage for household consumption (processed)	11.48	7.64	5.51	7.46	6.16	7.04	8.16	6.55	6.92	7.25	7.63	5.37
Passenger motor cars (other than industries and government)	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.01	6.26	7.13	5.37
Motor spirit (other than industries and government)	3.87	4.43	3.84	3.85	3.45	3.92	4.31	5.20	4.74	1.13	0.00	0.00
Non-industrial transport equipment	0.09	0.13	0.11	0.12	0.09	0.10	0.06	0.09	0.06	5.08	0.05	0.05
Other consumer goods	26.76	26.72	25.61	29.58	27.70	27.70	27.07	29.92	27.77	25.09	22.63	24.14
Total consumer goods	47.48	44.27	40.36	47.21	44.04	46.25	46.12	48.29	46.24	50.64	44.68	40.08
Goods not elsewhere specified	0.02	0.02	0.03	0.02	0.15	0.17	0.22	0.22	1.09	0.76	0.61	1.95
Total imports	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source : Central Statistical Office . Ministry of Planning. Annual Statistical Abstract, 1976, p. 268 and 1977 p.309(for 1975)& 1978 p.307(76)

TABLE 1.20 KUWAIT: BALANCE OF PAYMENTS 1966/67 - 1977 (IN MILLION KD)

Transact	1966/67	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975*	1976*	1977*
Balance of current transactions:	202.2	174.3	185.7	196.8	218.9	420.8	448.8	979.8	2 137.4	1 939.0	2 104.0	1 794.0
Transactions of the oil sector	315.4	319.2	315.5	344.2	351.3	527.9	548.5	1 084.6	2 369.3	2 289.0	2 615.0	2 587.0
Government oil revenues	292.1	293.5	277.7	291.6	321.1	500.7	504.2	989.7	2 203.5			
Expenditure of oil companies	23.3	25.7	33.0	41.5	27.8	19.8	26.1	23.0	25.0			
Transactions of K.N.P.C.	-	-	4.8	11.1	2.4	7.9	18.2	71.9	140.8			
Other current transactions	-113.2	-144.9	-129.8	-147.4	-132.4	-107.1	-99.7	-104.8	- 231.9	- 340.0	- 511.0	- 793.0
Exports F.O.B.	14.5	15.5	20.9	27.0	26.4	37.8	53.3	74.6	130.5	170.0	213.0	197.0
Imports C.I.F.	-176.1	-219.0	-213.1	-255.9	-240.6	-241.2	-266.6	-325.5	-552.6	-685.0	- 963.0	-1 123.0
Freight, insurance, travel	- 26.8	- 23.0	- 27.1	- 23.0	- 21.0	- 12.4	- 11.9	4.7	- 21.8	- 53.0	- 73.0	- 185.0
Investment income	75.2	81.6	89.5	104.5	102.8	108.7	125.5	141.4	202.6	334.0	441.0	492.0
Other	-	-	-	-	-	-	-	-	9.4			
Balance of capital transactions	- 144.3	-155.5	-125.0	-130.6	- 93.9	-102.0	-140.5	-244.-	-1 022.6	-792.0	-1 268.0	-349.0
Capital transfer	- 132.8	-154.4	-122.4	-129.2	-100.2	-105.1	-130.9	-244.7	- 894.3	-434.0	- 806.0	-207.0
Government transfers	- 15.3	- 65.9	- 49.1	- 50.1	- 40.9	- 37.6	- 46.3	90.8	- 286.7	- 36.0	- 37.0	- 68.0
Current private tranfers	- 2.8	4.5	1.8	0.8	-	- 42.5	- 11.7	- 45.0	- 75.-	- 80.0	- 92.0	-106.0
Private capital (others)1/	- 114.7	- 93.0	- 75.1	- 79.9	- 59.3	- 25.0	- 96.3	-108.9	- 532.6	-318.0	-677.0	- 33.0
Loans	- 11.5	- 1.1	- 2.6	- 1.4	6.3	3.1	- 9.6	0.7	- 128.3	-474.0	-591.0	-316.0
Government loans2/	- 5.5	4.1	3.1	3.3	4.5	7.4	- 6.1	4.4	16.7	-377.0	-520.0	-231.0
K.F.A.E.D. loans	- 6.0	- 5.2	- 5.7	- 4.7	1.8	-4.3	- 3.5	- 3.7	- 145.0	- 37.0	- 71.0	- 85.0
Balance of monetary sector	- 57.9	- 18.8	- 60.7	- 66.2	-125.0	-318.8	-308.3	-737.8	-1 114.8	-1 147.0	-836.0	-1445.0
Net commercial banks assets	- 62.0	- 1.6	- 54.0	13.0	- 24.5	- 27.6	8.4	5.3	23.3	- 27.0	94.0	- 52.0
Government assets 3/	4.1	- 17.2	- 6.7	- 79.2	-100.5	-291.2	-316.7	-743.1	-1 138.1	-1 120.0	-930.0	-1 394.0

Source: Central Statistics Office, Ministry of Planning. Annual Statistical Abstracts, 1976 p.183(for 66/67-74/75 & Khouja & Sodler: The economy of Kuwait. MacMillan Press, London 1979, p.57 (for 75/77)

1/ Including transactions by investment companies and specialized banks.
2/ Including government loans and capital transactions of the oil sector.
3/ Including the Central Bank
* A different method of compiling Balance of Payments figures was adopted in these years.

TABLE 1.21. KUWAIT: INVESTMENTS ALLOCATION IN THE FIRST AND SECOND DEVELOPMENT PLANS

Sector	Investment allocations in the First Five Year Plan 1967/68 - 1971/72		Investment Allocations in the Second Five Year Plan 1976/77 - 1980/81	
	Value (Million KD.	Percent	Value (Million KD	Percent
Agriculture	12.0	1.4	12	0.4
Manufacturing	222.8	26.6	20	0.6
Fuel and gas	70.0	8.4	1 076	31.7
Construction	177.0	21.1	705	20.8
Transport & Communication	152.2	18.2	360	10.6
Wholesale, retail trade	22.0	2.7	90	0.3
Other services	181.0	21.6	1 210	35.6
Total	837.0	100.0	3 392*	100.0

Source: Kuwait. Ministry of Planning. The Second Five Year Development Plan

* To this should be added the private sector investments of KD 1,049 million. The total will thus be KD.4,441 million.

TABLE 1:22 . KUWAIT: TOTAL INVESTMENT APPROPRIATIONS IN THE FIVE YEAR PLAN 1976/77 - 1980/81 (CONTINUED)

	Electricity and Water	Housing	Education	Health	Social Welfare.	Religion	Internal Security	Information	Government Building and public utilities	Total Investment
1.	538 909	312	116 507	133 396	68 796	16 372	34 120	20 450	76 023	1 306 169
2.	631		114 257					250		116 338
3.	373	312		132 766					8.000	147 551
4.					68 796				8 000	76 796
5.						16 372	4 440		8 000	28 812
6.				630			29 680		6 000	66 364
7.								20 200		22 200
8.			1 000						8 000	249 245
9.			1 250							114 055
10.	1 120								8 000	544 785
11.	536 785								30 023	30 023
12.									28 078	94 090
13.		705 123	126 700					5 249		120 000
14.			120 000							703 188
15.		703 188							15 578	39 202
16.		1 935						5 249		39 500
17.									12 500	19 200
18.			6 700						104 101	2 317 259
19.	538 909	705 435	243 207	133 396	68 796	16 372	34 120	25 699		1 349 089
20.		695 400							104 101	3 366 344
21.	538 909	1 400 835	243 207	133 396	68 796	16 372	34 120	25 699		1 074 557
22.			32 375						104 101	4 440 900
23.	538 909	1 400 835	275 582	133 396	68 796	16 372	34 120	25 699		414 100
24.										4 985 000
25.										

TABLE 1.23. KUWAIT: TOTAL INVESTMENT APPROPRIATIONS IN THE FIVE YEAR PLAN 1976/77 - 1980/81

	Agricul-ture	Extrac-tion	Manufac-turing	Land transport	Sea transport	Air transport	Communica-tions	Contin-gency reserve	Trade & Finance
SPECIFIC USE									
Government sectors									
1. Ministries of state	12 500	-	1 400	227 745	27 923	29 154	53 792	38 770	
2. Education								1 200	
3. Health			1 400					4 700	
4. Social Affairs and labour									
5. Justice and Awqaf									
6. Islamic Affairs									
7. Interior						29 154		900	
8. Information								2 000	
9. Public works	12 500			227 745					
10. Communications					27 923		53 792	29 970	
11. Electricity and water									
12. Others									
13. Independent & supplementary agencies			18 495	2 374	18 800			7 430	8 841
14. University of Kuwait									
15. National Housing Authority									
16. Municipality of Kuwait			4 295	2 374				930	8 841
17. General Administration of Shuaiba			14 200		18 800			6 500	
18. Others									
19. Total government sector	12 500		19 895	230 119	46 723	29 154	53 792	46 200	8 841
20. Private sector	20 700	4 900	125 100	81 556	93 600			3 870	23 959
21. Non-oil investments	33 200	4 900	144 995	311 675	140 323	29 154	53 792	50 070	32 800
22. Oil and natural gas sectors		83 799	764 482		193 900				
23. Total fixed investment	33 200	88 699	909 477	311 223	334 223	29 154	53 792	50 070	32 800
24. Contingency investment allocation									
25. TOTAL INVESTMENT									

continued...

Table No. 1.24 Kuwait: Structure of family income, 1972/1973

Monthly family income (in KD)	Kuwaitis		Non-Kuwaitis		Total	
	House-holds (%)	Share of income (%)	House-holds (%)	Share of income (%)	House-holds (%)	Share of income (%)
Less than 50	5.4	0.5	5.5	1.1	5.4	0.8
50 - 69	3.0	0.5	7.5	2.2	5.7	1.3
70 - 99	4.0	1.0	14.6	6.0	10.3	3.2
100 - 149	13.6	4.9	20.9	12.6	17.9	8.4
150 - 199	18.7	9.2	16.1	13.8	17.2	11.3
200 - 249	12.8	7.9	10.3	11.2	11.3	9.4
250 - 299	9.4	7.2	7.6	10.2	8.4	8.5
300 - 399	10.3	10.0	8.1	13.8	9.0	11.7
400 - 599	11.5	15.4	6.5	15.1	8.5	15.2
600 - 999	5.8	11.8	2.2	7.8	3.6	10.0
1000 and more	5.5	31.6	0.7	6.2	2.7	20.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Central Statistical Office - Ministry of Planning, Annual Statistical Abstract 1977, p. 224.

Chapter II

Absorptive Capacity and the Non-Manufacturing Sectors

Introduction

Inadequate capital and shortages of foreign exchange have long been considered as the main constraints on economic growth in developing economies. The recent experience in many oil producing and exporting countries, however, has cast some doubt about the general validity of the two-gaps approach to economic growth.

The large surpluses accumulated by some OPEC members replaced the investment and import gaps with savings and exports that far exceeded investment and import requirements. However, these countries found themselves constrained by a new and more complex phenomenon generally referred to as limited absorptive capacity. This refers to a general state of skill shortages, bottlenecks, size problems, shortages of materials, inadequate infrastructure, improper planning machinery, etc. Unfortunately any one of these factors is sufficient to constrain the growth process.

Even the nature of capital in these countries is a problem, since they are generally dependent upon the singly resource of oil. So it is not the case of using capital to build on other natural resources as is the case in many developing economies. The very source of capital is that single natural resource. The lack of other resources limits and constraints their ability to diversify their economies. But as oil is an exhaustible resource, whose end is in sight, they face the challenge of transforming oil or its monetary realization into physical and human capital of replacing oil as sources of income and foreign exchange earnings.

This chapter presents an assessment of non-manufacturing sectors as avenues for further development and diversification. Three broad categories will be discussed: agriculture, fishing and shipping as one category, finance, banking and re-exports as another and finally a detailed consideration of the oil sector is undertaken.

Agriculture, Fishing and Shipping

Agricultural development on a large scale appears to be an unlikely possibility given the nature of the terrain and the paucity of rainfall. Current estimates indicate that only a quarter of one per cent of the land in Kuwait is under cultivation and that at most only 8.6 per cent of the total land in Kuwait is cultivable (see Table 2.1). There is also the general problem of labour scarcity. At present, about 0.4 per cent of domestic consumption of vegetables is locally produced, 6 per cent of milk, 42 per cent of eggs and about 36 per cent of poultry and 2 per cent of meat.

There is a growing interest in poultry farms and live-stock husbandry to meet the increasing domestic demand and to reduce the heavy dependence of Kuwait on imported foods. There are also major expansions in the field of large-scale commercial production of vegetables using greenhouses and protected cropping. These efforts have been primarily constrained by the lack of water, which is now provided by deslinization plants catering primarily to residential demand.

Fishing has always been a traditional pursuit of may Kuwaitis.

Table 2.1 Land Utilization in Kuwait 1974/75

Use	Area in Hectares	%
Total Area	1781,800	100.00
Non-cultivable land	1627,951	91.37
Cultivable land	153,849	8.63
(i) Pastures	134,000	7.52
(ii) Unused Arable Land	15,382	0.86
(iii) Cultivated Land	4,467	0.25
(a) vegetables	,998	0.06
(b) fruit trees	2,269	0.12
(c) public gardens	1,300	0.07

Source: The Second Five Year Plan 1976/77 - 1980/81 Government of Kuwait, Planning Board, p. 201.

In 1972, several independent fishing companies operating in Kuwait were merged into the United fisheries of Kuwait which is 47 per cent owned by the government. The company now has a fleet of 147 ships - perhaps one of the world's largest fishing companies - and its shrimp trade has emerged as its most profitable line. The average weight of shrimp catch is now about 3.5 million pounds a year, of which half is consumed locally. A shrimp and fish processing and freezing plant has been built in the industrial zone of Shuaiba and this has improved the export potential of this activity. The government is also building a multi-million dinar fishing port that is expected to be on line soon.

Fishing activities in the Gulf have not been orderly, but since the merger of the various independent fishing companies the rationalization of the operations has proceeded smoothly. Indeed, this activity could prove to be a major activity if and when it is integrated and complemented with the necessary auxiliary activities and facilities.

Throughout history Kuwaitis have played significant role in shipping activities. In the 19th century Kuwaitis usual cargo consisted of dates bought at Basra and traded down the Gulf coast either for money or for other goods. The trade continued across the Indian Ocean as far as India or down the east coast of Africa as far as Zanzibar and Tanganika (presently Tanzania). The return journey was usually more direct, carrying mostly timber and construction materials. Kuwaiti dhows sailed these routes constantly and have been credited with hawling the major share of trade between India, Africa and the Gulf. Kuwaiti's maritime history has influenced its

pursuit of modern shipping and sea transport as possible avenues for diversification and moving into oil downstream operations. Today Kuwait has a modern merchant fleet for dry cargo and tanker ships. The Kuwait Oil Tanker Company (KOTC) is one of the oldest public shareholding corporations in Kuwait, having been established in 1957. Its paid up capital was doubled when the government became a participant in 1976. KOTC now operates 11 ships with a capacity of 2.1 million tons. The take over of British Petroleum and Gulf Oil companies by the government of Kuwait stipulated that Kuwaiti ships would be used to transport Kuwaiti oil. Kuwait has also recently moved into the area of transport of liquified gas and refined products. The Kuwait National Petroleum Company has already leased tankers from KOTC for this purpose. Kuwait has expressed its intention to handle some 60 per cent of future exports of natural gas.

Kuwait has also moved to develop its general cargo fleet as a non-oil economic activity to widen its economic base. The Kuwait Shipping Company (KSC) was established in 1965 and by the end of 1976 it became a 77 per cent public owned company, with a nominal capital of KD 21 million. The KSC has control over 47 ships with a capacity of around one million dead weight tons. In 1976, however, the whole fleet was transferred to the United Arab Shipping Company (UASC), an offshoot of OAPEC. The main participants in this new company based on KSC include Saudi Arabia, Iraq, United Arab Emirates, Qatar and Bahrain. The capital of UASC stood at KD 500 million. With major expansions expected this fleet may very well be the largest dry cargo fleet in the world.

Banking, Finance and Insurance

The openness of the Kuwaiti economy, the large surpluses accumulated on account of oil, the limited absorptive capacity of the economy and the liberal trade and exchange systems provide a fertile ground for a prosperous financial system. Indeed, the financial sector in Kuwait has assumed the potential importance expected of it and has developed into a vital economic sector with significant income and wealth. Between 1970/1971 and 1975/1976, value added of this sector had increased from less than KD 20 million to KD 151 million, or at an annual rate of growth of almost 52 per cent. The significance of this sector is perhaps better appreciated when its value added is expressed as percentage of total non-oil GDP. In 1970/1971 it represented little over 6.1 per cent of non-oil GDP, whereas in 1975/1976 it accounted for more than 15 per cent.

The rapid expansion and importance of this sector is also clearly reflected in the growth of the consolidated assets of the banking system which have more than tripled between 1971 and 1977 reaching KD 2.6 billion (approximately $9.4 billion) at end of 1977.

Apart from the Central bank which replaced the Currency Board in 1968, Kuwaiti's financial system included: six commercial banks, three specialized banks, seventeen investment companies, several insurance companies (four national companies and a number of Arab and foreign companies operating through local agents), a number of exchange dealers and stock brokers, and the recently established Social Security Authority.

The six commercial banks include: the National Bank of Kuwait established in 1952, Commercial Bank of Kuwait (1960), Gulf Bank (1960), Al-Ahli Bank (1967), Bank of Kuwait and the Middle East (1971), and Burgan Bank (1975). The first four are privately owned, the last two are jointly owned with government. With the exception of the newly formed Burgan Bank, Kuwaiti banks are among the largest banks in the Middle east. Unlike the other Gulf States, foreign banks are not allowed to operate independently in Kuwait. The law has been amended recently to admit foreign banks which are at least 50 per cent Kuwaiti owned. Major foreign banks, however, have been assisting in the management of a number of Kuwaiti banks and some even hold sizable stakes in Kuwaiti investment companies and other financial institutions.[24/]

There are three specialized banks, the Credit and Saving bank, which is fully owned by government and is principally in the business of extending soft social and real estate loans; the Real Estate Bank of Kuwait, which is privately owned and whose lending operations are mainly directed towards financing large real estate projects; and the Industrial bank of Kuwait, which is owned jointly by the government and the private sector.

The rapid expansion and prosperity of the financial sector in Kuwait is nowhere better reflected than in the substantial increase in resources an activities of the investment companies. Before 1973, there were only two such investment companies, Kuwait Investment Company (established in 1961) and Kuwait Foreign Trading, Contracting and Investment Company (1964). The first is 50 per cent

government owned and the latter 80 per cent. But since 1973, a total of fifteen new companies have been established all but one wholly privately owned. The government has been instrumental in the development of investment companies as it depended on them to invest in the Euro-Bond market, being particularly dependent on the first two companies. The role of government in the business of the investment companies has declined, as wealth is spread over a wider base and the companies are offering a broad range of services, including those typically offered by merchant banks.

The insurance market is perhaps the most competitive of the financial markets given that, on the supply side, there exists a number of underwriters. Of the four Kuwaiti insurance companies only one is partly owned by government while the rest are totally privately owned. There are also several stock brokers who transact shares of Kuwaiti business, Gulf businesses and even foreign shares. A formal stock exchange has recently been established to transact the shares of about 42 public shareholding companies that have been established in Kuwait since 1952. At the end of 1977, the volume of issued shares has been estimated at 17 million with a total book value in the order of KD 110 million and a market value of approximately KD 2.1 billion. Shares placed on the market have been restricted to about 32 million. The relatively small number of shares coupled with limited domestic investment opportunities and a high measure of liquidity has resulted in strong speculative waves. Between 1970 and 1973 the average price of shares traded increased by a factor of three and then increased by 125 per cent between 1974-1976. It is remarkable that these increases have taken place despite the absence of a formal stock exchange until 1977.

Kuwait has long intended to promote its financial sector in order to play a pivotal role in the Gulf and in the rest of the Arab world. With the exception of the Lebanese banking system, the Kuwaiti financial sector has a long lead over the financial institutions in the rest of the Middle East. Following the recent demise of the Lebanese banking services. It is not certain whether Kuwait will continue to play the central role that it is now playing if and when Leabnon is capable of re-ordering its political affairs. Nonetheless, the maturity and development of the Kuwaiti financial system over the past few years suggest a continued growth trend and the assimilation of a significant portion of the financial business in the Gulf area.

The Oil Sector

Production and Reserves

Kuwaiti's oil production, which accounted for 8.1 per cent of world production and over 31 per cent of Middle east oil output in 1960, has declined to 3.5 per cent of world production and 10.1 per cent of Middle east production in 1978. Kuwait oil reserves, however, represent 10 per cent of total world proven reserves and 19.2 per cent of Middle East reserves.

Total oil output today is only slightly higher than output in 1960 as a result of a conscious conservationist policy designed to spread oil production over a long period of time. Peak production of 1.2 billion barrels was achieved in 1973. Since then output has declined to 776.9 million barrels in 1978 or 2.13 million barrels per

TABLE 2.2 CRUDE OIL PRODUCTION

(Million barrels)

Year	KUWAIT				Middle East[2]	Kuwait as a Percent of	
	Kuwait Oil Company (KOC)	Kuwait (WAFRA)	Arabian Oil Company (AOC)[1]	Total		World	Middle East[3]
1961	600.2	29.3	3.8	633.3	2 067.1	7.7	30.6
1962	669.3	34.3	11.0	714.6	2 294.2	7.7	31.1
1963	705.5	35.6	24.2	765.2	2 524.7	8.0	30.3
1964	774.8	35.5	31.8	842.1	2 818.7	8.1	29.9
1965	791.9	36.5	33.1	861.5	3 094.3	7.7	27.8
1966	830.5	29.5	46.5	906.6	3 451.2	7.5	26.3
1967	837.7	24.8	50.9	912.4	3 690.9	7.0	24.7
1968	886.1	15.3	55.2	956.6	4 560.6	6.0	21.0
1969	940.0	12.9	58.8	1 011.7	4 522.4	6.4	22.4
1970	998.1	29.9	62.6	1 090.6	7 057.1	6.5	21.6
1971	1 067.8	33.3	65.3	1 166.4	5 873.2	6.6	19.9
1972	1 097.7	28.9	75.0	1 201.6	6 278.0	6.5	19.0
1973	1 004.8	25.8	71.9	1 102.5	7 642.6	5.5	14.4
1974	830.7	30.1	68.6	929.4	7 853.9	4.6	11.8
1975	671.0	30.3	59.4	760.7	7 043.1	3.9	10.8
1976	699.9	29.7	55.4	785.0	7 921.7	3.6	9.9
1977	650.8	32.6	34.7	718.1	8 007.0	3.2	8.9
1978	691.1	29.5	56.3	776.9	7 712.5	3.5	10.1

Source: Central Bank of Kuwait, 1978.

1/ Kuwait's share, i.e. half of Company's production.

2/ Middle East here includes Kuwait, Iran, Iraq, Qatar, Saudi Arabia and United Arab Emirates.

3/ World production amounted to 21.0 billion barrels in 1978 as against 21.8 billion barrels in 1977.

day. During the period 1972-1975 production of oil dropped by about 14 per cent per year in response to the government's desire to maintain reserves and economic stagnation in industrial countries between 1974 and 1975. In 1976, however, production increased in response to a strong demand for inventory build-ups. In 1977 production slumped again by 8 per cent mainly on account of the two-tier price system prevalent then and the difficulties encountered in marketing heavy crude. Production continued to decline in 1978 as the oil market stagnated. In 1979 oil production was increased to meet the shortages that developed in the wake of the Iranian crises (see Table 2.2).

The cost of producing crude petroleum in Kuwait is considerably lower than in any other oil producing country. This is mainly the result of favourable transportation, extraction and storage conditions. The highly productive Burgan field in southeast Kuwait is only 14-20 miles from the Gulf, and a network of gathering lines connects all fields to the storage tanks at Al-Ahmadi on a ridge which is 400 feet above sea level, six miles from the Gulf. Pipelines from the storage farms use gravity to feed oil to the terminal at Al-Ahmadi, loading by gravity rather then by use of pumps results in susbtantial cost savings and, at the same time, in faster loading rates.

Oil Companies and the Kuwaiti Government

Up until 1975 six oil companies were engaged in production and exploration in Kuwait and in the Neutral Zone.[25/] Four were foreign concessionaries, one a national compay and one a

TABLE 2.3 KUWAIT'S MAJOR OILFIELDS AND THEIR CHARACTERISTICS

Oilfield Kuwait	Discovery Date	No. of Wells	Reserves Estimates	Depth of pay zone	Gravity (P-API)
Burgan	1938	368	56,133	3,500-4,500	30-32
Magwa/Ahmadi	1951/52	178	n.a.	4,300-4,750	31.5
Minagish	1959	14	2,000	10,000	30-32
Raudhatain	1955	51	n.a.	7,700	30-32
Sabiriyah	1957	48	7,000	8,000	30-32
Umm Gudair	1962	31	n.a.	9,300	n.a.
Neutral Zone	1960	92	17,250	11,960	26-28
Wafra - Oil Structure					
Burgan	1953	47)		3,600	24.
Eocean	1954	150)	4,469	2,200	18.5
Ratawi	1955	25)		6,750	24.3

Source: Kuwait, Ministry of Oil.

joint-venture company. The foreign concessionarite companies included the Kuwait Oil Company (KOC), owned then by British Petroleum and Gulf Companies; the American Independent Oil Company (Aminoil) which was taken over by R.J. Reynolds Industries, the Japanese owned Arab Oil Company (AOC), and the Kuwait Shell Petroleum Company. The national concern was Kuwait National Petroleum Company (KNPC). The joint-venture concern, the Kuwait-Spanish Petroleum Company (KSPC), was 51 per cent, owned by (KNPC) and 49 per cent by the Hispanoil Company.

The largest and oldest among these companies was KOC. Prior to 1954 it was the only company operating in Kuwait. By 1976, however, its share had dropped to 89.2 per cent of total oil production in Kuwait. The original agreement in 1934 had given KOC the exclusive concession to produce, market and explore oil in Kuwait exclusive of the Neutral Zone for a period of 75 years. The concession was subsequently extended for another 17 years in 1951. The agreement involved meager payments and taxes for Kuwait such the the total payments received by Kuwait between 1946 and 1950 were less than $37 million for over 284.2 billion barrels. In 1951 Kuwait introduced a 50 per cent tax on oil profits which resulted in about $60 million of revenue in 1953. In 1955 the concept of posted prices was introduced according to which imported tax values of oil exports in 1956-1958 were to be assessed. Royalty payments were increased to 12.5 per cent of posted prices from the original 3 Indian Rupees per barrel. But royalties continued to be claimed as a credit against the tax liability of the companies. The change in government unit revenues per barrel was from around 70 cents per barrel in 1946-1950 to about 80 cents per barrel in the late fifties.

Following the establishment of OPEC, producing countries were successful in expensing royalties. According to this procedure, royalty on crude oil would be shown as an expense in the same way as production costs in calculating net revenues instead of being claimed as tax credit.

TABLE 2.4 1965 COMPANY PAYMENTS PER BARREL TO KUWAIT

	AL-Ahmadi 31° API U.S. Cents/Barrel
1. Posted Price	159
2. Less Marketing Allowance	0.5
3. Less Discounts (0.075%)	11.925
4. Loss Gravity Allowance (4x0.13235)	0.529
5. Less Production Costs	6.0
6. Less Royalty at 12.5%	19.875
7. Plus Former Profits	120.171
8. 50% Income Tax	60.086
9. Government Take (6+8)	79.961

Source: Khouja and Sadler, Ibid. p. 81

Discounts were to be phased out by 1973. Until the early 1970s production, pricing and equity participation were under the control of the foreign concessionaire companies. Saudi Arabia, Iran and Kuwait, however raised their posted prices and taxes in November of 1970. KOC profits tax rates were raised from 50 per cent to 55 per

cent and posted prices were increased from $1.59 to $1.68 per barrel. The Tehran and Geneva OPEC conferences brought about significant changes in the early seventies. The Teheran agreement in February 1971 fixed the income tax rate at 55 per cent and raised posted prices by 40.5 cents per barrel. The Geneva conferences in January 1972 and June 1973 addressed the problem of oil price deterioration through the depreciation of the US dollar and US inflation. The first Geneva conference produced an 8.49 per cent increase in posted prices to compensate for the dollar devaluation of December 1971. The second Geneva conference produced a formula for adjusting oil prices for future dollar depreciations by relating posted prices to a basket of currencies. In 1972 Kuwait introduced a production limit of 3 million barrels per day (MBD). The October war marked the final transition to the full ownership of oil production by the producing countries. First there was a 70 per cent increase in posted prices per barrel of 34° API crude. In Teheran on 22 December 1973, OPEC adopted the $11.65 per barrel price. On 1 January 1974, KOC was to be owned to the tune of 60 per cent by the government of Kuwait with the remaining 40 per cent left for BP and Gulf. The same agreement had also retroactively provided for a 25 per cent government participation in KOC during 1973. In 1974, royalties were increased from 12.6 per cent to 20 per cent of posted prices and income taxes from 55 per cent to 85 per cent. On 1 December 1975, Kuwait terminated BP and Gulf's concessions in Kuwait and took full ownership of KOC. BP and Gulf were awarded a five-year renewable commercial contract that granted these companies the right to purchase 950,000 barrels per day of Kuwait crude at a 15 cents per barrel discount off the market price retroactive to 6 March 1975.

In 1977 Kuwait moved to nationalize Aminoil and established in its place Al-Wafra Kuwait Oil Company. In turn, Al-Wafra was split into an operational unit that folded into KOC and a refinery unit that merged with KNPC. The Japanese-Kuwaiti Arab Oil Company remained a joint-venture but with higher taxes applied to its earnings.

The result of the change in the centres of decisions following OPEC's triumph was a curtailment of production and a rise in price. What is now expected is a greater integration and harmonization of oil production and development needs.

Moving Down Stream

The desire of Kuwait to up-grade its oil production and to capture more of the rent on its finite and non-renewable resource is obvious and understandable. Oil production is certainly different from industrial production. In many respects it is not production at all. It represents a monetization of a physical asset. It belongs perhaps more appropriately to the balance sheet of the economy than to the flow accounts of national income. This realization has motivated the producer countries to move to processing activities such as refining, transporting, and even production of petrochemicals.

We have already discussed the transportation activities of Kuwait, which represent serious attempts at integrating vertically the oil processes.

There are three refineries currently operating in Kuwait. The first is in Mina Al-Ahmadi, the second in Shuaiba and the third in the Neutral Zone. Today KNPC is charged with operating the first two refineries.

The Mina Al-Ahmadi refinery was the first to have been built in Kuwait in 1949. Its initial 25,000 barrels per day throughout capacity was raised to 30,000 barrels per day in 1952, then to 190,000 barrels per day in 1958 with the addition, that year, of two distillation units each with a capacity of 80,000 barrels per day. With the continuous growth in demand, capacity was once more increased in 1962-1963 to 250,000 barrels per day and again in 1975 to its current level of 300,000 barrels per day. However, as a result of the drop in KOC's crude oil production, since 1972 the refinery has been operating much below this level. It only processed 224,300 barrels per day in 1972, 178,100 barrels per day in 1973, 150,700 barrels per day in 1974 and 78,212 barrels per day in 1975. The Al-Ahmadi refinery covers about 85 per cent of the country's gasoline (90 octane) and gas oil requirements as well as all of its kerosene requirements.

A contract concluded on 3 October 1976, between KOC and Foster Wheeler Italian provides for the construction at Mina Al-Ahmadi of bitumen plant, costing KD 6.5 million with a capacity of 250,000 barrels per day.

The Shuaiba refinery, owned by Kuwait National petroleum Company, was built in 1966, after a three-year study. Since 1972, its initial 95,000 barrels per day capacity has been successively raised to 120,000 barrels per day, then to 140,000-150,000 barrels per day through the improvement and enlargement of the existing units.

In 1974, KNPC contracted with Italy's Snam Progetti to increase the capacity of the refinery to 180,000 darrels per day; this work was completed in August 1975.

The Shuaiba plant was the first all-hydrogen refinery capable of operating on both light and heavy crudes and of utilizing associated gas for the production of hydrogen used in the cracking units. The crude processed is supplied by KOC, mainly from the Burgan and Umm Gudair fields. The Shuaiba refinery actually processed 91,000 barrels per day in 1970, 90,900 barrels per day in 1971, 115,000 barrels per day in 1972, 129,000 barrels per day in 1973, 120,000 barrels per day in 1974 and 139,064 barrels per day in 1975. It produced in 1975, 999,500 tons of naptha, 268,300 tons of gasoline, 611,900 tons of kerosene and aviation fuel, 2,397,600 tons of diesel oil and 1,826,500 tons of fuel oil.

A contract worth KD 26 million, concluded in April 1975 between KNPC and the US firm Foster Wheeler, provided for the enlargements of the isocracking and hydrogen production units, as well as for the construction of a fourth steam generator. On 7 November 1976, Foster Wheeler completed the setting up of a new large hydrocracker with a capacity of 8,700 barrels per day of naptha, 9,600 barrels per day of aviation fuel, 11,000 barrels per day of diesel oil. A 15,000 barrels per day of fuel was added to the refinery's previous cracking capacity of (21,000 barrels per day) in the second half of 1977.

Towards the end of 1975, following a feasibility study, KNPC undertook the construction of a lube oil plant (annual capacity: 28,000 tons) at the industrial complex of Shuaiba, which was completed at the end of 1977.

The Mina Abdallah refinery, owned by American Independent Oil Company, was built in 1953, soon after the discovery of the first oilfield in the Neutral Zone (Wafra). Its initial 30,000 barrels per day capacity was raised in 1961-1962 to 100,000 barrels per day, then in 1971 to its current level of 145,000 barrels per day. Crude quantities actually processed were 77,400 barrels per day in 1970, 101,900 barrels per day in 1971, 78,900 barrels per day in 1972, 71,600 barrels per day in 1973 and 73,700 barrels per day in 1974. A fire which broke out in the plant on 27 December 1976, damaged the desulphurisation unit and halted operations. Refining operations were resumed in June 1977 after a six-month interruption.

Oil Exports

Crude Oil

The rate of crude oil production, within the maximum limit specified by the government, is determined mainly by developments in the crude oil export market. Exports of crude oil in 1978 increased by approximately 9.2 per cent after a 10 per cent decline in 1977, and by an annual average of 15 per cent in the period 1973-1975, whereas they remained almost steady in 1976 (see Table 2.5). Following Government policy to develop and promote oil-based industries the ratio of crude oil exports to total production took a downward trend, from 89 per cent in 1972 to around 82 per cent in 1977 and 1978.

South East Asian countries, mainly Japan and Singapore, continued to rank first among countries importing Kuwait crude oil, with a share of around 49 per cent of the total export in 1978. The

share of Western European countries, which had dropped to about 37 per cent, rose significantly in 1978. The rise in the share of this group has been at the expense of the share of Latin America and North American countries, whose share fell to 5.5 per cent compared to 10.4 per cent in 1977.

Refined Products

Kuwait exports a major part of its refined products, and retains only 10 per cent for local consumption. Kuwait production of refined products in 1978 maintained its 1977 level, reaching around 130.4 million barrels. The downward production trend was reversed in 1976 following the expansion of the capacity of KNPC's refinery and the increased world demand for refined products (see table 2.6). Local consumption increased considerably, from around 17,000 barrels per day in 1975 to 37,000 barrels per day in 1978, as a consequence of a growing demand for gasoline due to the increasing number of motor vehicles in the country, and increased utilization of fuel oil in state facilities and in the private sector.

New Oil Projects

The year 1978 witnessed an enormous development in the oil sector, culminating in a number of new projects, mainly:

(1) The Lube Oil Blending Plant of KNPC in Shuaiba, which was inaugrated in February 1978. This plant, with a maximum total capacity of around 28,000 tons per annum, will provide the local market with certain oils of international quality for use in motor

vehicles, heavy machinery and various industries. The plant was put into operation in decembe: 1977, and represents a means whereby oil revenues may be utilized to process consumption and end-products, and satisfy part of the country's needs for such essential materials at suitable economic cost, instead of importing them from outside at higher cost.

(2) Expansion of the Isomax Unit in Shuaiba Refinery, accomplished in July 1978, to a capacity of 44,000 barrels per day. The unit is intended to raise the hydrogen-cracking capacity to produce gas oil, to extract kerosene/diesel from heavy oil components and to improve the quality of products and their economic return.

TABLE 2.5 OIL EXPORTS

(Million Barrels)

	1971	1972[1]	1973	1974	1975	1976	1977	1978
Crude Oil	1 013.0	1 070.6	966.0	804.8	652.7	655.5	588.4	642.8
Kuwait Oil Company	946.9	934.8	894,4	736.2	594.2	598.5	553.8	586.1
Arabian Oil Company[2]	66.1	75.6	71.6	68.6	58.5	57.0	34.6	56.7
Refined Products	155.0	146.5	148.9	132.7	107.6	147.1	145.6	155.9
Kuwait Oil Company[3]	87.2	76.6	77.5	61.0	38.9	50.9	50.6	52.8
National Petroleum Co.	37.2	40.8	44.6	42.0	42.5	65.4	64.3	73.3
National Petroleum Co. (Wafra)	30.6	29.1	26.8	29.7	26.2	30.8	30.7	29.8
TOTAL	1 168.0	1 217.1	1 114.9	937.5	760.3	802.6	734.0	798.7

Source: Central Bank of Kuwait, 1978.

1/ Including a small quantity exported by former Wafra Oil Co.
2/ Kuwait's share.
3/ Including bunker and liquified petroleum gas.

(3) The new Bitumen Plant (KOC's), inaugurated in October 1978, with a total capacity of 250,000 tons per annum, which will be used to satisfy local consumption needs.

TABLE 2.6 REFINED PRODUCTS AND REFINING CAPACITY

	KOC	K N P C		
	(Admadi)	Shuaiba	Mina Abdulla	Total
Refined products (Mn. Barrels)				
1970	86.0	33.2	28.3	147.5
1971	81.5	37.1	31.3	149.9
1972	65.4	40.9	27.9	134.2
1973	64.6	45.4	25.6	135.6
1974	47.4	43.5	30.3	121.2
1975	28.2	46.2	31.4	105.8
1976	39.5	62.8	29.7	132.0
1977	37.5	55.7	33.0	126.2
1978	41.4	58.9	30.1	130.4
Refining Capacity at End of Year (Thousand bbl/day)				
1970	250	95	110	445
1974	250	135	110	495
1975	300	180	145	625
1976	300	200	145	645
1977	300	200	145	645
1978	300	200	145	645

Source: Central Bank of Kuwait, 1978.

With regard to drilling and exploration, the Burgan deep testwell programme is now in an advanced stage following completion of geophysical surverys and seismic exploratory operations. Exploratory drilling had been started on two other wells in north Kuwait in 1977.

Early in 1979 the Gas Liquafaction Plant (KOC's) was inaugurated. Total cost of the plant was $800 million, and the plant will initially be operated to produce 4.4 million tons.

Priorities in respect of projects under execution cover the following two major projects:

(1) Modification and development of Al-Ahmadi Refinery (KOC,S), at a total cost of approximately $350 million. The work is intended to modernize existing facilities and equipment, to upgrade the quality of products to international specifications, to improve operation economies in the refinery and increase production of low - sulphur fuel for local consumption in place of associated gas required for the Gas Liquefaction Plant. (2) Aromatics Plant (Petrochemical Company), intended to produce benzene and xylene, based on naphtha, at a total capacity of 300,000 metric tons per year.

Joint refinery projects with foreign partners are all intended to counter world-wide monopolies of marketing refined products. These include the Kuwait-Rumanian petrochemical and refinery project, the Kuwait-Indonesian refinery, the Kuwait-Yugoslavian Refinery and the Kuwait-Ras Al-Khaima Refinery. These projects are being considered and evaluated by the authorities in Kuwait.

Natural Gas

A large amount of natural gas is presently produced with crude oil. Up until 1972 no independent natural gas fields were in existence in Kuwait. In that year a new gas field was discovered in the Neutral Zone. Commercial utilization of the field is in its early stages.

The principal use of natural gas up until recently was in reinjection of oil fields to maintain reservoir pressures. However, manufacture of liquid petroleum gas, production of energy to meet a rising demand for electricity and water and as a raw material for petrochemicals and fertilizers are beginning to assume a significant role. The ratio of gas utilized to total gas produced has continuously risen. In 1964 it represented less than 18 per cent, in 1971 it reached 35 per cent, and by 1977 utilization was over 66 per cent. Most of LNG is exported to Japan in Kuwaiti ships.

The demand for natural gas is expected to continue rising, primarily for residential use. Also important is the new demand for industrial uses at the Shuaiba zone.

Conclusions

With oil representing a significant proportion of total government revenues, the major part of export receipts and a very high component of GDP, the desire to diversify the economy horizontally by developing other sectors and vertically by up-grading the value added derived from oil processing, is natural and understandable. Agricultural output expansion appears to provide a limited opportunity given water, labour and land shortages. Shipping and fishing are excellent activities.

TABLE 2.7 Natural Gas Production and Utilization
(In billions of cubic feet)

	1970	1971	1972	1973	1974	1975	1976	1977
1. Natural gas production	570.4	643.7	647.8	581.1	466.9	382.4	395.8	373.0
2. Natural gas utilisation	188.0	227.5	246.8	265.1	251.4	266.0	243.8	246.0
3. (2) as % of (1)	33.0	35.3	38.1	45.6	53.8	59.1	61.6	65.9

Transforming Kuwait into a financial centre for the Gulf is another avenue of diversification. The experience and maturity of the Kuwaiti financial system appears to have a significant lead over corresponding institutions in the Gulf.

Up-grading oil production and moving downstream are logical extensions of the dictates of comparative advantage. Transportation of oil and refining seem to be the early stages of this process. However, the value added additions are limited and the investment requirements appear to be too large in relationship to limited returns. On other alternative is the expansion of the industrial uses of oil. This alternative is the subject of the next chapter.

Chapter III

The Manufacturing Sector and the Economy: An Aggregate View

Introduction

Manufacturing activity in Kuwait is a recent phenomenon. The traditional economic activities were, for the most part, non-manufacturing in nature involving mainly fishing, pearling and seafaring. Shipbuilding was perhaps the only activity that could be classified as manufacturing. There were indeed, a large number of independent shop-keepers and some metalsmiths, carpenters and peddlers but they catered to small numbers of regular customers. Large-scale manufacturing did not emerge until the 1950's and even then only as part of the oil industry. The limited available capital was generally allocated to foreign trade activities.

The small size of the market, lack of indigenous skills, the outright shortages of even unskilled labour, and the openness of the economy militated against the development of manufacturing activity. However, with the increase in oil revenues and the influx of foreign labour and skills in the 1950s, these circumstances were changed. More important was the change in the Government's attitute towards industrialization.

The heavy dependence on oil, the limited opportunities in agriculture and the dependence of trade and services on the export base of oil, cast new importance on manufacturing as the single most important avenue for widening the Kuwaiti economic base and reducing the risks and vulnerabilities associated with specialization in oil

production and export and heavy dependence on investments abroad. The Government has increasingly assumed more responsibilities and engaged in more activities to promote and encourage industrial efforts and ventures. This involvement, however, is still limited, but the expectations are that it will intensify as the manufacturing sector begins to mature.

General Indicators

Total value added in manufacturing, an indicator of the performance of this sector, has increased from as little as KD 24 million in 1965/1966 to more than KD 164 million by 1975/1976. This increase implies an annual rate of growth of over 21 per cent, which is significantly higher than the implicit annual rate of growth of GDP at market prices of 15.9 per cent during the same period. This explains the increase in the share of manufacturing in total GDP from as low as 3.2 per cent in 1965/1966 to slightly over 5 per cent in 1975/1976. The rate of growth of manufacturing value added (MVA) and its low share in total GDP are the result of low initial values of manufacturing value added in the 1960s and the phenomenal rise in the oil GDP in the early 1970s. Thus the share of MVA in non-oil GDP was as high as 20.1 per cent in 1974/1975 and has more than doubled between 1965/1966 and 1975/1976.

The Kuwaiti share of MVA in total GDP in 1970/1971 was one of the lowest in the world. It fell short of that of Africa, which stood at 11.5 per cent in 1970, and much below the 17.4 per cent achieved by market oriented developing economies in the same year.

TABLE 3.1 SOME SELECTED ECONOMIC INDICATORS

(KD million; per cent)

	1965/66	1966/67	1967/68	1968/69	1969/70	1970/71	1971/72	197 /73	1973/74	1974/75	1975/76
GDP at market prices	749.0	854.0	872.0	951.0	989.0	961.0	1,346.0	1,562.0	2,111.0	3,450.0	3,279.0
Annual Rate of Growth	-	14.0	2.1	9.1	4.0	-2.8	40.1	16.0	35.1	63.4	-5.0
Value Added in Manufacturing	24.0	30.0	34.0	37.0	36.0	38.0	42.0	60.0	75.0	158.0	164.0
Annual Rate of Growth	-	25.0	13.3	8.8	-2.7	5.6	10.5	42.9	25.0	101.7	3.8
Ratio of MVA to GDP	3.2	3.5	3.9	3.9	3.7	4.0	3.1	3.8	3.6	4.6	5.0
Non-oil GDP	278.0	344.0	398.0	421.0	432.0	309.0	444.0	626.0	664.0	788.0	985.0
Annual Rate of Growth	-	23.7	15.2	5.8	2.6	-28.5	43.7	41.0	6.1	18.7	25.0
Ratio to MVA Non-oil GDP	8.6	8.7	8.5	8.8	8.3	12.3	9.5	9.6	11.3	20.1	16.6

Source: Tables in Chapter 1. obtained from the Kuwait Statistical Office, Ministry of Planning.

However, the share of MVA in non-oil GDP is slightly above Africa's. The picture is clearer when per capita manufacturing output in US dollars is considered on comparative basis. Kuwaiti per capita manufacturing output was $183.7 in 1970, whereas that of Africa stood at $16. The corresponding figure for the developed countries in the same year averaged $790.

Although the above indices are not complete or fully comparable, they nevertheless suggest that while manufacturing activity in Kuwait is over-shadowed by the events in the oil sector on a per capita basis Kuwait has significantly more manufacturing activity than other developing countries.

Further insights into the nature and structure of the manufacturing sector in Kuwait are obtained by considering the structure of its employment, productivity and the technical nature of its linkages with the rest of the sectors.

Employment in manufacturing has increased from 17.9 thousand workers in 1965 to 32.1 thousand in 1970 but fell to 24.5 thousand in 1975. The figures are not fully comparable as the 1975 data includes workers 15 years and older, whereas the data in 1965 and 1970 include workers 12 years of age and older. Between the comparable years 1965 and 1970 employment in manufacturing increased from 10 per cent of total employment to 13.7 per cent. In 1975 it stood at only 8.2 per cent. While non-Kuwaitis accounted for over 90 per cent of total employment in the manufacturing sector in 1965, this ratio declined to 81 per cent in 1970. In 1975 this ratio rose to 91 per cent. Total employment in this sector make up less than 1 per cent of total employment.

Table 3.2 EMPLOYMENT AND PRODUCTIVITY ECONOMY WIDE AND IN THE MANUFACTURING SECTOR

	1965	1970	1975
Total Employment (in 000's)	179.2	234.3	298.4
Employment in Manufacturing (in 000's)	17.9	32.1	74.5
Emp. in MAN Total employment (per cent)	10.0	13.7	8.2
GDP/ Employment (KD)	4,180.0	4,102.0	10,989.0
MVA/ Employment in MAN (KD)	1,341.0	1,184.0	6,694.0
Non-oil GDP/ Employment in non-oil (KD)	1,613.0	1,361.0	3,355.0

Source: Derived from tables in Chapter 1.

Turning to the ratio of output to input (productivity) we find that manufacturing productivity is relatively low. In 1965, for instance, total GDP per employee was KD 4,180 while in manufacturing it amounted to KD 1,341. One wonders whether the enormous productivity of the oil sector might not have been responsible for such a difference. Indeed oil explains to a large extent the difference between total GDP productivity and manufacturing productivity, but the fact that non-oil GDP per employee is higher than MVA per employee in 1965 is indicative of low productivity in the manufacturing sector in the mid sixties. The picture was not different in 1970 as total GDP productivity amounted to KD 4,102, while that in manufacturing was KD 1,184 and that in non-oil GDP was KD 1,361. In 1975, the results were different. Total GDP productivity was still significantly higher than that achieved in manufacturing but the ratio had declined from more than 3 to less than 2. Secondly, productivity per employee in manufacturing was higher than productivity per employee in the non-oil sectors. It is worth mentioning here that productivity per employee in both the total economy and in manufacturing compares very favourably with similar indices for economies. This is perhaps the result of employment of highly skilled expatriate workers with high capital intensity per worker, as we shall point out later.

Technical Linkages and Multipliers

The interdependence among productive sectors can be studies from several points of view. This section is devoted to an analysis of the types of productive sectors by grouping them according to the

pattern of output distribution and input source. The characteristics of an industry are in part describable by the proportions of its output sold to other industries for intermediate use and to final use as final demand, and also by the proportion of the ultimate factors of production, used to produce a given commodity, that are employed in the sector producing the commodity.

$$\text{Let } \phi_i = \frac{\text{total sales of intermediate product by industry } i}{\text{total output of industry } j}$$

A large ϕ_i means that industry is an important supplier of materials and semi-finished goods rather than a supplier of final goods. Actually,

$$\phi_i = \sum_{j=1}^{n} a_{ij}$$

where aij is the technical coefficient of production representing the total amount of industry i's output required to produce a single unit of output by industry j. Similarly, let λ_j denote the proportion of inputs purchased from other industries by industry j:

$$\lambda_j = \frac{\text{total purchases of intermediate inputs by industry } j}{\text{total output of industry } j}$$

or,

$$\lambda_j = \sum_{i=1}^{n} a_{ij}$$

A large λ_j means that a large proportion of industry j's inputs are made up of output of other industries. For the economy as a whole, the extent of intermediate factor use and the extent of intermediate demand are the same if we make allowance for foreign trade. The ratio of inter-sectoral use to total production of institutes a weighted average of either the ϕ's or the λ's[26].

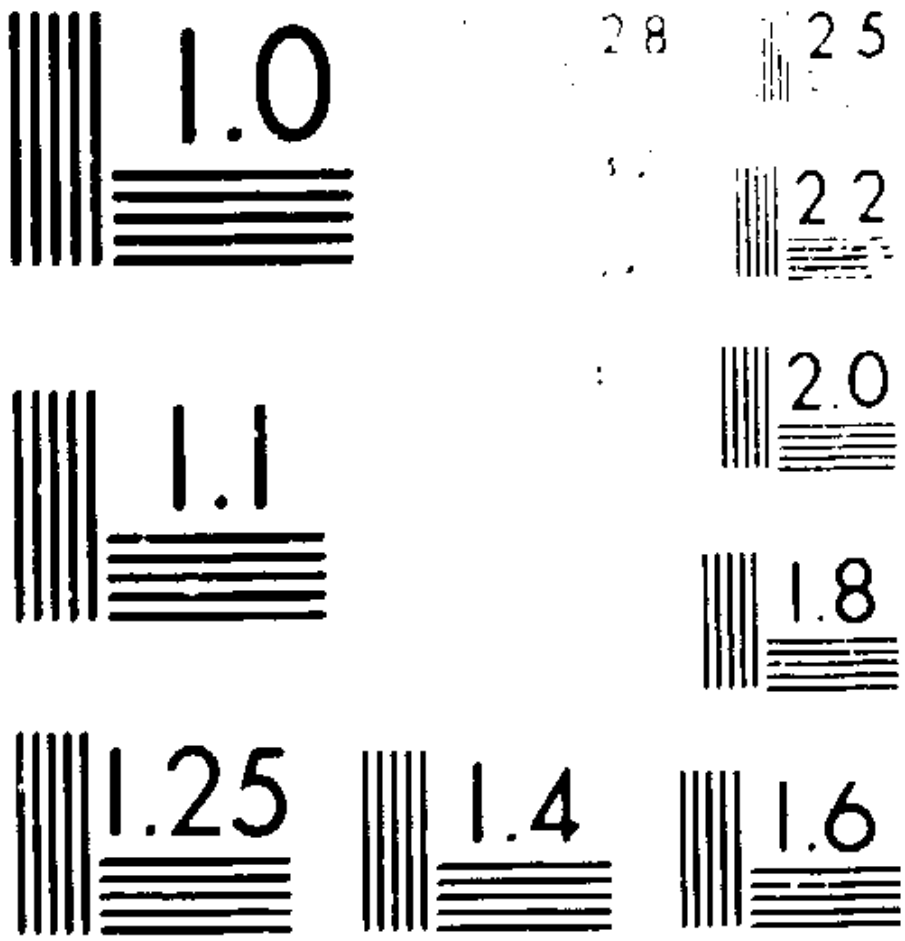
$$0.3914 = \frac{\sum_{i=1}^{n} \phi_i}{n} = \frac{\sum_{j=1}^{n} \lambda_j}{n}$$

However, there exists no necessary connection between the two measures for any single sector.

Inasmuch as this section is devoted to the study of intersectoral relatedness it involves the relation of sectors on both the demand and supply sides. Therefore, a two way classification will be used for each measure, based on whether the values of ϕ's and λ's are below or above their average values. The results are shown in tables 3.3 and 3.4 for each sector. Since the values of these coefficients depend on the classification used, a greater degree of disaggregation would certainly sharpen the distinction between final and intermediate, on the one hand, and between manufacturing and primary, on the other hand. Despite the blurring due to aggregation, the distinction between final and intermediate and manufacturing and primary is sufficiently clear and few sectors, as tables 3.3 and 3.4 reveal, are close to their mean values.

These classifications are important in the sense that they reveal important characteristics about sectors and their production map. Sectors that fall under the Final-Primary category are relatively independent of other producing sectors and provide a direct link between final users and owners of primary factors. Those in the category Intermediate-Manufacture are at the other extreme. The cost of their use of primary inputs is less than the cost of their purchased inputs from other sectors, and a larger proportion of their output goes to other producers.

Some economists have gone as far as discerning a pattern of production over time. In a rough way they maintain that Categories III,II and I may be thought of as successive stages of production.


2.8
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1.1
1.0

TABLE 3.3 TYPES OF PRODUCTIVE SECTORS (1974-1975)

I - FINAL PRIMARY PRODOCTION

	LAMBDA	THETA
8 WATER,ELECTRICITY ,GAS	.0842	.1917
11 TRANSPORTATION, COMMUNICATION	.2222	.2577
13 ALL OTHER SERVICES	.3561	.2126

II - INTERMEDIATE PRIMARY PRODUCTION

	LAMBDA	THETA
2 MINING,QUARRYING	.0165	.8967
10 TRADE	.1896	.8075
12 FINANCE,INSURANCE ,REAL ESTATES	.1613	.4028

III - FINAL MANUFACTURE

	LAMBDA	THETA
1 LIVESTOCK,AGRI-CULTURE,FISHING	.4621	.2147
4 SOFTWARE,PAPER INDUSTRIES	.4581	.2895
5 OIL REFINING, CHEMICAL INDUST.	.7647	.3223
6 NON-METALLIC INDUSTRIES	.5739	.3472
9 CONSTRUCTION	.7096	.0355

IV - INTERMEDIATE MANUFACTURE

	LAMBDA	THETA
3 FOOD MANUFACTUR-ING	.6670	.4118
7 METAL WORKING INDUSTRIES	.4231	.6983

TABLE 3.4 TYPES OF PRODUCTIVE SECTORS (1975-1976)

I - FINAL PRIMARY PRODOCTIO.

	LAMBDA	THETA
8 WATER,ELECTRICITY ,GAS	.0842	.1918
11 TRANSPORTATION, COMMUNICATION	.2222	.2578
13 ALL OTHER SERVICES	.3561	.2127

II - INTERMEDIATE PRIMARY PRODUCTION

	LAMBDA	THETA
2 MINING,QUARRYING	.0165	.8967
10 TRADE	.1896	.8076
12 FINANCE,INSURANCE ,REAL ESTATES	.1613	.4028

III - FINAL MANUFACTURE

	LAMBDA	THETA
1 LIVESTOCK,AGRI- CULTURE,FISHING	.4621	.2147
4 SOFTWARE,PAPER INDUSTRIES	.4582	.2895
5 OIL REFINING, CHEMICAL INDUST.	.7647	.3223
6 NON-METALLIC INDUSTRIES	.5739	.3473
9 CONSTRUCTION	.7096	.0355

IV - INTERMEDIATE MANUFACTURE

	LAMBDA	THETA
3 FOOD MANUFACTUR- ING	.6672	.4118
7 METAL WORKING INDUSTRIES	.4233	.6983

The average value for λ and ϕ in Kuwait in 1974/1975 is 0.3914 which is generally about average for developing countries, but almost half of the corresponding values in developed economies.[27/]

Manufacturing sectors are mainly classified as Final-Manufacturers. This implies that software, paper industries, oil refining and chemical industries, and non-metallic industries are such that they absorb inputs from other industries but ship their products for consumption or export without much processing within the economy. Food manufacturing and metal-working industries are classified among the most mature of industries i.e., under the classification of Intermediate-Manufactures, implying heavy processing and inter-sectoral linkage. None of the manufacturing sectors is among the Final-Primary category.

There is very little change in 1975/1976 from the results of 1974/1975. The average degree of processing for the whole economy is 0.391 and the same pattern of classification of sectors is preserved. The values of ϕ's and λ's associated with the different sectors are almost the same as those in 1974/1975. This is to be expected as technical indices are generally stable and fixed at least for short periods of time.

The distinctions which we have drawn so far neglect the fact that inter-sectoral transactions may involve either one or many other sectors and that the resulting patterns of interdependence might, at least a priori, take an infinite variety of forms. In particular the coefficents used only reflect direct relationships, but it is possible that an industry with little or no direct

influence on the system may generate significant impact through its indirect effects and/or what is generally referred to in the input-output jargon as induced effects.[28]

The averages of total input requirements for a unit increase in the final demand in the jth sector is the average of the sum of direct plus indirect effects, or;

$$\frac{1}{n}\sum_{i=1}^{n} c_{ij} = \frac{1}{n}\, c_{.j} \quad (j = 1, \ldots, n)$$

where cij is the element of the inverse matrix $(I-A)^{-1}$ in the i^{th} row and j^{th} column. It represents the direct and indirect requirements from industry i in response to a unit change in the final demand of the j^{th} industry. The coefficients, $\frac{1}{n}\, c.j$, are interpreted by Rasmussen "... as an estimate of the direct and indirect increase in output to be supplied by an industry chosen at random if the final demand of industry j(j=1,...,n) increases by one unit."[29]

A similar interpretation has been suggested by Rasmussen regarding the set of averages:

$$\frac{1}{n}\sum_{j=1}^{n} c_{ij} = c_{i.} \quad (j=1,\ldots,n)$$

These sets are not suited in their present form for making inter-sectoral comparisons and for this purpose they are normalized by the overall average defined as:

$$\frac{1}{n^2}\sum_{i=1}^{n}\sum_{j=1}^{n} cij = \frac{1}{n^2}\sum_{j=1}^{n} c.j = \frac{1}{n^2}\sum_{i=1}^{n} ci.$$

Let us then consider the following indices:

$$Uj = \frac{1}{n} c\cdot j / \frac{1}{n^2} \sum_{j=1}^{n} c\cdot j$$

and

$$Ui = \frac{1}{n} ci / \frac{1}{n^2} \sum_{i=1}^{n} ci.$$

Uj and Ui are interpreted as the "Index of Power of Dispersion and the Index and Sensitivity of Dispersion." They have recently, however, been interpreted to represent Hirschman's backward and forward linkage.[30/] Since the averages

$$\bar{U} = \sum_{j=1}^{n} Uj/n = \sum_{i=1}^{n} \frac{U_i}{n} = 1,$$

Ui>1 implies that the output of sector i will have to increase more than the output of other sectors in response tc a unit increase in the final demand of the whole system. Similarly, Uj>1 implies that sector j absorbs more of outputs from other sectors than the average other sectors. Since these coefficients are based on averages they are liable to be influenced by extreme values and give misleading results. Therefore we have decided to add two other indices to the Ui and Uj. The first,

$$Vj = \left[\left(\frac{1}{n-1}\right)\left(\sum_{i=1}^{n} (cij - \frac{1}{n} c\cdot j\ )\right)\right]^{1/2} / \frac{1}{n} c\cdot j \text{ for all } j = 1, \ldots, n$$

represents the coefficient of variation of the Uj (standard derivation divided by the mean). A high Vj may be interpreted as indicating that a particular industry draws heavily on one or few sectors and a low V_j indicates that a sector draws evenly from other sectors. Similarly, we calculate Vi as:

$$Vi = \left[\left(\frac{1}{n-1}\right)\left(\sum_{j=1}^{n} (cij - \frac{1}{n} ci.)^2\right)\right]^{1/2} / \frac{1}{n} ci.$$

which could be interpreted in much the same way as Vj.

We shall define a "key sector" as one which has:

(a) both Ui and Uj greater than one;

and

(b) both Vj and Vi are low relative to their averages.

This definition of key sectors may be again identified with Hirschman's definition of a key sector as one with high forward and backward linkages. Hirschman's definition, however, does not impose any restrictions on variability.

Manufacturing sectors such as food manufacting, oil refining and chemical industries, and non-metallic industries are characterized by high Uj and low Vj, i.e., high backward linkage and high absorption rates from many sectors. Again as Tables 3.5 and 3.6 reveal there were few changes between 1974/75 and 1975/76. None of the manufacturing sectors is characterized by low absorption from only a few sectors (low Uj and high Vj) whereas several non-manufacturing sectors appear to display this characteristic, notably mining and quarrying, water, electricity and gas, trade, transportation, and finance, insurance and real estate.

The only manufacturing sector with high forward linkage with many sectors (high Ui and low Vi) is the metal working sector. This suggests that manufacturing activity in Kuwait appears to be in part well positioned within the resource base of the economy and is well integrated in terms of vertical technical links. However, only the metal working industries are involved in forward processing, indicating weak horizontal links and limited processing sequences within the economy.

TABLE 3.5 KUWAIT: BACKWARD LINKAGES AND THEIR COEFFICIENTS OF VARIATIONS (1974-1975)

I - SECTORS WITH LOW BACKWARD LINKAGE AND LOW COEFFICIENT OF VARIATION

	VJ	UJ
13 ALL OTHER SERVICES	2.4239	.9656

II - SECTORS WITH HIGH BACKWARD LINKAGE AND LOW COEFFICIENT OF VARIATION

	VJ	UJ
1 LIVESTOCK, AGRICULTURE, FISHING	2.1868	1.1602
3 FOOD MANUFACTURING	2.0713	1.3474
5 OIL REFINING, CHEMICAL INDUST.	2.3080	1.1651
6 NON-METALLIC INDUSTRIES	2.3041	1.1228
9 CONSTRUCTION	1.6670	1.3346

III - SECTORS WITH LOW BACKWARD LINKAGE AND HIGH COEFFICIENT OF VARIATION

	VJ	UJ
2 MINING, QUARRYING	3.5226	.6487
8 WATER, ELECTRICITY, GAS	3.1883	.7142
10 TRADE	2.8679	.7971
11 TRANSPORTATION, COMMUNICATION	2.8703	.8 24
12 FINANCE, INSURANCE, REAL ESTATES	3.1676	.7836

IV - SECTORS WITH HIGH BACKWARD LINKAGE AND HIGH COEFFICIENT OF VARIATION

	VJ	UJ
4 SOFTWARE, PAPER INDUSTRIES	2.6420	1.0771
7 METAL WORKING INDUSTRIES	2.8502	1.0406

TABLE 3.6 KUWAIT: BACKWARD LINKAGES AND THEIR COEFFICIENTS OF VARIATIONS (1975-1976)

I - SECTORS WITH LOW BACKWARD LINKAGE AND LOW COEFFICIENT OF VARIATION

	VJ	UJ
13 ALL OTHER SERVICES	2,4238	,9655

II - SECTORS WITH HIGH BACKWARD LINKAGE AND LOW COEFFICIENT OF VARIATION

	VJ	UJ
1 LIVESTOCK,AGRI-CULTURE,FISHING	2,1868	1,1602
3 FOOD MANUFACTUR-ING	2,0709	1,3476
5 OIL REFINING, CHEMICAL INDUST,	2,3080	1,1650
6 NON-METALLIC INDUSTRIES	2,3039	1,1228
9 CONSTRUCTION	1,6669	1,3346

III - SECTORS WITH LOW BACKWARD LINKAGE AND HIGH COEFFICIENT OF VARIATION

	VJ	UJ
2 MINING,QUARRYING	3,5226	,6486
8 WATER,ELECTRICITY ,GAS	3,1881	,7142
10 TRADE	2,8678	,7971
11 TRANSPORTATION, COMMUNICATION	2,8703	,8424
12 FINANCE,INSURANCE ,REAL ESTATES	3,1675	,7835

IV - SECTORS WITH HIGH BACKWARD LINKAGE AND HIGH COEFFICIENT OF VARIATION

	VJ	UJ
4 SOFTWARE,PAPER INDUSTRIES	2,6419	1,0777
7 METAL WORKING INDUSTRIES	2,8497	1,0407

TABLE 3.7 KUWAIT: FORWARD LINKAGES AND THEIR COEFFICIENTS OF VARIATIONS (1974-1975)

I - SECTORS WITH LOW FORWARD LINKAGE AND LOW COEFFICIENT OF VARIATION

	VI	UI
5 OIL REFINING, CHEMICAL INDUST.	2.5202	.9208

II - SECTORS WITH HIGH FORWARD LINKAGE AND LOW COEFFICIENT OF VARIATION

	VI	UI
2 MINING, QUARRYING	1.7551	1.4443
7 METAL WORKING INDUSTRIES	2.2463	1.3093
10 TRADE	1.5822	1.3915
12 FINANCE, INSURANCE, REAL ESTATES	2.2867	1.0541

III - SECTORS WITH LOW FORWARD LINKAGE AND HIGH COEFFICIENT OF VARIATION

	VI	UI
1 LIVESTOCK, AGRICULTURE, FISHING	3.0652	.8392
4 SOFTWARE, PAPER INDUSTRIES	3.2063	.8961
6 NON-METALLIC INDUSTRIES	2.9269	.9018
8 WATER, ELECTRICITY, GAS	2.7948	.8083
9 CONSTRUCTION	3.4077	.8706
11 TRANSPORTATION, COMMUNICATION	2.6570	.9028
13 ALL OTHER SERVICES	2.8021	.8425

IV - SECTORS WITH HIGH FORWARD LINKAGE AND HIGH COEFFICIENT OF VARIATION

	VI	UI
3 FOOD MANUFACTURING	2.8538	1.0188

TABLE 3.8 KUWAIT: FORWARD LINKAGES AND THEIR COEFFICIENTS OF VARIATIONS (1975-1976)

I - SECTORS WITH LOW FORWARD LINKAGE AND LOW COEFFICIENT OF VARIATION

	VI	UI
5 OIL REFINING, CHEMICAL INDUST.	2.5201	.9208

II - SECTORS WITH HIGH FORWARD LINKAGE AND LOW COEFFICIENT OF VARIATION

	VI	UI
2 MINING, QUARRYING	1.7550	1.4443
7 METAL WORKING INDUSTRIES	2.2464	1.3092
10 TRADE	1.5821	1.3915
12 FINANCE, INSURANCE, REAL ESTATES	2.2866	1.0541

III - SECTORS WITH LOW FORWARD LINKAGE AND HIGH COEFFICIENT OF VARIATION

	VI	UI
1 LIVESTOCK, AGRICULTURE, FISHING	3.0650	.8392
4 SOFTWARE, PAPER INDUSTRIES	3.2061	.8961
6 NON-METALLIC INDUSTRIES	2.9265	.9018
8 WATER, ELECTRICITY, GAS	2.7943	.8083
9 CONSTRUCTION	3.4074	.6706
11 TRANSPORTATION, COMMUNICATION	2.6567	.9028
13 ALL OTHER SERVICES	2.8020	.8425

IV - SECTORS WITH HIGH FORWARD LINKAGE AND HIGH COEFFICIENT OF VARIATION

	VI	UI
3 FOOD MANUFACTURING	2.8538	1.0187

Input-output analysis allows us to consider the sum of the effects of uni· changes in final demand. They are generally known as the output multipliers. In Table 3.9 we present only the 1975/1976 multipliers as there is little difference between them and those derived for 1974/1975.

Table 3.9 OUTPUT MULTIPLIERS OF KUWAIT INDUSTRIES 1975/1976

	Sector	Multiplier	Rank
1.	Livestock, Agriculture and Fishing	1.32	11
2.	Mining and Quarrying	2.28	1
3.	Food Manufacturing	1.61	5
4.	Software, Paper Industries	1.41	9
5.	Oil Refining and Chemical Industries	1.45	6
6.	Non-Metallic Industries	1.422	8
7.	Metal Working Industries	2.06	3
8.	Water, Electricity and Gas	1.27	12
9.	Construction	1.06	13
10.	Trade	2.19	2
11.	Transportation and Communication	1.423	7
12.	Finance, Insurance and Real Estate	1.66	4
13.	All Other Services	1.33	10

The highest multiplier is associated with oil extraction (Mining and Quarrying) as is expected. The manufacturing sectors are sectors 3 to 7. The multipliers associated with these sectors are relatively low, their highest multiplier among them ranks third (Metal Working Industries) and this is the manufacturing sector with the highest forward linkage. The low multiplier values are again indicative of the limited processing activities involved in the manufacturing sectors.

It is disappointing to find that there is not a single key sector among the manufacturing sectors (i.e. high U_i and U_j and low V_i and V_j). But it is also true that there is not, according to our own definition, a single key sector in the Kuwaiti economy. This is a reflection of deficient production networks and is expected to change as the system establishes greater and more varied industrial linkages. The openness of the economy and its heavy dependence on imports has a lot to do with these deficiencies. Trade ultimately establishes linkages with the rest of the world sector at the expense of the domestic production network. This is the subject of the next section.

Trade in Manufactured Goods

The manufacturing sector in Kuwait is typical of developing economies undergoing unbalanced growth. The growth pole is often a single sector, which is primarily export oriented, utilizes the most advanced technology, has limited technical linkages with the other sectors, is basically operated and maintained by foreign workers, and contributes large proportions of government revenues, export proceeds and GDP.

On the other hand, the other sectors have limited forward and backward linkages and most of their outputs are domestically consumed. Imports constitute the largest shares of domestic utilization of output and they are primarily of the consumer goods variety.

In Kuwait the picture is a bit different. Indeed oil is the engine of growth and it contributes large proportions of export proceeds, GDP and government revenues. It is also true that the oil sector is export oriented with little of its output utilized domestically, and is operated and maintained by foreign workers. However, the other sectors in the economy show some significant backward linkages and some even show, in a relative sense, respectable forward linkages. Imports repesent high percentages of available supplies but they are primarily imports of capital and intermediate goods. In 1965 Intermediate imports were 33.8 per cent of the total import bill and capital goods were 18.7 per cent together making up more than half of total imports. In 1976 capital goods accounted for 25.1 per cent and intermediate goods 32.9 per cent for a sum of 58 per cent of total imports.

The composition of capital goods imports is even more interesting; machinery and capital equipment alone represent 15.6 per cent of total imports. Industrial supplies and primary and processed goods for industry add to a share of about 26 per cent of total imports in 1965 and about 31 per cent in 1974. Imports of consumer goods represented 47.5 per cent of total imports in 1965 but fell to 40.1 per cent in 1976.

The foreign trade percentage (i.e., exports plus imports divided by GNP) is indeed exceptionally high reaching 96 per cent in 1975. The average propensity to import, however, is relatively moderate at 19.8 per cent for the same year. This suggests that the economy is heavily dependent on trade, yet its dependence is heavily skewed towards exports rather than imports.

The commodity composition of trade is indicative of some interesting implications for manufacturing. Since we do not have a strict correspondence between production by ISIC and imports by ISIC, we shall attempt to make some general observations on the proportions of imports to domestic output at the agrregative level. Total consumer goods imported represent about 20 per cent of total consumption expenditure for the period 1970-1975, a ratio which is indeed below what is generally expected for an open economy such as Kuwait. This suggests that in total Kuwaiti sectors satisfying 80 per cent of total consumption activity. But since services represent a significant proportion of consumption, it is unrealistic to believe that Kuwaiti manufacturing is satisfying anything close to 80 per cent of the demand for manufactured consumer goods. Heuristically, we find, for instance, that total imports of food and beverages represent about 60 per cent of total domestic supply in 1974.

Imports of capital goods, however, represent a large proportion of gross fixed capital formation. In 1975 the ratio was about 75 per cent but dropped to 53 per cent in 1976. Although the ratio is unstable, it represents a significant proportion of GFCF.

TABLE 3.10 INDUSTRIAL EXPORTS OF KUWAIT, 1975 and 1976

(in thousands K.D.)

	Product	1975	1976
1.	Shrimps	1418	718
2.	Biscuits and Food Items	275	288
3.	Animal Feed	240	461
4.	Asbestos	884	1023
5.	Metal Scrap	493	456
6.	Non-metallic Scrap	299	447
7.	Chlorine	94	141
8.	Sulphur	345	1497
9.	Hydrochloric Phosphate	350	150
10.	Amonia	10660	7229
11.	Sodium Chlorate	3026	333
12.	Aluminum Sulfate	5020	150
13.	Urea	43560	18333
14.	Plastic Products	137	298
15.	Exterminators	101	91
16.	Prefabricate Building Materials	5860	5966
17.	Paper and Cellophane	113	291
18.	Steel Products	2275	4318
19.	Aluminum & Lead Products	166	2321
20.	Aluminum or Steel Containers	115	1090
21.	Electrical Products	686	573
22.	Car Chassis	354	2918
23.	Furniture	308	713
24.	Printed Matters	925	853
25.	Industrial Plastics	112	1299
26.	Other Industrial Exports	10524	2218
	Total	90300	57800

Source: Industrial Bank of Kuwait, March 1978.

Exports of industrial products appear to be restricted to the chemical and petroleum products industries as well as to the metal working industries. Total industrial exports amounted to KD 90.3 million in 1975 but dropped to KD 57.8 million in 1976. Indeed these are small numbers compared to the exports of crude petroleum, but they account for 53 per cent and 27 per cent of total non-oil exports in 1975 and 1976, respectively.

Heavy, Medium and Light Manufacturing

The structure of production of the manufacturing sector may be analyzed in terms of the general classification of its activities into light, medium and heavy. Although this classification is not very accurate, it designates sectors in terms of their end products and the sophistication of the end product processes. Generally ISIC 31, 32, 33 and 39 are designated as light, ISIC 37 and 38 as heavy, and ISIC 34, 35 and 36 as medium. According to this classification, Kuwait's manufacturing output is primarily of the medium type with over 77 per cent of total output produced by the sectors designated medium in 1966 and over 80 per cent in 1977. The lowest share of these sectors was recorded in 1972, and even then exceeded 60 per cent. Heavy industry accounted for less than 6 per cent of total manufacturing output for the period 1966-1977 and light manufacturing between 11 per cent and 26 per cent for the same period. The large savings in the shares are the result of different coverage of the industrial censuses, but the general picture is clear, the manufacturing sector of Kuwait is closely related to oil down-stream activities and is likely to continue to be dominated by

such industries given Kuwait's comparative advantage in oil. Moreover, horizontal diversification considerations appear to have been overshadowed by vertical diversification considerations. Longterm balancing of this sector, and for that matter of the economy as a whole, calls for a serious reconsideration of other viable extensions of light and heavy manufacturing sectors.

Conclusion

Manufacturing activity in Kuwait is still in its early stages. It is, however, undergoing rapid change and transformation. Oil related industries dominate and appear to have increased their dominance over time despite recent ceilings on oil production.

Linkages among sectors appear to be limited, especially forward linkages. Backward linkages appear to have been established but their magnitudes are limited. Imports satisfy the major demands for manufactured foods, and exports of manufactured goods, although more visible recently, are still limited in volume and value.

The Kuwaiti manufacturing sector generally manifests many of the characteristics of a single product developing economy. The sector is basically dualistic.

Chapter IV

The Disaggregated Manufacturing Sector: Trends and Performance 1966-1977

Introduction

Aggregate information is useful in the characterization of the overall performance of the economy and in depicting general trends and macroeconomic behaviour. However, aggregation generally masks details that are necessary for the proper designation and analysis of the structure of the system. Alternatively, a totally disaggregated system is difficult to control and to organize, details may be superflous and misleading. There is, however, a happy medium between a highly aggregative system where magnitudes are lumped indiscriminately together and a highly disaggregative system where emphasis on details is misleading, costly and cumbersome.

This Chapter shall concentrate on two-digit ISIC disaggregation, and occasionally it will venture into higher disaggregations but only to point out the significance of particular structures.

Data availability in Kuwait is far beyond what is expected of a developing economy. It is generally reliable and systematic but suffers from a fair measure of non-comparability and limited comprehensiveness. This is particularly true of manufacturing statistics collected yearly from industrial censuses conducted by the Central Statistical Office.

The first industrial census in Kuwait was carried out in 1963. It was limited in coverage and had many conceptual and procedural problems. This census preceded the Central Statistical Office (CSO) and, therefore, was conducted with limited experience and without the proper organizational structure. The second census was conducted by the CSO in 1966. It was comprehensive in coverage and included all establishments in the private and mixed sectors. Where full coverage was not possible, sample statistics were used to infer the population parameters. Service producing establishments within the industrial sector were treated in the same manner as commodity producing establishments. In 1967 the coverage was changed. Instead of including all establishments, the industrial sector was divided into two categories: the organized and the unorganized sectors. All establishments in the organized sector were included but only a selected group was covered in the unorganized sector. The 1968, 1969 and 1970 censuses were similar in structure to that of 1967 and this group, therefore, is comparable and homogenous.

In 1971 several changes were introduced. First, coverage was extended to all establishments including industrial services producing establishments. Second a special section was devoted to establishments employing ten or more workers. In 1972 the same establishments included in 1971 were covered except those producing industrial services. The same scope was preserved for the 1973 and 1974 censuses. The CSO has not published any data for 1975, 1976, 1977 and 1978. However, it was possible to obtain some summary statistics for 1977.

The tables presented in this Chapter include data derived from the various censuses between 1966 and 1974. Two subsets were distinguished for time-series analysis. The first includes 1966, 1971, 1972, 1973, 1974 and 1977. The second includes 1967, 1968, 1969 and 1970. To insure that the entries in each of the sub-series are comparable, several adjustments were introduced and these will be made explicit as the discussion proceeds.

Two approaches may be used to analyze the structure of manufacturing production of Kuwait. The various sectors may be analyzed separately considering in detail the various aspects pertinent to each. Or it may be possible to discuss the various sectors in terms of general indices of performance. The second approach was opted for in order to exploit the detailed data gathered.

Number of Establishments

In 1966 Kuwait had 2,024 establishments, and by 1977 the number of establishments increased to 3,388. The largest number of estbalishments is in textiles, wearing apparel and leather and the smallest in basic metal. Large numbers of establishments are also noted in wood and wood products; food, beverages and textiles; and fabricated metal products.

The textiles, wearing apparel and leather industries account for almost 50 per cent of the total number of establishments for most of the years, 1966 and 1971-1977. The number of establishments in this sector increased from 894 in 1966 to 1,646 in 1977. The number of establishments in food, beverages and tobacco increased from 396 in

1966 to 473 in 1973 but fell back to 397 in 1977. In wood and wood products, the number of establishments grew from 363 in 1966 to 635 in 1977, but reached the highest number in 1972. The number of establishments in paper, paper products, printing and publishing more than doubled between 1966 and 1977. Although the number of establishments in chemical, petroleum, rubber and plastic products is low, it tripled between 1966 and 1977. In non-metallic mineral products the number of establishments increased but by a very small number. In 1966 there were 116 establishments in this sector, whereas in 1977 there were 130. The basic metal industry had only one establishment in 1966, whereas there were 13 in 1977. In fabricated metals the number grew from 123 to 388.

The entries for 1971 must be interpreted with care a they include service establishments within the sector. For instance, car repair shops are included as part of the fabricated metal industry.

When the organized sector and a limited number of unorganized sectors are included, as in the figures between 1967-1970, the number of establishments is reduced to a small number. In 1967 there were only 74 establishments in total and in 1970 the total increased to 96. The largest number of establishments were in the basic metal and fabricated metals sectors.[31/] Food, beverages and tobacco had the second largest number followed by non-metallic mineral products. Small numbers of establishments were reported for wood and wood products; chemical, petroleum, rubber and plastic products; and paper products, printing and publishing.

The analytical value of the number of establishments is rather small. Data on the number of establishments, by themselves, carry

very little information save perhaps that they may indicate the degree of expected competitiveness of the market. This is an indirect measure given that the number of establishments is not an indicator of size or of the percentage share of the market. Furthermore, given the different scope and comprehensiveness of the various censuses conducted, the number displayed in Tables 4.1 and 4.3 should be interpreted and used with caution.

Gross Output

The value of gross output of a given sector is an indication of the size of the sector and when coupled with input data can be used to construct a measure of productivity. The value of gross ouput in Kuwait has increased from KD 93.1 million in 1966 to more than KD 714.2 million. Indeed some of the change is attributable to price changes; however, the major part of the change is a change in volume of production.

The largest manufacturing gross output in Kuwait is associated with the chemical, petroleum, rubber and plastic products sector. As a matter of fact more than 70 per cent of the total gross output of manufacturing is produced within this sector. The highest percentage share was recorded in 1974 when it reached 77 per cent of total manufacturing gross output. The major component of this sector's output is petroleum refining. In value terms, the gross output of this sector increased from as little as KD 65.0 million in 1966 to KD 531.5 million in 1977. This increase represents an average annual rate of increase of 21 per cent.

Gross output in food, beverages and tobacco increased from KD 8.9 million in 1966 to KD 42.9 million in 1977. However, due to the rapid increase in the chemical, petroleum, rubber and plastic products sector's output, the percentage share of this sector declined from 9.5 per cent in 1966 to 6 per cent in 1977.

The gross output of all sectors have increased in absolute terms but most have experienced declines in their relative shares between 1966 and 1977. Textile, which increased its share from less than 3 per cent in 1966 to 7.8 per cent in 1973, ended up with 2.3 per cent in 1977. Wood and wood products had a share of 5.5 per cent in 1966 which declined to 4.1 per cent in 1977. Finally, the non-metallic mineral products share in gross output declined from 7 per cent in 1966 to 5.75 per cent in 1977.

On the other hand, paper, paper products, printing and publishing increased its share from less than one per cent in 1966 to 1.6 per cent in 1977; the basic metal industry's share has also increased from 0.3 per cent to 1.32 per cent; and that of fabricated metal products, machines and equipment has increased from 3.13 per cent to 4.23 per cent during the same period.

When only the organized sector and some selected industries from the unorganized sector are taken into account, the dominance of the oil regining and chemical products sector is all the more apparent. Tables 4.7 and 4.8 indicate that the gross output of chemical, petroleum, rubber and plastic products repesents more than 80 per cent of total gross output for the years 1967-1970. As a matter of fact the share reached almost 84 per cent in 1970 before the major change in the price of oil. The high percentages reported here are

in part the result of excluding the output of the textile sector from total manufacturing gross output on account of non-comparable data over this sub-set of years. But the part explained by the exclusion of the textile sector's output is small and does not change the basic argument that the chemical, petroleum, rubber and plastic products sector is dominant in the context of the organised sector.

Value Added

The income generating capacity of a sector is measured by its contribution to value added. It is also true that value added is often considered as a proxy for the degree of processing.

Value added in the manufacturing sector in Kuwait had experienced considerable growth between 1966 and 1977. In 1966 it was below KD 76.4 million but increased to more than KD 426.4 million by 1977. The major growth has taken place in the chemical, petroleum, rubber and plastic products sector. In 1966 value added in this branch was KD 62.5 million, whereas in 1977 it amounted to KD 323.8 million. The contribution of this sector to total value added in manufacturing is more illustrative of the importance and dominance of this sector. It acounted for 82 per cent of total manufacturing value added in 1966. By 1973, its share of total value added dropped to 50.4 per cent, but by 1974 it rose again to 71.3 per cent and was as high as 76 per cent by 1977.

The food, beverages and tobacco sector is credited with the second highest contribution to manufacturing value added. Its share in 1966 was 4.3 per cent but increased to almost 11 per cent in

1973. By 1977 it had dropped to 5.8 per cent. The significant increase in the price of oil in 1974 gave disproportionate importance to value added in oil related sectors and overshadowed major changes in the structure of value added in non-oil manufacturing. In particular, non-metallic mineral products value added increased from KD 3.2 million in 1966 to KD 23.2 million in 1977, more than a seven-fold increase within a ten year period. The same increase occurred in food and beverages. Wood and wood products experienced an eight-fold increase over the same period. The largest increase, however, was that associated with value added in the basic metal industries. In 1966, value added in this sector was less than KD 145 thousand, but in 1977 it reached KD 5.1 million. Value added in fabricated metal products, machines and equipment had also experienced a considerable increase between 1966 and 1977, from as low as KD 1.9 million in 1966 to KD 18.5 million in 1977, an increase of more than nine-fold.

Table 4.11 and 4.12 present data for 1967-1970 on the organized sector and selected industries in the unorganized sector. The data in these tables indicate that value added in the food and beverages industries did not increase by a significant amount during this period. In fact value added in this sector was KD 1.8 million in 1967 and amounted to only KD 1.9 million in 1970. The same is true for wood and wood products. Value added in wood and wood products which amounted to KD 829 thousand in 1967 was only KD 834.4 thousand in 1970. Value added in non-metallic mineral products actually dropped from KD 1.4 million in 1967 to KD 939.2 thousand in 1970,

whereas that of chemicals, petroleum, rubber and plastic products increased from KD 56.2 million in 1967 to KD 63.6 million in 1970. This is a modest increase by the standards of growth of this sector in the seventies. In 1968 and 1969 there was a decline in the value added of this branch. In the basic metal products, however, it had continuously risen between 1967 and 1970, from KD 1.4 million in 1967 to KD 2.2 million in 1970.

The Capital Stock and Fixed capital Formation

The size and structure of capital are major indicators of size and are related to productivity. Capital is augmented by net fixed capital formation and thus the two are being analysed jointly.

The capital stock in manufacturing in Kuwait has increased rather substantially between 1966 and 1971. However, it declined continuously between 1971 and 1974. The capital stock in manufacturing at current prices in 1966 was put at KD 32.9 million. By 1971 it reached KD 89.4 million. It subsequently dropped to KD 78.8 million in 1973 but increased to KD 81.1 million in 1974.

Gross fixed capital formation (GFCF) in manufacturing for the same period explains the changes in the capital stock. In 1966 GFCF in manufacturing was as high as KD 18.9 million. By 1971 it dropped to KD 8.1 million and fell further to KD 3.1 million in 1972. In 1973 it had risen to KD 7.7 million and by 1974 it amounted to KD 12.9 million. In 1977 the value increased further to KD 23.9 million. The increases in 1974 and 1977 include a substantial portion that is attributable to the rise in the prices of capital goods.

As expected, the largest capital stock in manufacturing is in oil refining and chemicals. More than 85 per cent of the total capital stock in manufacturing in 1971 was in this sector. This share declined to 76 per cent in 1974 as GFCF in other manufacturing sectors rose more rapidly than GFCF in oil refining and chemicals. Thus the capital stock share of food, beverages increased to 10.5 per cent in 1974 as GFCF in this sector rose to almost 34 per cent of total GFCF in manufacturing. On the other hand, the share of wood and wood products in the total capital stock in manufacturing declined from 3.12 per cent in 1966 to 1.22 per cent in 1974 as its share in total GFCF in manufacturing declined from as high as 8.32 per cent in 1972 to less than one per cent in 1974 and increased to almost 2.5 per cent in 1977.

Since investments fluctuate, some major changes in the magnitudes and shares of GFCF and the capital stock can be seen. For instance, the share of non-metallic mineral products in manufacturing GFCF in 1966 was about 44 per cent. In 1971 the share of this branch declined to 30 per cent. However, it is misleading to compare these ratios over time. The analysis is better conducted in terms of magnitudes.

The capital stock in food, beverages and tobacco was almost KD 4.6 million in 1966, and by 1974 it reached KD 8.5 million. The bulk of investment in this branch took place in 1974, when GFCF reached KD 4.33 million. The data on the capital stock in textiles, wearing apparel and leather is apparently unreliable. Yet the figures in Table 4.13 on GFCF are consistent with a very low level of capital stock. Despite very large increases in GFCF in the wood

and wood products branch, the capital stock has increased by modest amounts between 1972 and 1974, reflecting perhaps high rates of capital consumption. Gross fixed capital formation in paper, paper products, printing and publishing was high throughout the period 1966, 1971-1973 and 1977. Indeed, the capital stock in this sector increased from KD 647.3 thousand in 1966 to KD 2.1 million in 1972 but declined to KD 1.9 million in 1974.

Since 1966, the capital stock in the chemical, petroleum, rubber and plastic products sector represented more than half of the total capital stock. In fact, it was higher in this sector than KD 15.3 million in 1966 and increased to over KD 76 million by 1971. It has subsequently declined, reaching to the value of KD 61.6 million in 1974. Gross fixed capital formation in this sector was also high. In 1966 its value reached KD 9.5 million, but dropped to as low as KD 1.3 million. By 1977 it had risen again to KD 11.1 million.

Both the capital stock and the gross fixed capital formation in the non-metallic mineral products varied widely over the period 1966-1977. In 1966 the capital stock was almost KD 10 million. In the same year GFCF was KD 8.3 million. However, by 1971 the capital stock in this sector had dropped to as low as KD 2.6 million with GFCF of less than KD 565 thousand. In 1974 GFCF in this sector had fallen to KD 282 thousand. However, in 1977 a new resurgence in investment in this sector is witnessed with a value of GFCF of KD 7.3 million. The capital stock in the basic metals industries has gone through a declining phase as well as through an upsurge. In 1966 the capital stock in this sector was as low as KD 516 thousand and by 1972 it had dropped to even lower levels reaching the value

of KD 402 thousand. In 1974, however, capital stock in basic metals increased to about KD 1.5 million and using 1977 figures on GFCF in this sector, the capital stock in 1977 is significantly higher than the corresponding value in 1974. The capital stock in fabricated metals, machinery and equipment appears to have increased continuously from 1971 onwards. In 1971 the capital stock was about KD 2 million but in 1974 it reached KD 3.7 million and GFCF in 1977 has increaed to KD 1.6 million as compared to KD 512 thousand in 1974.

The censuses of industry for the years 1967 through 1970 did not include data on the capital stock, but included information on gross fixed capital formation by sector. The pattern is not very different from that of other censuses. Chemicals, petroleum, rubber and plastics show the larget investments followed, by and in some some years dominates by, investments in food and beverages. The non-metallic mineral products sector appears to have absorbed high rates of investments also; an observation that did not occur in the other censuses.

Indeed, the data on the capital stock and/or GFCF would have had more information content had they been expressed in constant KD rather than in present market values. With price indices for 1972 onwards it is possible to generate such series for these years. There does not exist at the moment a price index for investment, although the development of such an index is highly desirable. Alternatively, it may be argued convincingly that GFCF at market prices may be deflated without serious problems by an import price index given that Kuwait imports the bulk of its capital goods. The analysis of the adequacy of data on capital and GFCF in manufacturing will be considered in another section to follow.

Employment

Employment in manufacturing which registered 25,777 workers in 1971 increased to over 26,320 workers by 1974. Although this increase is rather insignificant major increases were reported in food and beverages, textiles, paper and paper products and in chemicals, petroleum, rubber and plastics. Employment in food and beverages increased from 3,375 workers in 1966 to 4,422 in 1974. In textiles, wearing apparel and leather, the increase in employment was even more apparent. It increased from 527 workers in 1966 to 4,287 workers by 1974. In the paper and paper products sector employment increased by about fourfold between 1966 and 1974, from 431 workers to 1,268. The largest increase in employment between 1966 and 1974 took place in the chemicals, petroleum, rubber and plastic products sector. In 1966 employment in this sector was 810 workers and by 1974 it reached 5,013.

Employment behaved erratically between 1966 and 1974 in the wood and wood products sector, rising first from 2,300 workers in 1966 to 4,254 workers in 1971 and [illegible] with 2,879 workers in 1974. The same appears to be true about employment in the fabricated metal products. Although only incomplete information are available on this sector, the level of employment declined from a height of 7,280 workers in 1971 to 4,490 workers in 1974. Employment in basic metals as well as in other manufacturing industries have also declined during the period 1966-1974. However, the decline in the former group was much more pronounced than that in the latter.

In percentage terms, the fabricated metal products sector had the highest share of total manufacturing employment in 1971,

followed by wood and wood products, food and beverages, and chemicals, petroleum, rubber and plastics. By 1974, the structure of employment had changed considerably. Chemicals, petroleum, rubber and plastics showed the largest share of total manufacturing employment followed by fabricated metals, food and beverages, textiles and non-metallic minerals. The rest of the sectors showed low shares of total manufacturing employment.[32/]

Turning to the data collected from the organized sector and from some selected establishments in the unorganized sector for the years 1967-1970, we find that the pattern is not significantly different from that of 1966 and 1971-1974. In 1967, employment in non-metallic products was the largest with 1,222 workers. In 1970, employment in chemical, petroleum, rubber and plastics dominated the rest of the sectors with 2,193 workers, followed by the combined employment of basic metals and fabricated metals. Employment in food and beverages increased from 1,130 workers in 1967 to 1,429 in 1970, whereas employment in wood and wood products declined from 681 workers to 628 workers. The number of workers in paper and paper products remained almost constant between 1967 and 1970. However, employment in chemicals and the combined basic metals and fabricated metals industries more than doubled during the same period.

The proportion of foreign workers in manufacturing is high indeed and is expected to remain so for some time. In 1977 Kuwait issued 119,849 work permits of which 63,492 represented new permits. The share of manufacturing was 9.3 per cent of the total permits. The occupational distribution of the new workers was as follows: 68 per cent supervisory workers, mechanics and

carpenters; 11.6 per cent clerical workers; 9.8 per cent scientists and professionals; 8.0 per cent service workers; 1.2 per cent administrators and managers, and 0.9 per cent farm workers.

Foreign labour is not allowed under Kuwaiti laws to form labour unions and is ,therefore, unorganized. Industrialists have complained of lack of industrial discipline, high absentee rates and high turn-over rates of their employees. In the absence of seniority rights, union recourse and industrial traditions it is not surprising to have such complaints.

The size distribution of employment in manufacturing is indicative of the structure and nature of the working conditions and work relationships between workers and employees. It is also indicative of the stage of development and maturity of the pattern of production. As is clear from table 4.35, the distribution of employment is concentrated in establishments employing between 10 and 49 workers. There are a few establishments, however, that employ 50 to 99 workers and some that employ more than 99 workers.

Employment in food and beverages establishments in 1975 was concentrated in the 10-49 worker size group. There was only one establishment in this sector that employed more than 99 workers and two that employedd between 50 and 99. In textiles, the pattern of employment is of the large type with 3 establishments in the 10-49 category, another 3 in the 50-99 category and one with more than 99 workers. Leather and shoes, however, are produced in relatively small establishments. The distribution pattern in wood and wood products is concentrated in the 10-49 category with three out of four establishments belonging to it. The fourth is in the 50-99 workers category.

Establishment size in paper and paper products, printing and publishing is of the medium to large type with 16 establishments in the 10-49 worker category, 3 in the 50-99 category and 2 in the more than 99 worker category. Chemical industries are generally large in size and so is their employment size distribution. There are 19 establishments with 10 to 49 workers, 6 with 50 to 99 and 2 with more than 99 workers. Only two establishments in this sector have less than 10 workers. It is interesting to note that employment in the non-metallic mineral products industry is also of the medium to large size category with 24 establishments with 10 to 49 workers, 2 establishmetns with 50-99 workers and another 2 establishments with more than 99 workers. On the other hand, basic metal industries, have only one large establishment with more than 99 workers, two establishments with 50-99 workers, whereas there are four establishments with 10-49 workers and even three estblishments with less than ten workers. In metal fabricating, machinery and equipment, establishments are generally large size. For instance, the car industry has six establishments with employment exceeding 99 workers; aluminium has 5 establishments in the 10 49 category and one with 50-99 workers; and the construction materials industry had three establishments with 10-49 workers, two with 50-99 workers and five with more than 99 workers.

The employment profile in manufacturing in Kuwait is dominated by expatriates, concentrated in the chemical, petroleum, rubber and plastics industry, generally located in medium size establishments and the labour force is generally unorganized.

Market Orientation

Data on imports and exports of manufacturing products are not organized by manufacturing sectors. To organize them in this manner is a project in itself.[33/] An indirect calculation, however, may be made for restricted subset of sectors from the Kuwaiti input-output tables for 1974/1975 and 1975/1976. The sectors included are: food and beverages; paper and paper products; chemicals, petroleum, rubber and plastics, non-metallic mineral products; and fabricated metal products.

The column coefficients of the matrix, $\beta(I-A)^{-1}H$, sum to one.[34/] This allows us to calculate the percentage market share of each sector in satisfying any particular item of final demand. For instance export demand is satisfied to the tune of 88 per cent, by the mining and quarrying sector. This ratio increases to almost 92 per cent when exports of chemicals, petroleum, rubber and plastics are added. Metal fabricating products account for less than 1.5 per cent of total exports. Replacement investment is sustained by a share of 3 per cent from food and beverages, 4.5 per cent from software and paper products, 11 per cent from chemicals, petroleum, rubber and plastics, 10 per cent from non-metallic minerals and more than 25 per cent from metal fabricating. All in all, the manufacturing sector contributes more than 54 per cent of the demand for investment.

Metal fabricating products account for 15.7 per cent of government consumption, paper products for 7 per cent, and food and beverages for 2.5 per cent. The manufacturing sector appears to satisfy less than 18 per cent of total private consumption demand.

Food and beverages satisfy less than 3.3 per cent of total private consumption demand, paper and soft ware products less than 3.5 per cent, chemicals, oil refining less than 1.4 per cent, non-metallic mineral products less than 2/10 of one per cent, and metal fabricating less than 10 per cent.

Most of the import demand is directed towards the metal fabricating products which account for 33 per cent of the total; non-metallic minerals account for almost 4 per cent, chemicals 8 per cent, paper 8 per cent and food and beverages 5 per cent.

Although the data presented here is only for one year (1975/1976), the information is indicative of the low contribution of the manufacturing sector to total final demand. The metal fabricating sector is singled out as the largest contributor to domestic demand.

The analysis in this section is conducted in a round about manner to examine the sectoral distribution of manufacturing products (value added) in terms of demand or market categories such as exports, consumption, investment and imports. Certainly a direct statistical analysis of exports and imports of manufactured products would have beeen preferable, but sectoral data is not available. We have presented, however, in Chapter Three, Table 3.10, a detailed account of industrial exports. We have also tried in Chapter Three to associate manufacturing imports with manufacturing output.

Performance Indices

The indices of total employment, output, value added, capital stock and gross fixed capital formation by sector are indicative of

the general characteristics for the structure and pattern of manufacturing in Kuwait. They reveal very little, however, in terms of efficency, productivity and expected potential. The latter type of information is obtainable from performance indices such as the average size of capital, capital labour intensity, capital output ratios, etc. We shall turn to these indices to characterize the performance of Kuwait's manufacturing. Since there are several gaps in the information collected due caution must be exercised in interpreting the results.

Capital Intensity

The amount of capital is indicative of output potential, size and even the level of technology. Higher capital values are associated with higher volumes of output, more advanced technology, higher degrees of processing and higher labour productivity. The main indicators of capital intensity are capital per worker and capital per unit of value added. The first represents the physical assets that aid workers in production and the second is the inverse of capital productivity.

Capital per worker is highest in the chemical, petroleum, rubber and plastics sector reaching KD 29.7 thousand in 1971. The capital per worker in basic metals, food and beverages, and paper and paper products is generally higher than in the other sectors. The average capital per worker, however, is generally higher than capital per worker in all sectors other than chemicals and oil. Indeed the capital intensity of Kuwaiti manufacturing other than in the

chemicals, petroleum, rubber and plastics sector is lower than is expected of an economy with severe labour shortages. This may also be indicative of low or intermediate technology levels utilized in production.

Capital per unit of value added in Kuwaiti manufacturing is indeed low reflecting either one of two circumstances. First, it may well be the result of high average capital productivity or it may be the result of low capitalization given the small size of the Kuwaiti market. The low value of capital/value added in chemicals, petroleum, rubber and plastics is the result of high average capital productivity. Its low level in wood and wood poducts may very well be the result of an inadequate scale of operation. The variability of this index over the years is also a significant indicator of the nature and process of capital accummulation in Kuwaiti manufacturing. Given that manufacturing activity in Kuwait is of recent vintage and that new plants are added on a continuous basis, the capital-value added ratios are expected to vary widely. However, the consistent low values over a number of sectors is again indicative of low capitalization.

Gross fixed capital formation per unit of value added reveals the proportion of net income in the sector devoted to the increase of the capital stock. The data in Table 4.25 show that in only a small number of sectors is there a strong relationship between value added and GFCF. In 1973, 15 per cent of value added in food and beverages was devoted to GFCF, less than 11 per cent in chemicals, etc., and about 9 per cent in non-metallic minierals. In 1974 about 55 per cent of value added in food oand beverages is devoted to GFCF in the sector, whereas the share of GFCF in value added of the other

sectors does not exceed 7 per cent. In 1977, the non-metallic mineral products sector and the basic metals sector account for the highest and second highest ratio of GFCF to value added in manufacturing.

Two conclusions may be drawn from the data in tables 4.23, 4.24 and 4.25. First, capital per worker, capital per unit of value added and GFCF per unit of value added are, with the exception of the chemical, petroleum, rubber and plastics sector, inadequate compared with the general abundance of financial capital and foreign exchange in the country. Second, there is a significant degree of variability in these coefficients due to rapid structural change taking place in manufacturing. Given that the change is not systematic, it is unlikely that major changes in capital intensity, capital productivity and scale of production could be expected in sectors other than chemicals, petroleum, rubber and plastic proudcts for some time in the future.

Productivity

Labour productivity in manufacturing differs from sector to sector. It is exceptionally high in the chemical, petroleum, rubber and plastics sector. Between 1971 and 1974, labour productivity defined here as gross output per worker increased from KD 44.5 thousand to KD 71.5 thousand. Some of this increase is indeed the result of price changes rather than physical changes; nonetheless, average productivity in this sector is exceptionally high. Unfortunately the same levels of productivity are not duplicated in other sectors. The second highest average labour productivity is in

basic metals with KD 6.5 thousand in 1973 and KD 9.2 thousand in 1974. Food and beverages show productivity levels of KD 5.3 thousand in 1973 and KD 6.1 thousand in 1974. The rest of the sectors show productivity figures in the four thousand Kuwaiti dinars range. Productivity increases were experienced in almost all sectors, but again caution should be exercised given rapid rises in prices in this period.

In Table 4.25 we present data on value added per worker as another indicator of productivity. Chemicals, petroleum, rubber and plastics are again the most productive sectors. Yet productivity is seen to be falling, due to a faster rise in employment than in output of this sector in the 1970s.

Value added per worker in the other sectors is rather low, especially in comparison with wages per worker which are generally high. This fact translates itself into high variable cost of production and decreases the competitiveness of Kuwaiti manufacturing vis-a-vis imports and other exports.

Another measure of productivity is that of gross output by establishment. The scale of output is an important determinant of cost per unit of production and, therefore, economic viability and competitiveness. The scale of output is largest in chemical, petroleum, rubber and plastic products and it is growing larger as the data in Table 4.28 show. By 1977 gross output per establishment in the chemical, petroleumm, rubber and plastic sector reached KD 16.1 million, whereas it was as low as KD 46 thousand in wood and wood products and KD 108.2 thousand in food and beverages. In basic metals the gross output per establishment in 1977 was KD 723.1

thousand ranking second after chemicals, etc. The average for the whole manufacturing sector in 1977 was KD 211 thousand. The average has consistently increased since 1966 from a level below KD 47 thousand to the KD 211 thousand. The scale of output should be measured in terms of physical volumes, but since there do not exist industry selling price indices in manufacturing no attempt has been made to deflate the gross output series. However, the increases in the scale of output per establishment are such that increases in the physical volume of output must have taken place. For instance the increases in the wholesale price index between 1972 and 1977 was in the order of 66 per cent, whereas the value increase in food and beverages scale of output for the same period was 291 per cent, for wood and wood products 249 per cent, for paper and paper products 282 per cent, for chemicals etc. 228 per cent, and for non-metallic minerals 444 per cent. Thus increases in the physical volumes of production must have generally taken place in these sectors as the rise in their value far exceed the general price increase.[35/]

Degree of Processing

A high ratio of value added to gross output is generally interpreted as indicative of a high degree of processing within the sector. This indeed is not necessarily the case, as it may indicate also a high ratio of labour cost to total cost of production, or high rates of profit per unit of output. Each case may have to be judged separately with special consideration to the unique circumstancs involved. Furthermore, this index is generally considered to be stable and thus changes in it are often taken to

indicate strucutral change. Increases in the ratio of value added to gross output are generally interpreted as an indication of greater domestic processing and higher domestic integration of the processes of production.

The data in Table 4.29 reveal a generally unstable index that fluctuates widely from year to year. However, if 1966 and 1977 or even 1972 and 1977 are compared a clear pattern emerges. The ratio of value added to gross output is rising in food and beverages, in wood and wood products, in paper and paper products, in non-metallic minerals, and in basic metal industries. It has fallen, however, in the chemical, petroleum, rubber and plastics' sector and in fabricated metals.

The fall in this ratio in the chemical, petroleum, rubber and plastics' sector is perhaps the result of increases in output prices that were as high as the rise of input prices, in this case, oil. The fall in the fabricated metal industries, however, may have resulted from low domestic processing of imported materials.

The rise in this ratio in the other sectors may very well be the result of higher domestic utilization, but given the high labour content of most of these sectors and the high cost of labour in Kuwait per unit of output, it may be also the result of high labour costs that define much of value added in Kuwait. In general, value added per unit of output is high in Kuwait for the resons mentioned above. This is not to be expepcted in the sectors that import most of their raw materials, but it is in these sectors too that value added is high. Thus the high value added to gross output ratios are the result of low productivity of primary inputs in these sectors.

Efficiency, Performance and Size

The performance indicies discussed in Section 4.7 may not be as reliable as they have been made to appear on account of the fact that the data available on establishments and the nature of the operations of these establishments may not be accurate or homogeneous. To overcome these defects, we shall present here the performance indices of Kuwaiti manufacutring establishments in the organized sector with ten or more employees for 1973 and 1974. The data base is more homogeneous and more accurate. The results in tables 4.30 - 4.33 reveal a number of interesting characteristics:

a) There appears to be some significant asymmetry between the percentage shares of total number of establishments and employment. For instance, the chemicals, petroleum, rubber and plastics sector accounted for 22.4 per cent and 28.3 per cent of total employment in manufacturing in 1973 and 1974, respectively, whereas this sector accounted for only 7.6 per cent and 9.2 per cent of the total number of establishment in the corresponding years. This suggests that the establishment size in this sector is relatively large. The same is true for the basic metal industries' sector which accounted for less than one per cent of the number of establishments but accounted for 3 per cent of total employment. There is, however, some correspondence between these two percentage shares in 1973 and 1974 for non-metallic mineral products, food, beverages and tobacco, paper and paper products, and fabricated metals. This suggests that the establishments in these sectors are generally of average size.

On the other hand, textiles, wearing apparel and leather show a large number of estalishments with limited employment complements.

In 1973 this sector showed a percentage share of the total number of establishments of less than 8 per cent, while its employment share for the same year was about 2.3 per cent. This picture was more exaggerated in 1974, with 7.6 per cent of total establishments but with only 1.9 per cent of total manufacturing employment.

b) Gross product is almost singularly concentrated in sector number five (chemicals, etc.) with 84 per cent of total gross manufacturing output of establishments employing ten or more employees. This represents an increase over its high share of 78 per cent in 1973. The second largest share of gross output is that of food and beverages with 6.94 per cent in 1973 and 4.76 per cent in 1974. Non-metallic mineral products sector is third with 5.4 per cent and 3.8 per cent in 1973 and 1974, respectively. Fabricated metals is fourth with limited share of 4.2 per cent and 3.4 per cent in 1973 and 1974, respectively. The rest of the sectors show very small shares.

c) Value added is again highest in chemicals, petroleum, rubber and plastics. Its share of total value added, however, is lower than its share of gross output. In 1973 value added in this sector accounted for 64 per cent of total value added but its share climbed to 80 per cent in 1974. Value added in food and beverages, which accounted for 9.3 per cent in 1973, dropped to 3.9 per cent in 1974. As a matter of fact the share of every sector other than chemicals, petroleum, rubber and plastics decreased between 1973 and 1974 on account of the significant change in the value of oil. In value terms, however, only a few sectors show an absolute decline; among them are food and beverages, wood and wood products, and paper and paper products.

d) Gross fixed capital formation by sector is generally high in the various sub-sectors except in textiles and leather. It is also generally irregular and variable. It has more than tripled between 1973 and 1974 in the food and beverages sector, rising from KD 1.29 million to KD 4.297 million. In wood and wood products sector, it declined from KD 275 thousand in 1973 to KD 112 thousand in 1974. The largest values of GFCF are those in the chemical, petroleum, rubber and plastics, In 1973 GFCF in this sector was KD 4.4 million, in 1974 it increased to KD 7.3 million. Declines in GFCF have also been noted in paper and paper products, and non-metallic minerals, whereas it was almost stable in the metal fabricating industries and there was a small increase in basic metal industries.

e) In 1974, gross output of the manufacturing sector employing 10 or more workers accounted for almost 92 per cent of the total gross output of manufacturing. At the same time it accounted for almost 89 per cent of value added, 98 per cent of gross fixed capital formation and almost 68 per cent of heavily dominated by establishments with 10 or more employees and that this sector is perhaps better analyzed in terms of the indices derived for this segment of the manufacturing sector.

f) Average employment per establishment in this sector was 48 workers in 1973 and increased to 58 workers in 1974. In only three sectors did the number of workers per establishment exceeded the average in 1973 and in only two in 1974. In basic metals the average size was as large as that in chemical, petroleum, rubber and plastics. The size of employment per establishment in paper and paper products as well as wood and wood products was almost equal to

the average. In textiles, non-metallic minerals, food and beverages and fabricated metals, employment per establishment was smaller than average. It is also worth noting that, in all but one sector, the number of workers per establishment increased between 1973 and 1974.

g) Productivity measured by gross output per worker is highest as expected, in the chemical, petroleum, rubber and plastics. The magnitude of the index associated with this sector is so exceptionally high that the average is totally biased by it in such a way that no other sector's productivity is equal to or above average. Major gains in productivity were experienced by all sectors between 1973 and 1974, but particularly by chemical, etc., and basic metals. The high correlation between size and productivity is evident in these two sectors.

h) Value added per worker is relatively low. This is a very interesting indicator given that it may be explained in number of ways. First, it may be the result of low primary factor costs. this is unlikely in Kuwait. Second, it may be the result of low employment levels by the sector. This may be true in the chemical and petroleum sector, but it is doubtful that it is true for the rest of the sectors. Third, it may be due to a low value added per cent of output on account of a low degree of local processing. This feature of the data is elaborated in point (i) below.

i) Indeed value added per unit of gross output is significantly lower in the establishments with more than 10 workers than in the total manufacturing employment. Higher productivity per worker where workers are not paid their value of marginal product may lead to a low ratio of value added to gross output. But it may well be

the result of the high cost of non-primary inputs too. This is the more plausible explanation of the relatively lower value added to gross output coefficients in this case. There appears to be a general tendency for the coefficient of value added to gross output to decrease. Invariably this coefficient was lower in 1974 than in 1973. This may be the result of price distortions in the wake of oil price increases, i.e., prices of non-primary inputs have increased faster than prices of primary inputs and/or products.

j) Gross fixed capital formation per unit of value added is highest in the food and beverages sector and lowest in textiles.

If investment in Kuwait were totally financed from internal funds most sectors would on average finance their investments by devoting only a small percentage of their value added. Only in the food and beverages sector would there be a need for external sources. Seen in a different way, GFCF in Kuwait is only a small fraction of value added. This is indicative perhaps of a low GFCF in the manufacturing sector. As a percentage of gross output, GFCF in Kuwait did not exceed 3 per cent in either of 1973 or 1974. GFCF for the economy as a whole, moreover, is a very small percentage, less than 6 per cent, of NNP. Manufacturing GFCF in this category of establishments, on the other hand, is almost twice as high.

Conculsions

Kuwait's comparative advantage demonstrates itself in two sectors: chemicals and petroleum related products as well as basic metals. Very high returns to labour and capital and low costs per

unit of output (high labour productivity) are associated with these sectors. Abundant oil supplies place the Kuwaiti chemical industry in a very special and privileged position. Export potential, if well co-ordinated with neighbouring Arab producers, is high and lucrative. Other industries appear more limited in size, productivity and capital formation. They are, however, efficient considering their small size and the market constraints they face.

TABLE 4.1
NUMBER OF ESTABLISHMENTS BY ECONOMIC ACTIVITY
KUWAIT (1966,1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	397	443	433	473	461	397
32	TEXTILES, WEARING APPAREL AND LEATHER	894	N.A.	1210	1216	1214	1646
33	WOOD AND WOOD PRODUCTS	363	651	647	548	538	635
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	16	31	34	34	34	38
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	10	15	19	32	36	33
36	NON-METALLIC MINERAL PRODUCTS	116	131	133	131	126	130
37	BASIC METAL INDUSTRIES	1	246	N.A.	12	10	13
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	123	1554	N.A.	498	475	388
39	OTHER MANUFACTURING INDUSTRIES	104	76	58	74	73	109
	TOTAL	2024	3147	2534	3018	2967	3388

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.2
NUMBER OF ESTABLISHMENTS BY ECONOMIC ACTIVITY
PERCENTAGES TO TOTAL
KUWAIT (1966,1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	19.61	14.08	17.09	15.67	15.54	11.72
32	TEXTILES, WEARING APPAREL AND LEATHER	44.17	N.A.	47.75	40.29	40.92	48.58
33	WOOD AND WOOD PRODUCTS	17.93	20.69	25.53	18.16	18.13	18.74
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.79	.99	1.34	1.13	1.15	1.12
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.49	.48	.75	1.06	1.21	.97
36	NON-METALLIC MINERAL PRODUCTS	5.73	4.16	5.25	4.34	4.25	3.84
37	BASIC METAL INDUSTRIES	.05	7.82	N.A.	.40	.34	.38
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	6.08	49.38	N.A.	16.50	16.01	11.45
39	OTHER MANUFACTURING INDUSTRIES	5.14	2.41	2.29	2.45	2.46	3.19
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.3
NUMBER OF ESTABLISHMENTS BY ECONOMIC ACTIVITY
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	15	14	15	16
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	11	14	13	14
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	5	7	7	7
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	7	9	9	9
36	NON-METALLIC MINERAL PRODUCTS	10	12	14	12
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	25	28	35	37
39	OTHER MANUFACTURING INDUSTRIES	1	N.A.	N.A.	1
	TOTAL	74	84	93	96

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.4
NUMBER OF ESTABLISHMENTS BY ECONOMIC ACTIVITY
PERCENTAGES TO TOTAL
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	20.27	16.67	16.13	16.67
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	14.86	16.67	13.98	14.58
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	6.76	8.33	7.53	7.29
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	9.46	10.71	9.68	9.38
36	NON-METALLIC MINERAL PRODUCTS	13.51	14.29	15.05	12.50
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	33.78	33.33	37.63	38.54
39	OTHER MANUFACTURING INDUSTRIES	1.35	N.A.	N.A.	1.04
	TOTAL	100.00	100.00	100.00	100.00

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.5
GROSS OUTPUT IN PRODUCER,S VALUE BY ECONOMIC ACTIVITY
KUWAIT (1966,1971-1974, AND 1977)
(VALUES IN THOUSANDS OF K,D,)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	8868.2	15484.8	16431.9	23401.5	26386.0	42942.0
32	TEXTILES, WEARING APPAREL AND LEATHER	2695.8	4999.2	6521.8	21292.6	19283.0	16408.0
33	WOOD AND WOOD PRODUCTS	5115.7	11512.8	12013.7	11150.5	12424.0	29238.0
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	873.9	2623.4	3607.7	3833.8	4945.5	11362.0
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	65001.3	113819.1	134647.1	181065.0	358180.7	531478.0
36	NON-METALLIC MINERAL PRODUCTS	6512.5	8732.9	9565.9	13380.8	18092.4	41067.0
37	BASIC METAL INDUSTRIES	295.5	1229.1	2395.7	2746.7	4970.1	9400.0
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	2913.8	5981.9	6595.6	15686.6	19801.9	30180.0
39	OTHER MANUFACTURING INDUSTRIES	875.7	359.1	899.3	769.7	2620.6	2089.0
	TOTAL	93152.4	164742.3	192678.7	273327.2	467204.2	714164.0

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.6
GROSS OUTPUT IN PRODUCER'S VALUE BY ECONOMIC ACTIVITY
PERCENTAGES TO TOTAL
KUWAIT (1966,1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	9,52	9,40	8,53	8,56	5,75	6,01
32	TEXTILES, WEARING APPAREL AND LEATHER	2,89	3,03	3,38	7,79	4,13	2,30
33	WOOD AND WOOD PRODUCTS	5,49	6,99	6,24	4,08	2,66	4,09
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	,94	1,59	1,87	1,40	1,06	1,59
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	69,78	69,09	69,88	66,24	76,66	74,42
36	NON-METALLIC MINERAL PRODUCTS	6,99	5,30	4,96	4,90	3,87	5,75
37	BASIC METAL INDUSTRIES	,32	,75	1,24	1,00	1,06	1,32
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	3,13	3,63	3,42	5,74	4,24	4,23
39	OTHER MANUFACTURING INDUSTRIES	,94	,22	,47	,28	,56	,29
	TOTAL	100,00	100,00	100,00	100,00	100,00	100,00

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.7
GROSS OUTPUT IN PRODUCER'S VALUE BY ECONOMIC ACTIVITY
KUWAIT (1967-1970)
(VALUES IN THOUSANDS OF K.D.)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	5688.7	6336.1	7115.2	7395.1
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	1690.4	1876.8	1594.2	1690.1
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	439.4	577.9	527.7	533.6
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	61179.1	68983.6	58570.6	90877.6
36	NON-METALLIC MINERAL PRODUCTS	3514.9	2818.7	3541.9	3369.5
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	2503.3	2772.6	3930.0	4385.8
39	OTHER MANUFACTURING INDUSTRIES	27.5	N.A.	N.A.	62.0
	TOTAL	75043.3	83365.7	75279.6	108303.7

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.8
GROSS OUTPUT IN PRODUCER'S VALUE BY ECONOMIC ACTIVITY
PERCENTAGES TO TOTAL
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	7,58	7,60	9,45	6,82
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	2,25	2,25	2,12	1,56
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	,59	,69	,70	,49
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	81,53	82,75	77,80	83,91
36	NON-METALLIC MINERAL PRODUCTS	4,68	3,38	4,70	3,11
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	3,34	3,33	5,22	4,05
39	OTHER MANUFACTURING INDUSTRIES	,04	N.A.	N.A.	,06
	TOTAL	100,00	100,00	100,00	100,00

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.9
VALUE ADDED (NET) BY ECONOMIC ACTIVITY
KUWAIT (1966,1971-1974, AND 1977)
(VALUES IN THOUSANDS OF K.D.)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	3285.8	6366.1	7339.7	9279.5	7948.7	24804.0
32	TEXTILES, WEARING APPAREL AND LEATHER	2181.7	4045.9	5461.0	8226.7	7391.8	3549.0
33	WOOD AND WOOD PRODUCTS	2309.6	5805.3	6230.9	5277.0	5420.8	16489.0
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	543.4	1555.1	2454.8	2273.0	2077.9	9256.0
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	62515.4	88140.1	38191.0	42780.0	109519.2	323873.0
36	NON-METALLIC MINERAL PRODUCTS	3183.2	4476.0	4922.2	6548.7	8166.4	23244.0
37	BASIC METAL INDUSTRIES	145.8	606.4	712.1	1196.7	1983.3	5086.0
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	1917.3	3936.2	4051.5	8862.7	10324.9	18531.0
39	OTHER MANUFACTURING INDUSTRIES	373.3	280.0	493.6	440.1	730.0	1454.0
	TOTAL	76455.5	115211.1	70056.8	84884.4	153563.0	426366.0

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.10
VALUE ADDED (NET) BY ECONOMIC ACTIVITY
PERCENTAGES TO TOTAL
KUWAIT (1966,1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	4,30	5,53	10,48	10,93	5,18	5,84
32	TEXTILES, WEARING APPAREL AND LEATHER	2,05	3,51	7,80	9,69	4,81	,83
33	WOOD AND WOOD PRODUCTS	3,02	5,04	8,89	6,22	3,53	3,87
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	,71	1,35	3,50	2,68	1,35	2,17
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	81,77	76,50	54,51	50,40	71,32	75,96
36	NON-METALLIC MINERAL PRODUCTS	4,16	3,89	7,03	7,71	5,32	5,45
37	BASIC METAL INDUSTRIES	,19	,53	1,30	1,41	1,29	1,19
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	2,51	3,42	5,78	10,44	6,72	4,35
39	OTHER MANUFACTURING INDUSTRIES	,49	,24	,70	,52	,48	,34
	TOTAL	100,00	100,00	100,00	100,00	100,00	100,00

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.11
VALUE ADDED (NET) BY ECONOMIC ACTIVITY
KUWAIT (1967-1970)
(VALUES IN THOUSANDS OF K.D.)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	1815.9	2025.2	2039.5	1955.8
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	829.0	990.9	796.9	834.4
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	219.5	177.0	216.0	253.6
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	56297.5	58084.5	30862.8	63592.4
36	NON-METALLIC MINERAL PRODUCTS	1405.9	1173.4	1554.9	939.2
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	1439.3	1489.5	1811.9	2175.6
39	OTHER MANUFACTURING INDUSTRIES	4.8	N.A.	N.A.	29.1
	TOTAL	62011.9	63940.5	37282.0	69780.1

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.12
VALUE ADDED (NET) BY ECONOMIC ACTIVITY
PERCENTAGES TO TOTAL
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	2.93	3.17	5.47	2.80
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	1.34	1.55	2.14	1.20
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.35	.28	.58	.36
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	90.78	90.84	82.78	91.13
36	NON-METALLIC MINERAL PRODUCTS	2.27	1.84	4.17	1.35
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	2.32	2.33	4.86	3.12
39	OTHER MANUFACTURING INDUSTRIES	.01	N.A.	N.A.	.04
	TOTAL	100.00	100.00	100.00	100.00

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.13
GROSS FIXED CAPITAL FORMATION BY ECONOMIC ACTIVITY
KUWAIT (1966,1971-1974, AND 1977)
(VALUES IN THOUSANDS OF K.D.)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	638.5	745.3	706.0	1379.1	4330.1	1706.0
32	TEXTILES, WEARING APPAREL AND LEATHER	16.5	56.4	32.8	93.2	38.1	87.0
33	WOOD AND WOOD PRODUCTS	202.6	281.6	259.5	348.0	99.3	595.0
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	165.7	172.0	254.3	183.5	83.1	442.0
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	9409.9	5495.2	1253.5	4402.2	7398.7	11042.0
36	NON-METALLIC MINERAL PRODUCTS	8281.5	564.5	207.1	595.0	282.8	7273.0
37	BASIC METAL INDUSTRIES	69.5	161.2	13.7	80.4	139.8	1133.0
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	123.0	623.8	342.4	635.6	512.4	1630.0
39	OTHER MANUFACTURING INDUSTRIES	1.8	.6	51.5	11.0	24.2	0.0
	TOTAL	18909.0	8100.6	3120.8	7728.0	12908.5	23998.0

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.14
GROSS FIXED CAPITAL FORMATION BY ECONOMIC ACTIVITY
PERCENTAGES TO TOTAL
KUWAIT (1966,1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	197?
31	FOOD, BEVERAGES AND TOBACCO	3,38	9,20	22,62	17,85	33,54	7,45
32	TEXTILES, WEARING APPAREL AND LEATHER	,09	,70	1,05	1,21	,30	,36
33	WOOD AND WOOD PRODUCTS	1,07	3,48	8,32	4,50	,77	2,48
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	,88	2,12	8,15	2,37	,64	1,84
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	49,76	67,84	40,17	56,96	57,32	46,03
36	NON-METALLIC MINERAL PRODUCTS	43,80	6,97	6,64	7,70	2,19	30,32
37	BASIC METAL INDUSTRIES	,37	1,99	,44	1,04	1,08	4,72
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	,65	7,70	10,97	8,22	3,97	6,80
39	OTHER MANUFACTURING INDUSTRIES	,01	,01	1,65	,14	,19	0,00
	TOTAL	100,00	100,00	100,00	100,00	100,00	100,00

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.15
GROSS FIXED CAPITAL FORMATION BY ECONOMIC ACTIVITY
KUWAIT (1967-1970)
(VALUES IN THOUSANDS OF K.D.)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	1004.5	896.9	1449.1	1021.5
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	0.0	0.0	0.0	0.0
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	79.3	116.6	436.9	107.7
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	647.0	7620.2	1362.0	2085.0
36	NON-METALLIC MINERAL PRODUCTS	425.4	313.0	700.3	652.9
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	83.3	200.2	443.9	322.5
39	OTHER MANUFACTURING INDUSTRIES	0.0	N.A.	N.A.	4.4
	TOTAL	2239.5	9146.9	4392.2	4194.0

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.16
GROSS FIXED CAPITAL FORMATION BY ECONOMIC ACTIVITY
PERCENTAGES TO TOTAL
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	44.85	9.81	32.99	24.36
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	0.00	0.00	0.00	0.00
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	3.54	1.27	9.95	2.57
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	28.89	83.31	31.01	49.71
36	NON-METALLIC MINERAL PRODUCTS	19.00	3.42	15.94	15.57
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	3.72	2.19	10.11	7.69
39	OTHER MANUFACTURING INDUSTRIES	0.00	N.A.	N.A.	.10
	TOTAL	100.00	100.00	100.00	100.00

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.17
TOTAL CAPITAL STOCK BY ECONOMIC ACTIVITY
KUWAIT (1966,1971-1974, AND 1977)
(VALUES IN THOUSANDS OF K.D.)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	4513.7	5291.7	6218.6	5739.7	8454.4	N.A.
32	TEXTILES, WEARING APPAREL AND LEATHER	221.4	524.3	555.6	49.1	42.7	N.A.
33	WOOD AND WOOD PRODUCTS	1028.5	1107.4	1695.5	860.1	988.1	N.A.
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	647.3	1267.7	2122.7	1641.2	1907.9	N.A.
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	15326.6	76097.8	67935.6	64289.2	61582.9	N.A.
36	NON-METALLIC MINERAL PRODUCTS	9965.9	2611.5	2752.7	3180.3	3027.0	N.A.
37	BASIC METAL INDUSTRIES	516.5	455.3	402.1	587.2	1423.8	N.A.
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	731.9	1926.3	1931.3	2527.6	3682.2	N.A.
39	OTHER MANUFACTURING INDUSTRIES	30.5	84.5	255.9	14.4	21.2	N.A.
	TOTAL	32982.3	89366.5	83870.0	78889.8	81130.2	N.A.

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.15
TOTAL CAPITAL STOCK BY ECONOMIC ACTIVITY
PERCENTAGES TO TOTAL
KUWAIT (1966,1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	13.69	5.92	7.41	7.28	10.42	N.A.
32	TEXTILES, WEARING APPAREL AND LEATHER	.67	.59	.66	.06	.05	N.A.
33	WOOD AND WOOD PRODUCTS	3.12	1.24	2.02	1.09	1.22	N.A.
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	1.96	1.42	2.53	2.08	2.35	N.A.
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	46.47	85.15	81.00	81.49	75.91	N.A.
36	NON-METALLIC MINERAL PRODUCTS	30.22	2.92	3.28	4.03	3.73	N.A.
37	BASIC METAL INDUSTRIES	1.57	.51	.48	.74	1.75	N.A.
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	2.22	2.16	2.30	3.20	4.54	N.A.
39	OTHER MANUFACTURING INDUSTRIES	.09	.09	.31	.02	.03	N.A.
	TOTAL	100.00	100.00	100.00	100.00	100.00	N.A.

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.19
NUMBER OF EMPLOYEES BY ECONOMIC ACTIVITY
KUWAIT (1966,1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	3375	4037	3981	4367	4422	N.A.
32	TEXTILES, WEARING APPAREL AND LEATHER	527	977	N.A.	4162	4287	N.A.
33	WOOD AND WOOD PRODUCTS	2300	4254	4085	2847	2879	N.A.
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	431	970	1116	1245	1268	N.A.
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	810	2558	2803	3601	5013	N.A.
36	NON-METALLIC MINERAL PRODUCTS	2629	3180	3348	3271	3173	N.A.
37	BASIC METAL INDUSTRIES	N.A.	2214	N.A.	421	538	N.A.
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	N.A.	7280	N.A.	4422	4490	N.A.
39	OTHER MANUFACTURING INDUSTRIES	293	307	371	255	250	N.A.
	TOTAL	10365	25777	15704	24591	26320	N.A.

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.20
NUMBER OF EMPLOYEES BY ECONOMIC ACTIVITY
PERCENTAGES TO TOTAL
KUWAIT (1966,1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	32,56	15,66	25,35	17,76	16,80	N,A,
32	TEXTILES, WEARING APPAREL AND LEATHER	5,08	3,79	N,A,	16,92	16,29	N,A,
33	WOOD AND WOOD PRODUCTS	22,19	16,50	26,01	11,58	10,94	N,A,
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	4,16	3,76	7,11	5,06	4,82	N,A,
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	7,81	9,92	17,85	14,64	19,05	N,A,
36	NON-METALLIC MINERAL PRODUCTS	25,36	12,34	21,32	13,30	12,06	N,A,
37	BASIC METAL INDUSTRIES	N,A,	8,59	N,A,	1,71	2,04	N,A,
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	N,A,	28,24	N,A,	17,98	17,06	N,A,
39	OTHER MANUFACTURING INDUSTRIES	2,83	1,19	2,36	1,04	,95	N,A,
	TOTAL	100,00	100,00	100,00	100,00	100,00	N,A,

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.21
NUMBER OF EMPLOYEES BY ECONOMIC ACTIVITY
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	1130	1229	1339	1425
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	681	728	633	623
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	226	231	232	212
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	1032	1990	2073	2193
36	NON-METALLIC MINERAL PRODUCTS	1222	1130	1268	1344
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	777	904	1395	1792
39	OTHER MANUFACTURING INDUSTRIES	2	N.A.	N.A.	14
	TOTAL	5070	6212	7010	7621

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.22
NUMBER OF EMPLOYEES BY ECONOMIC ACTIVITY
PERCENTAGES TO TOTAL
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	22.29	19.78	19.81	18.74
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	13.43	11.72	9.03	8.23
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	4.46	3.72	3.31	2.87
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	20.36	32.03	29.57	28.75
36	NON-METALLIC MINERAL PRODUCTS	24.10	18.19	18.37	17.62
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	15.33	14.55	19.90	23.59
39	OTHER MANUFACTURING INDUSTRIES	.04	N.A.	N.A.	.18
	TOTAL	100.00	100.00	100.00	100.00

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.23
CAPITAL PER EMPLOYMENT
(VALUES IN THOUSANDS OF K.D.)
KUWAIT (1966,1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	1,34	1,31	1,56	1,31	1,91	N.A.
32	TEXTILES, WEARING APPAREL AND LEATHER	.42	,54	N.A.	.01	.01	N.A.
33	WOOD AND WOOD PRODUCTS	,45	,26	,42	,20	,34	N.A.
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	1,50	1,31	1,90	1,32	1,50	N.A.
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	18,92	29,75	24,24	17,85	12,28	N.A.
36	NON-METALLIC MINERAL PRODUCTS	3,79	,82	,82	,97	,95	N.A.
37	BASIC METAL INDUSTRIES	N.A.	,21	N.A.	1,39	2,65	N.A.
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	N.A.	,26	N.A.	,57	,82	N.A.
39	OTHER MANUFACTURING INDUSTRIES	,10	,28	,69	,06	,08	N.A.
	TOTAL	3,18	3,47	5,34	3,21	3,08	N.A.

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.24
CAPITAL PER VALUE ADDED
VALUES IN K.D.
KUWAIT (1966, 1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	1.374	.831	.867	.619	1.064	N.A.
32	TEXTILES, WEARING APPAREL AND LEATHER	.101	.130	.102	.006	.006	N.A.
33	WOOD AND WOOD PRODUCTS	.445	.191	.272	.163	.182	N.A.
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	1.191	.815	.865	.722	.918	N.A.
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.245	.863	1.779	1.503	.562	N.A.
36	NON-METALLIC MINERAL PRODUCTS	3.131	.583	.559	.486	.371	N.A.
37	BASIC METAL INDUSTRIES	3.543	.751	.441	.491	.710	N.A.
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.382	.489	.477	.285	.357	N.A.
39	OTHER MANUFACTURING INDUSTRIES	.082	.302	.518	.033	.029	N.A.
	TOTAL	.431	.776	1.197	.929	.528	N.A.

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.25
GROSS CAPITAL FORMATION PER VALUE ADDED
VALUES IN K.D.
KUWAIT (1966, 1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	.194	.117	.096	.149	.545	.072
32	TEXTILES, WEARING APPAREL AND LEATHER	.008	.014	.006	.011	.005	.025
33	WOOD AND WOOD PRODUCTS	.088	.049	.042	.066	.018	.036
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.305	.111	.104	.081	.040	.048
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.151	.062	.033	.103	.068	.034
36	NON-METALLIC MINERAL PRODUCTS	2.602	.126	.042	.091	.035	.313
37	BASIC METAL INDUSTRIES	.477	.266	.015	.067	.070	.223
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.064	.158	.085	.072	.050	.068
39	OTHER MANUFACTURING INDUSTRIES	.005	.002	.104	.025	.033	.000
	TOTAL	.247	.070	.045	.091	.034	.056

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.26
GROSS OUTPUT PER EMPLOYMENT
(VALUES IN THOUSANDS OF K.D.)
KUWAIT (1966,1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	2,63	,34	4,13	5,36	6,08	N.A.
32	TEXTILES, WEARING APPAREL AND LEATHER	5,12	5,12	N.A.	5,12	4,50	N.A.
33	WOOD AND WOOD PRODUCTS	2,22	2,7[illegible]	2,94	3,92	4,32	N.A.
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	2,03	2,70	3,23	3,08	3,90	N.A.
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	80,25	44,50	48,0[illegible]	50,28	71,45	N.A.
36	NON-METALLIC MINERAL PRODUCTS	2,48	2,75	2,86	4,09	5,70	N.A.
37	BASIC METAL INDUSTRIES	N.A.	,56	N.A.	6,52	9,2[illegible]	N.A.
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	N.A.	,82	N.A.	3,55	4,41	N.A.
39	OTHER MANUFACTURING INDUSTRIES	2,99	1,17	2,42	3,02	10,48	N.A.
	TOTAL	8,99	6,39	12,27	11,11	17,75	N.A.

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.27
VALUE ADDED PER EMPLOYMENT
(VALUES IN THOUSANDS OF K.D.)
KUWAIT (1966,1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	.97	1.58	1.84	2.12	1.80	N.A.
32	TEXTILES, WEARING APPAREL AND LEATHER	4.14	4.14	N.A.	1.98	1.72	N.A.
33	WOOD AND WOOD PRODUCTS	1.00	1.36	1.53	1.85	1.88	N.A.
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	1.26	1.60	2.20	1.63	1.64	N.A.
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	77.18	34.46	13.63	11.88	21.85	N.A.
36	NON-METALLIC MINERAL PRODUCTS	1.21	1.41	1.47	2.00	2.57	N.A.
37	BASIC METAL INDUSTRIES	N.A.	.27	N.A.	2.84	3.69	N.A.
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	N.A.	.54	N.A.	2.00	2.30	N.A.
39	OTHER MANUFACTURING INDUSTRIES	1.27	.91	1.33	1.73	2.92	N.A.
	TOTAL	7.38	4.47	4.46	3.45	5.83	N.A.

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.28
GROSS OUTPUT PER ESTABLISHMENT
(VALUES IN THOUSANDS OF K.D.)
KUWAIT (1966,1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	22,34	34,95	37,95	49,47	58,32	108,17
32	TEXTILES, WEARING APPAREL AND LEATHER	3,02	N,A,	5,39	17,51	15,88	9,97
33	WOOD AND WOOD PRODUCTS	14,09	17,68	18,57	20,35	23,09	46,04
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	54,62	84,63	106,11	112,76	145,46	99,00
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	6500,13	7587,94	7006,69	5658,28	9949,46	105,39
36	NON-METALLIC MINERAL PRODUCTS	56,14	66,66	71,92	102,14	143,59	315,90
37	BASIC METAL INDUSTRIES	295,50	5,00	N,A,	228,89	497,01	723,08
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	23,69	3,85	N,A,	31,50	41,69	77,78
39	OTHER MANUFACTURING INDUSTRIES	8,42	4,73	15,51	10,40	35,90	19,34
	TOTAL	46,02	52,35	75,04	90,57	157,47	210,79

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.29
VALUE ADDED PER GROSS OUTPUT
VALUES IN K.D.
KUWAIT (1966,1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	.371	.411	.447	.397	.295	.579
32	TEXTILES, WEARING APPAREL AND LEATHER	.809	.809	.837	.386	.383	.216
33	WOOD AND WOOD PRODUCTS	.451	.504	.519	.473	.436	.564
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.622	.593	.680	.593	.620	.815
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.962	.774	.284	.236	.306	.609
36	NON-METALLIC MINERAL PRODUCTS	.489	.513	.515	.489	.451	.566
37	BASIC METAL INDUSTRIES	.493	.493	.381	.436	.399	.541
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.658	.658	.614	.565	.521	.614
39	OTHER MANUFACTURING INDUSTRIES	.426	.780	.549	.572	.279	.696
	TOTAL	.821	.699	.364	.311	.329	.597

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.30
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY, KUWAIT, 1973-7974, (VALUES IN THOURSANDS OF K.D.)
FOR EMPLOYMENT 10 AND MORE

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES		NUMBER OF ESTABLISHMENT		GROSS OUTPUT IN PRODUCER'S VALUE		VALUE ADDED (NET)		GROSS FIXED CAPITAL FORMATION	
		1973	1974	1973	1974	1973	1974	1973	1974	1973	1974
31	FOOD, BEVERAGES AND TOBACCO	2950	3017	73	64	16160.7	20343.6	6217.0	5343.3	1290.9	[illegible]
32	TEXTILES, WEARING APPAREL AND LEATHER	364	332	26	23	1532.4	1828.7	538.0	569.9	.3	10.6
33	WOOD AND WOOD PRODUCTS	1356	1388	29	24	5656.8	6168.8	2547.0	2306.9	325.2	112.3
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	1192	1215	23	24	3609.6	4778.6	2132.1	1980.6	159.9	91.9
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	3573	4971	25	28	180977.4	357915.6	42733.2	109391.8	4397.3	7279.2
36	NON-METALLIC MINERAL PRODUCTS	3028	2872	77	66	12489.3	16319.5	6139.4	7436.2	594.5	374.3
37	BASIC METAL INDUSTRIES	397	520	3	3	2679.4	4908.0	1159.6	1944.2	78.8	139.8
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	3076	3303	73	70	9662.9	14340.2	5130.6	7568.0	596.0	515.3
39	OTHER MANUFACTURING INDUSTRIES	28	35	2	2	118.9	511.8	59.6	152.5	4.1	2.3
	TOTAL	15972	17653	331	304	232887.4	427114.9	66656.5	136719.8	7446.9	11712.1

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.31
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY, KUWAIT, 1973-7974, (VALUES IN THOUSANDS OF K.D.)
FOR EMPLOYMENT 10 AND MORE
PERCENTAGES TO TOTAL

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES		NUMBER OF ESTABLISHMENT		GROSS OUTPUT IN PRODUCER'S VALUE		VALUE ADDED (NET)		GROSS FIXED CAPITAL FORMATION	
		1973	1974	1973	1974	1973	1974	1973	1974	1973	1974
31	FOOD, BEVERAGES AND TOBACCO	18,52	17,09	22,05	21,05	6,94	4,76	9,33	3,91	17,33	33,20
32	TEXTILES, WEARING APPAREL AND LEATHER	2,28	1,88	7,85	7,57	,66	,43	,81	,43	,00	,08
33	WOOD AND WOOD PRODUCTS	8,49	7,86	8,76	7,89	2,43	1,44	3,82	1,69	4,37	,38
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	7,46	6,88	6,95	7,89	1,55	1,12	3,20	1,45	2,15	,63
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	22,37	28,16	7,55	9,21	77,71	83,80	64,11	80,01	59,05	57,26
36	NON-METALLIC MINERAL PRODUCTS	18,96	16,27	23,26	21,71	5,36	3,82	9,21	5,64	7,98	2,16
37	BASIC METAL INDUSTRIES	2,49	2,95	,91	,99	1,15	1,15	1,74	1,42	1,06	1,10
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	19,26	18,71	22,05	23,03	4,15	3,36	7,70	5,54	8,00	4,05
39	OTHER MANUFACTURING INDUSTRIES	,18	,20	,60	,66	,05	,12	,09	,11	,06	,03
	TOTAL	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.32
PERFORMANCE INDICES OF MANUFACTURAL ACTIVITIES, KUWAIT, (1973-1974)
(VALUES IN THOUSANDS OF K.D.)

ISIC CODE	INDUSTRIAL ACTIVITY	EMPLOYMENT PER ESTABLISHMENT		GROSS OUTPUT PER EMPLOYMENT		GROSS OUTPUT PER ESTABLISHMENT	
		1973	1974	1973	1974	1973	1974
31	FOOD, BEVERAGES AND TOBACCO	40.52	47.14	5.46	6.74	221.36	317.87
32	TEXTILES, WEARING APPAREL AND LEATHER	14.00	14.43	4.21	5.51	58.94	79.51
33	WOOD AND WOOD PRODUCTS	46.76	57.83	4.17	4.44	195.06	257.03
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	51.83	50.63	3.03	3.93	156.94	199.11
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	142.92	177.54	50.65	72.00	7239.10	12780.70
36	NON-METALLIC MINERAL PRODUCTS	39.32	43.52	4.12	5.68	162.20	247.27
37	BASIC METAL INDUSTRIES	132.33	173.33	6.75	9.44	893.13	1636.00
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	42.14	47.19	3.14	4.34	132.37	204.36
39	OTHER MANUFACTURING INDUSTRIES	14.00	17.50	4.25	14.62	59.45	255.90
	TOTAL	48.25	58.07	14.58	24.20	703.59	1404.98

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.33
PERFORMANCE INDICES OF MANUFACTURAL ACTIVITIES, KUWAIT, (1973-1974)
(VALUES IN THOUSANDS OF K.D.)

ISIC CODE	INDUSTRIAL ACTIVITY	VALUE ADDED PER EMPLOYMENT		VALUE ADDED PER ESTABLISHMENT		GROSS FIXED CAPITAL FORM. PER EMPLOYMENT		GROSS FIXED CAPITAL FORM. PER ESTABLISHMENT	
		1973	1974	1973	1974	1973	1974	1973	1974
31	FOOD, BEVERAGES AND TOBACCO	2.10	1.77	85.16	83.54	.44	1.42	17.63	67.14
32	TEXTILES, WEARING APPAREL AND LEATHER	1.48	1.78	20.69	25.65	.00	.03	.01	.46
33	WOOD AND WOOD PRODUCTS	1.88	1.66	87.83	96.12	.24	.08	11.21	4.68
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	1.79	1.63	92.70	82.52	.13	.07	6.95	3.33
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	11.96	22.01	1709.33	3906.85	1.23	1.46	175.89	259.97
36	NON-METALLIC MINERAL PRODUCTS	2.03	2.59	79.73	112.70	.20	.10	7.72	4.16
37	BASIC METAL INDUSTRIES	2.92	3.74	386.53	648.07	.20	.27	26.27	46.50
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	1.67	2.29	70.28	108.11	.19	.16	8.16	7.36
39	OTHER MANUFACTURING INDUSTRIES	2.13	4.39	29.80	76.75	.15	.09	2.05	1.65
	TOTAL	4.17	7.74	201.38	449.74	.47	.72	22.50	41.02

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE 4.34
PERFORMANCE INDICES OF MANUFACTURAL ACTIVITIES, KUWAIT (1973-1974)
(VALUES IN K.D.)

ISIC CODE	INDUSTRIAL ACTIVITY	VALUE ADDED PER GROSS OUTPUT		GROSS FIXED CAPITAL FORM, PER VALUE ADDED		GROSS FIXED CAPITAL FORM, PER GROSS OUTPUT	
		1973	1974	1973	1974	1973	1974
31	FOOD, BEVERAGES AND TOBACCO	.385	.263	.208	.804	.080	.211
32	TEXTILES, WEARING APPAREL AND LEATHER	.351	.323	.001	.018	.000	.006
33	WOOD AND WOOD PRODUCTS	.450	.374	.128	.049	.057	.018
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.591	.414	.075	.040	.044	.017
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.236	.306	.103	.067	.024	.020
36	NON-METALLIC MINERAL PRODUCTS	.492	.456	.097	.037	.048	.017
37	BASIC METAL INDUSTRIES	.433	.396	.068	.072	.029	.028
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.531	.528	.116	.068	.062	.036
39	OTHER MANUFACTURING INDUSTRIES	.501	.300	.069	.021	.034	.006
	TOTAL	.286	.320	.112	.093	.032	.030

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

Table 4.35: Employment in Kuwait's Manufacturing Sector: By Size and Sub-Sector, 1975

Industry	Employment	1-9	10-49	50-99	More than 99
(1)	Food and Beverages	3	6	2	1
(2)	Textiles, Wearing Apparel and Leather	1	4	4	1
	(a) Textiles	-	3	3	1
	(b) Leather	1	1	1	-
(3)	Wood and Wood Products	-	3	1	-
(4)	Paper, Paper Products Printing and Publishing	-	16	3	2
(5)	Chemical, Petroleum, Rubber and Plastics	2	19	6	2
(6)	Non-Metallic Products	1	24	2	2
(7)	Basic Metals	3	4	2	1
(8)	Fabricated Metals, Machinery and Equipment	-	16	6	13
(9)	Other Industries	1	6	-	-
	Total	12	100	27	23

Source: Industrial Development Committee, Kuwait, 1975.

Chapter V

Industrial Problems, Policies and Institutions

Introduction

It is clear from the preceding chapters that the developments in the oil sector, however impressive they may have been in terms of contribution to GDP, have failed to provide sufficient stimulus to induce the growth of manufacturing. Several rigidities, shortages of critical factors and materials, inelasticities of supply, deficiencies in policy formulation and implementation, limited coordination among various institutions designed to oversee and promote industrialization and a host of other obstacles collectively provide formidable barriers that have in the past impeded, and may continue to impede the Kuwaiti industrialization processes and efforts.

The limited availability of both capital and foreign exchange has long been considered the major obstacle to economic growth and industrialization. This premise, as argued in chapter two, has been seriously challenged by recent events in several OPEC countries. It is now believed that limited absorptive capacity is the critical upper bound on growth and development in oil producing countries. In Kuwait, it is clear that shortages of labour, water, the limited size of the country and the multitude of problems facing policy-makers seriously place the most stringent constraints on the performance and ability of the economy to industrialize.

In this chapter, a detailed account of the obstacles and efforts to overcome them is presented.

Labour Shortages

There is a serious gap between the supply and demand for labour in Kuwait and paradoxically there is also a severe problem of disguised underemployment in some sectors, particularly in the public administration sector. The gap is not only in terms of the quantity of labour, but also and more critically, in terms of labour quality. Foreign labour has been recruited to offset deficiencies in local supplies, and since man-power development is a time-consuming process, the dependence on foreign labour is likely to remain a basic feature of Kuwait labour market for some time to come.

The population of Kuwait is growing at unprecedented rates exceeding 6 per cent per year and this should ease part of the labour shortage problem. But the large discrepancy in the participation rates of Kuwaitis and non-Kuwaitis (almost 2 to 1 in favour of non-Kuwaitis) suggests that Kuwaitis may have a lesser desire to join the labour force than others. Indeed, the high proportion of housewives and students among the Kuwaiti active population explains a good part too of this discrepancy. It is also true that the structure of the labour force has slightly changed in favour of Kuwaitis between 1970 and 1975. The share of Kuwaitis in the labour force has increased from 27 per cent to 30 per cent, whereas the non-Kuwaiti share has declined from 73 per cent to 70 per cent. The structure of employment has also shifted in favour of Kuwaitis who in 1975 accounted for 29 per cent compared to 25 per cent in 1970. Non-Kuwaitis' share dropped from 75 per cent to 71 per cent. The differences in the increase in participation rates of Kuwaitis (11 per cent) and employment rates (14 per cent) may be

TABLE NO. (5.1) KUWAITI LABOUR FORCE BY SEX AND OCCUPATION GROUPS

Occupation Groups and Sex		1965 Kuwaitis	1965 Non-Kuwaitis	1965 Total	1970 Kuwaitis	1970 Non-Kuwaitis	1970 Total	1975 Kuwaitis	1975 Non-Kuwaitis	1975 Total
Physical scientists and related technicians	M	13	193	206	47	251	298			
	F	-	3	3	6	36	42			
	T	13	196	209	53	287	340	149	721	870
Architects, engineers, surveyors, draughtsmen and related technicians	M	56	1 143	1 199	598	5 663	6 261			
	F	-	2	2	3	23	26			
	T	56	1 145	1 201	601	5 686	6 287	1 003	5 739	6 742
Aircrafts and ships' officers	M	216	153	369	129	315	444			
	F	-	-	-	-	-	-			
	T	216	153	369	129	315	444	158	212	370
Life scientists and related technicians	M	2	28	30	4	27	31			
	F	-	-	-	-	-	-			
	T	2	28	30	4	27	31	18	23	41
Physicians, dentists and veterinarians	M	23	473	496	44	609	653			
	F	1	70	71	3	111	114			
	T	24	543	567	47	720	767	225	1 532	1 764
Professional nurses	M	49	952	1 001	-	176	176			
	F	23	1 185	1 208	57	1 639	1 695			
	T	72	2 137	2 209	57	1 815	1 872	512	4 329	4 841
Pharmacists and other	M	207	501	708	289	1 287	1 576			
	F	25	37	62	9	98	107			
	T	232	538	770	298	1 385	1 683			
Jurists	M	90	243	333	118	314	432			
	F	-	13	13	6	6	12			
	T	90	256	346	124	320	444	267	530	797
Teachers	M	120	2 263	2 383	1 052	4 196	5 248			
	F	143	2 075	2 218	714	4 432	5 146			
	T	263	4 338	4 601	1 766	8 628	10 394	5 262	13 108	18 370
Clergymen	M	183	348	531	128	303	431			
	F	-	-	-	-	-	-			
	T	183	348	531	128	303	431			
Authors and journalists	M	91	220	311	22	169	191			
	F	13	44	57	4	11	15			
	T	104	264	368	26	180	206	48	213	261
Sculptors and related creative artists	M	112	1 168	1 280	98	281	379			
	F	-	10	10	-	4	4			
	T	112	1 178	1 290	98	285	383	429	848	1 277
Athletes, sportsmen and related workers	M	13	20	33	6	87	93			
	F	-	2	2	-	2	2			
	T	13	22	35	6	89	95			
Professional, technical and other related workers	M	121	926	1 047	218	1 695	1 913			
	F	27	21	48	179	153	332			
	T	148	947	1 095	397	1 848	2 245	1 443	4 470	5 913
Total Scientists and Technical Workers	M	1 296	28 631	29 927	2 753	15 373	18 126			
	F	232	3 462	3 694	981	6 515	7 491			
	T	1 528	32 093	33 621	3 734	21 888	25 622	9 719	32 027	41 746
Government administrators	M	1 303	454	1 757	316	34	350			
	F	31	132	16	2	1	3			
	T	1 334	586	1 920	318	35	353	423	47	476
Managers	M	131	1 886	2 017	292	1 128	1 420			
	F	4	22	26	1	6	7			
	T	135	1 908	2 043	293	1 134	1 427	610	1 762	2 372
Total Administrative and Managerial Workers	M	1 434	2 340	3 774	608	1 162	1 770			
	F	35	154	189	3	7	10			
	T	1 469	2 494	3 963	611	1 169	1 780	1 045	1 809	2 854
Government executive officials	M	-	-	-	1 835	385	2 220			
	F	-	-	-	29	11	40			
	T	-	-	-	1 854	396	2 260	2 516	476	2 992
Clerical supervisors	M	-	-	-	106	335	441			
	F	-	-	-	1	4	5			
	T	-	-	-	107	339	446	777	736	1 513
Stenographers, typists, card and tape punching machine operators	M	102	995	1 097	130	1 016	1 146			
	F	3	90	93	14	228	242			
	T	105	1 085	1 190	144	1 244	1 388	1 267	4 297	5 564
Book-keepers, cashiers and related workers	M	590	2 019	2 609	1 049	3 543	4 592			
	F	3	30	33	12	81	93			
	T	593	2 049	2 642	1 061	3 624	4 685	1 943	4 670	6 613
Transport and communication workers	M	168	76	244	209	234	443			
	F	-	1	1	-	1	1			
	T	168	77	245	209	235	444	346	535	881
Mail distribution clerks	M	376	839	1 215	581	1 056	1 637			
	F	-	-	-	-	-	-			
	T	376	839	1 215	581	1 056	1 637			
Telephone and telegraph operators	M	514	519	1 033	697	477	1 174			
	F	1	7	8	14	12	26			
	T	515	526	1 042	711	489	1 200	2 017	2 253	4 270
Other clerical and related workers	M	5 701	7 689	13 390	6 421	8 674	15 095			
	F	232	256	488	376	723	1 099			
	T	5 933	7 945	13 878	6 797	9 397	16 194	8 387	7 199	15 586
Total Clerical Workers	M	7 451	12 137	19 588	11 018	15 670	26 688			
	F	249	384	633	446	1 060	1 506			
	T	7 700	12 521	20 221	11 464	16 730	28 194	17 853	20 162	38 015

TABLE NO. (5.4) "Continued"

Occupation groups and sex		1965 Kuwaitis	1965 Non-Kuwaitis	1965 Total	1970 Kuwaitis	1970 Non-Kuwaitis	1970 Total	1975 Kuwaitis	1975 Non-Kuwaitis	1975 Total
Working proprietors	M	3 615	4 110	7 725	2 917	4 870	7 787			
	F	5	10	15	3	7	10			
	T	3 620	4 120	7 740	2 920	4 877	7 797	5 183	7 199	12 382
Technical salesmen, commercial travellers and manufacturers' Agents	M	6	63	69	2	197	199			
	F	-	-	-	-	1	1			
	T	6	63	69	2	198	200	19	793	812
Salesmen and shop assistants	M	993	6 372	7 365	3 610	9 363	12 363			
	F	7	42	49	16	107	123			
	T	1 000	6 414	7 414	3 626	9 470	13 096	983	9 316	10 299
Total Salesmen and related workers	M	4 614	10 545	15 159	6 529	14 430	20 959			
	F	12	52	64	19	115	134			
	T	4 626	10 597	15 223	6 548	14 545	21 093	6 185	17 508	24 093
Cooks and waiters	M	860	11 942	12 802	723	12 653	13 376			
	F	206	2 132	2 338	217	4 648	4 865			
	T	1 066	13 074	15 140	940	17 301	18 241	1 137	23 945	25 082
Building caretakers, charworkers and cleaners	M	1 670	9 589	11 259	5 775	11 965	17 740			
	F	221	1 027	1 248	260	1 293	1 553			
	T	1 891	10 516	12 507	6 035	13 258	19 293	9 457	17 401	26 858
Launderers, dry cleaners and pressers	M	25	1 743	1 768	19	1 222	1 241			
	F	1	9	10	-	4	4			
	T	26	1 752	1 778	19	1 226	1 245			
Hairdressers, barbers and beauticians	M	9	809	818	10	795	805			
	F	-	34	34	-	102	102			
	T	9	843	852	10	897	907	7	731	738
Fire brigades, policemen and detectives	M	111 037	3 297	14 334	15 678	678	16 356			
	F	2	-	2	-	-	-			
	T	11 039	3 297	14 336	15 678	678	16 356	22 062	706	22 768
Other service workers	M	14	73	87	504	1 093	1 597			
	F	6	15	21	30	68	98			
	T	20	88	108	534	1 161	1 695	222	1 510	1 732
Total Service Workers	M	13 615	27 453	41 068	22 709	28 406	51 115			
	F	436	3 217	3 653	507	6 115	6 622			
	T	14 051	30 670	44 721	23 216	34 521	57 737	32 900	45 400	78 300
Farm Managers	M	79	384	463	43	46	89			
	F	1	1	2	-	-	-			
	T	80	385	465	43	46	89	2 234	215	2 449
Farm workers and animal breeding	M	574	2 179	2 753	770	2 642	3 412			
	F	6	1	7	6	5	11			
	T	580	2 180	2 760	776	2 647	3 423	1 605	3 440	5 045
Fishermen and related workers	M	94	322	416	74	357	431			
	F	-	-	-	-	-	-			
	T	94	322	416	74	357	431	58	150	208
Total Agricultural, animal husbandry fishermen and hunters	M	747	2 885	3 632	887	3 045	3 932			
	F	7	2	9	6	5	11			
	T	754	2 887	3 641	893	3 050	3 943	3 897	3 805	7 702
Production supervisors and foremen	M	-	-	-	2 216	3 835	6 051			
	F	-	-	-	-	-	-			
	T	-	-	-	2 216	3 835	6 051	3 103	4 522	7 625
Miners, quarrymen and well drillers	M	167	357	524	175	553	728			
	F	9	172	181	44	520	564			
	T	176	529	705	219	1 073	1 292	154	499	653
Chemical workers and refiners	M	72	503	575	145	472	617			
	F	-	-	-	-	-	-			
	T	72	503	575	145	472	617	274	500	774
Workers in food and beverage production	M	107	2 289	2 396	123	2 550	2 673			
	F	-	-	-	-	-	-			
	T	107	2 289	2 396	123	2 550	2 673	96	2 644	2 740
Tailors, sewers and related workers	M	91	2 722	2 813	75	2 971	3 046			
	F	16	121	137	9	130	139			
	T	107	2 843	2 950	84	3 101	3 185	80	4 491	4 571
Footwear and leather production workers	M	6	125	131	10	135	146			
	F	-	-	-	-	-	-			
	T	6	125	131	10	135	146			
Carpenters	M	485	5 364	5 849	138	1 869	2 007			
	F	-	-	-	-	-	-			
	T	485	5 364	5 849	138	1 869	2 007	200	2 999	3 199
Blacksmiths, toolmakers and machine operators	M	15	134	149	68	598	666			
	F	-	-	-	-	-	-			
	T	15	134	149	68	598	666	1 905	10 025	11 930

Continued....

TABLE NO. (5.1) "Continued"

Occupation Group and Sex		1965 Kuwaitis	1965 Non-Kuwaitis	1965 Total	1970 Kuwaitis	1970 Non-Kuwaitis	1970 Total	1975 Kuwaitis	1975 Non-Kuwaitis	1975 Total
Electrical fitters and related electrical and electronical workers	M	486	5 000	5 486	813	5 900	5 713			
	F	–	–	–	–	–	–			
	T	1 486	5 000	5 486	813	6 900	5 713	1 331	7 378	8 709
Plumbers, welders, sheet metal and structural metal preparers & erectors	M	1 281	10 959	12 240	510	5 988	6 498			
	F	–	–	–	–	–	–			
	T	1 281	10 959	12 240	510	5 988	6 498	554	584	6 365
Jewellery and precious metal workers	M	43	402	445	21	279	300			
	F	–	–	–	–	–	–			
	T	43	402	445	21	279	300	17	267	284
Printing workers	M	182	438	620	317	503	820			
	F	1	–	1	–	–	–			
	T	183	438	621	317	503	820	389	691	1 080
Other production workers	M	25	834	859	1	5	6			
	F	–	8	8	–	–	–	1/	1/	1/
	T	25	842	867	1	5	6	101	2 190	2 291
Painters	M	33	2 417	2 450	66	2 558	2 624			
	F	–	–	–	–	–	–			
	T	33	2 417	2 450	66	2 558	2 624	114	2 872	2 956
Bricklayers and construction workers	M	575	11 164	11 739	860	18 109	18 969			
	F	–	–	–	–	–	–			
	T	575	11 164	11 739	860	18 109	18 969	1 052	17 106	18 218
Material handling and related equipment operators, dockers and freight handlers	M	141	888	1 029	236	937	1 173			
	F	–	–	–	–	–	–			
	T	141	888	1 029	236	937	1 173	279	1 195	1 474
Transport equipment operators	M	4 400	10 699	15 099	4 191	12 859	17 050			
	F	–	–	–	–	–	–			
	T	4 400	10 699	15 099	4 191	12 859	17 050	4 195	14 076	18 271
Labourers not elsewhere classified	M	1 913	13 765	15 678	3 366	22 807	26 173			
	F	–	7	7	1	3	4			
	T	1 913	13 772	15 685	3 367	22 810	26 177	1 459	12 791	14 260
Total Production and related Workers, Labourers:	M	10 022	68 060	78 082	13 331	82 928	96 259			
	F	26	308	334	54	653	707			
	T	10 048	68 368	78 416	13 385	83 581	96 966	15 348	90 260	105 608
Not adequately defined	M	2 032	1 160	3 192	1 815	570	2 385			
	F	80	92	172	6	19	25			
	T	2 112	1 252	3 364	1 821	589	2 410	4	–	4
Total Occupations	M	41 211	133 211	174 422	59 660	161 584	221 244			
	F	1 067	7 671	8 738	2 022	14 489	16 511			
	T	42 278	140 892	183 160	61 682	176 073	237 755	86 571	211 414	298 415

Source: Kuwait, Central Statistical Office, Ministry of Planning – Annual Statistical Abstracts 1977 pp. 96-99 and 1978 pp. 104-107

1/ Including: glass makers, potters, plastic product makers, paper and paper board materials.

due to government "Kuwaitization" policies which have reduced the unemployment rate among Kuwaitis from 8.9 per cent in 1970 to 5.3 per cent in 1975.

The implication of the above trends is that there has been some increase in Kuwaiti participation rates and more Kuwaitization of jobs. However, the Kuwaiti human resource base is still limited and the expatriate manpower is still the critical variable in the Kuwaiti labour market.

The occupational mix of the labour force in Kuwait has undergone a major transformation between 1965 and 1975. The number of scientists and technical workers in 1965 in Kuwait was less than 13,621 workers of which 11.2 per cent were Kuwaitis. In 1975 the number increased by a factor of 3 to a total of 41,836 workers of which 23.2 per cent were Kuwaitis. Similar increases but of lesser magnitude were noted in total service workers, salesmen and related workers and in total agricultural, animal husbandry, fishermen and hunters. However, limited increases in the number of Kuwaitis were reported in total production and related workers. In 1965 the total number of Kuwaitis in this category was little over 10,000 workers, in 1975 it increased to 15,348 workers. The corresponding numbers of non-Kuwaitis were 68,368 in 1965 and 90,260 in 1975.

Females are showing higher participation rates in traditional and non-traditional areas, but their proportional share in the labour force is far below their shares in the population. This is particularly true for Kuwaiti women, but it also applies to non-Kuwaiti females.

Manufacturing employment has increased between 1967 an 1974 by a small number from 15,002 workers in 1967 to 21,811 workers in 1974.

TABLE 5.2. KUWAIT: OPERATING ESTABLISHMENTS BY SECTION OF ECONOMIC ACTIVITY AND NUMBER OF EMPLOYEES AND AVERAGE MONTHLY WAGES: 1967 and 1974

Sections of economic activity employees & average wages	1967 Administrative & technical			1967 Labourers			Total 1967		Total (No. of establishments)	1974 Administrative & technical			1974 Labourers			Total 1974		Total (No. of establishments)
	Kuwaiti	Non-Kuwaiti	Total	Kuwaiti	Non-Kuwaiti	Total	Kuwaiti	Non-Kuwaiti		Kuwaiti	Non-Kuwaiti	Total	Kuwaiti	Non-Kuwaiti	Total	Kuwaiti	Non-Kuwaiti	
Agriculture hunting and fishing:																		
No. of employees	1	621	622	-	1 703	1 703	1	2 324	2 325	13	13	103	-	1 550	1 550	13	1 653	1 653
Wages	40	52	51	-	21	21	40	40	40	123	123	57	-	29	29	123	32	33
									(60)									(109)
Mining and quarrying:																		
No. of employees	201	2 111	2 312	1 088	2 362	3 450	1 289	4 473	5 762	410	844	1 254	721	674	1 395	1 131	1 518	2 649
Wages	164	185	183	79	--	77	92	128	120	344	272	295	207	133	171	257	210	240
									(9)									(9)
Manufacturing:																		
No. of employees	93	1 663	1 756	336	12 910	13 246	429	14 573	15 002	412	3 349	3 761	142	17 908	18 050	554	21 257	21 811
Wages	144	123	123	56	40	40	75	50	50	286	165	178	195	49	50	263	67	77
									(1 752)									(2 595)
Electricity, gas and water:																		
No. of employees	-	-	-	-	4	4	-	4	4	-	-	-	-	5	5	-	5	5
Wages	-	-	-	-	23	23	-	23	23	-	-	-	-	52	52	-	52	52
									(2)									(5)
Constructions:																		
No. of employees	16	1 559	1 575	-	10 058	10 058	16	11 617	11 633	24	2 060	2 084	-	12 705	12 705	24	14 765	14 789
Wages	226	107	108	-	41	41	226	50	51	511	138	140	-	46	46	211	59	59
									(163)									(292)
Wholesale & retail trade:																		
No. of employees	108	3 096	3 204	39	10 041	10 080	147	13 137	13 284	131	6 933	7 064	22	22 082	22 104	153	29 015	29 168
Wages	130	80	81	45	53	53	107	44	37	244	93	96	147	48	48	230	59	60
									(4 509)									(7 674)
Transport, storage and communications:																		
No. of employees	83	1 268	1 352	13	3 437	3 450	96	4 705	4 801	227	2 595	2 822	29	4 049	4 078	256	6 644	6 900
Wages	159	138	139	55	33	33	145	61	63	244	123	133	95	91	91	227	103	108
									(102)									(251)
Finance insurance and business services:																		
No. of employees	142	1 561	1 703	23	711	734	165	2 272	2 437	363	4 138	4 501	3	1 286	1 289	366	5 424	5 790
Wages	147	76	82	45	25	25	133	60	65	191	121	127	106	58	58	190	101	107
									(195)									(473)
Other:																		
No. of employees	26	1 573	1 599	10	6 801	6 811	36	8 374	8 410	82	3 551	3 633	7	11 827	11 834	89	15 378	15 467
Wages	136	77	78	72	33	33	118	41	42	186	81	83	205	48	48	138	55	56
									(2 053)									(2 705)
Total:																		
No. of employees	670	13 452	14 122	1 509	48 027	49 536	2 179	61 479	63 658	1 642	23 560	25 222	924	72 086	73 010	2 586	95 646	98 232
Wages	153	112	114	72	38	39	97	54	55	265	120	129	200	50	52	247	68	72
									(8 883)									(14 190)

Source: Kuwait, Central Statistical Office, Ministry of Planning, Annual Statistical Abstract 1979 p.106-107.

However, the number of administrative and technical workers in manufacturing more than doubled rising from 1,756 to 3,761. Non-Kuwaitis dominate employment in this sector representing 94 per cent of administrative and technical workers in manufacturing in 1967 and almost 90 per cent in 1974. In terms of total employment in this sector, non-Kuwaitis accounted for more than 97 per cent in 1967 and almost 99.3 per cent in 1974.

Vocational and Technical Training

The industry Act No. 6 of 1965 stipulates in article 21 that "it shall not be permissible for the number of Kuwaiti labourers and employees in any industrial establishment to fall below a number equal to 25 per cent of the total number of labourers and employees in the establishment. It shall be admissible, however, for the Minister of Finance and Industry to exempt the establishment from such restriction or to reduce the proprotion referred to where an adequate number of Kuwaitis is not available." The data in Tables 5.1 and 5.2 show clearly that Kuwaitis represent a small proportion of the total labour force and an insignificant percentage of the labour force in manufacturing.

The Kuwaiti Government has initiated a number of changes in the structure of education and in the institutional arrangements governing manpower training. A new committee was set up by the Planning Board in 1971 to oversee the re-organization of vocational education and training in Kuwait. It was later up-graded by the Council of Ministers to a "Supreme Council on Training" in 1972. In 1973 the "General Committee For Vocational and Technical Training" was set up and a new administration was put together under the

"Central Administration for Vocation and Technical Training." The latter was associated directly with the Council of Ministers and was entrusted to provide the requisite supplies of skilled manpower needed to effect the general plans of the Governemnt and the private sector. In particular the Central Administration For Vocational and Technical Training sought to achieve the following:

(a) formulation of manpower policies in the field and skill formation;

(b) development of alternative training facilities and approaches;

(c) standardization of skill levels and categories;

(d) analysis and approval of technical training projects within the public sector;

(e) consultative services in the field of manpower training to the mixed sector and the private sector;

(f) recruitment and development of the training staff;

(g) preparation of plans for self-sufficiency and local development of manpower requirements of skilled workers; and finally

(h) co-ordination of training activities with other Arab and foreign countries.

A number of institutes belong to the Central Administration including:

(i) The Communicative Centre

This was established in 1966 in cooperation with the United Nations. It admits Kuwaiti citizens only who are paid KD 100 per month.

(ii) The Showeikh Industrial Training Centre

This was established in 1971 in cooperation with the UNDP and the ILO. It trains Kuwaiti citizens in the following fields:

(1) Refrigeration and Air Conditioning

(2) Precision Instruments

(3) Radio and Television

(4) Metal Cutting and Lathing

(5) Electrical Machinery

(6) General Electricity

(7) Motors and Heavy Machinery

(8) Auto Mechanics

(9) Welding

Students are paid KD 60-100 per month.

(iii) Water and Electricity Centre

This was establishedin 1968 and again in cooperation with the UNDP. It trains Kuwaiti citizens in the field of operation, maintenance and administration of water deslainization and electricity generation stations. Students are paid between KD 60-100 per month.

The Communication Centre has already trained over 1,549 students between 1965 and 1977. The Showeikh Centre is credited with 763 graduates and the Water Electricity Centre with 546 graduates between 1969/1970 and 1976/1977.

The cost per graduate has reached almost KD 3,565 given that the Government has spent over KD 1.1 million up until 1978. The total number of graduates and the costs associated with their training are indeed meager and way below what is needed to increase the proportions of technical Kuwaitis in the labour force. It is, however, an important beginning reflecting concern and commitment to up-grade the Kuwaiti labour force and to increase its participation and responsibilities.

Wages and Productivity in Maufacturing

It has already been suggested that wage costs in Kuwait are relatively high, reflecting adjustments to a difficult enviroment rather than compensation for productivity.

Two tables are presented to describe the wage structure and pattern. Table 5.3 is old as it refers to 1972, however Table 5.4 is more recent and perhaps more relevant for our purposes than Table 5.3 as it presents manufacturing data only. The data in both tables reveal the following characteristics:

(1) the band or range of wages is wide. In Table 5.3 the lowest paid are unskilled workers with KD 40 per month. The highest paid are government administrators at KD 475 per month;

(2) the highest paid are administrators in the public sector which reflects the general premium associated with administrative jobs;

(3) the skilled and unskilled differentials are narrower than that between professionals and skilled workers. This is a reflection of limited industrial activity;

(4) wages in the private sector are generally lower than that of the public sector reflecting the bias in favour of Kuwaitis. However, in the professional category of engineering the reverse is true;

(5) the differences in data between tables 5.3 and 5.4 reveal an interesting pattern of narrow ranges in salaries of professionals and skilled workers in manufacturing as well as a significant increase in wages between 1972 and 1976 for most categories but particularly in the skilled workers group;

(6) when housing and other renumerations are added, wages in Kuwait are extremely high by developing economies standards.

The implications of these features are clear. Costs of production in Kuwait will necessarily be higher than those of competitors. This of course is only true if Kuwaiti productivity per worker does not compensate for the differences in costs. As we have seen in chapter four, this unfortunately is the case. Furthermore, professionals appear to be in relatively higher demand than skilled workers. This is a direct result of the ambitious development effort of Kuwait and its limited industrial capability. With the advent of industrialization, if it happens, the pay scale will likely adjust in favour of skilled workers. Attention should, therefore, be paid to ensure that this adjustment takes place promptly and smoothly.

Infrastructural Facilities

There does not appear to be a problem with infrastructural facilities in Kuwait. The Kuwaiti government has ever since independence emphasized the development of an infrastructure which could facilitate growth and industrial development. As late as 1964 the Shuaiba Industrial area was established. In 1970 this was put under the control of the Shuaiba Area Authority which was responsible then to the Ministry of Finance and Oil. Today these two ministries are separate.

The area is about 50 square km south of the city of Shuaiba on the coast. It has a small port and oil pier as well as a good communication network with the city and the sources of oil and natural gas. The area is designed specifically for heavy and medium size industries. The Authority exercises a wide scope of choice over which industries to attract and to control their operation

TABLE 5.3 KUWAIT: EMPLOYMENT AND AVERAGE MONTHLY WAGES BY SECTOR AND OCCUPATION 1972*

Occupation	Number of employees			Average wage in Dinars		
	Government	Private	Total	Government	Private	General Average
Physical scientists	68	80	148	227	270	250
Physical science technicians	288	62	350	103	185	118
Architects & town planners	66	56	122	261	262	261
Civil engineers	210	263	473	274	255	263
Electrical & electronics engineers	255	160	415	244	251	247
Mechanical engineers	112	382	494	258	250	252
Chemical engineers	16	89	105	258	357	342
Metallurgists & mining engineers	10	88	98	329	399	392
Industrial engineers	5	28	33	330	344	342
Engineers - not elsewhere stated	18	26	44	254	221	235
Engineering technicians	1 937	922	2 859	165	168	166
Aircrafts, pilots, navigators & engineers	4	64	68	335	409	405
Ships' deck officers, pilots & engineers	30	248	278	242	179	186
Life scientists and related technicians	80	-	80	217	-	217
Medical doctors and pharmacists	741	90	831	261	312	267
Pharmaceutical assistants	206	25	231	168	111	162
Dieticians and nutritionists	10	2	12	124	157	129
Professional nurses and midwives	1 854	255	2 109	88	121	92
Medical and related workers N.E.S.	1 717	43	1 760	159	169	160
Statisticians and mathematicians	51	56	107	163	252	210
Economists	85	20	105	305	399	323
Accountants	269	734	1 003	197	140	155
Jurists	263	48	311	260	225	255
University & higher education teachers	429	-	429	319	-	319
Teachers N.E.S.	11 357	1 443	12 800	157	59	146
Clergymen	492	2	494	115	239	116
Authors, journalists & related writers	88	150	238	190	98	132
Sculptors, painters, photographers & related creative artists	257	45	302	146	99	139
Composers & performing artists	245	2	247	143	27	142
Athletes and sportsmen	34	62	96	166	95	120
Professional, technicians & related workers N.E.S.	590	57	647	181	220	185
Total	21 787	5 502	27 283	160	161	161
Government administrators	314	-	314	475	-	475
Production managers	5	940	945	324	307	307
Total	319	940	1 259	473	307	349
Clerical supervisors and government executive officials	1 585	3 382	4 967	250	93	143
Stenographers, typists, card & tape punching machine operators	1 121	624	1 745	112	75	99
Book-keepers, cashiers & related works	1 701	1 334	3 535	174	87	128
Computing machine operators	4	96	100	106	109	108
Transport & communications supervisors	358	337	695	173	111	143
Transport conductors	-	341	341	-	44	44
Mail distribution clerks	1 132	230	1 362	97	47	89
Telephone and telegraph operators	1 285	207	1 492	143	62	132
Clerical and related workers N.E.S.	8 849	1 970	10 819	145	89	135
Total	16 035	9 021	25 056	153	87	129
Managers, wholesale and retail trade	-	221	221	-	243	243
Sales supervisors, buyers and technical salesmen	-	522	522	-	104	104
Technical salesmen, commercial travellers and manufacturers agents	-	180	180	-	104	104
Insurance, real estate, securities and business services, salesmen auctioneers	-	36	36	-	148	148
Salesmen, shop assistants and related workers	-	1 757	1 757	-	56	56
Total	-	2 717	2 717	-	85	85

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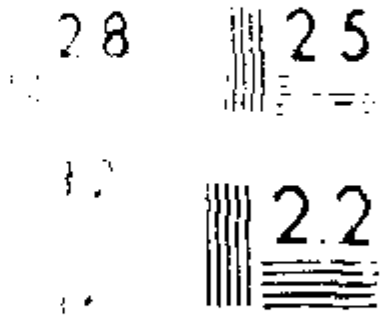
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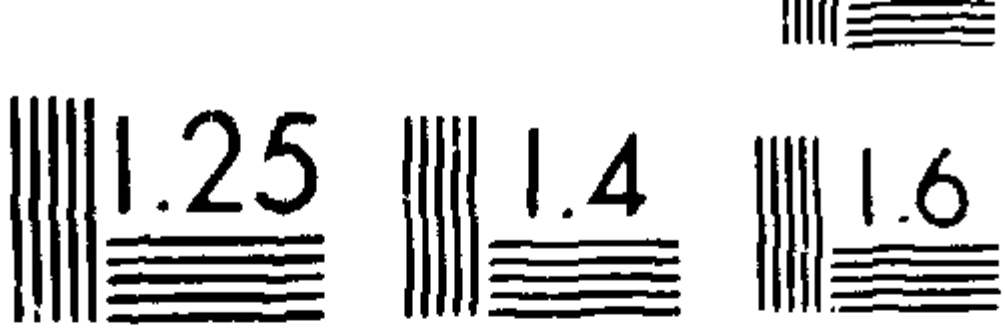
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	Number of employees			Average wage in Dinars		
	Government	Private	Total	Government	Private	General Average
Managers, catering and lodging services	-	38	38	-	150	150
Housekeeping and related service supervisors	121	69	190	117	96	109
Cooks, waiters and related workers	2 733	1 358	4 091	73	47	64
Maids and related housekeeping service workers N.E.S.	209	227	436	70	49	59
Building caretakers and related workers	19 682	3 802	23 484	69	32	63
Launderers, dry cleaners and pressers	294	125	419	70	35	60
Hairdressers, barbers, beauticians and related workers	54	5	59	109	61	105
Protective service workers	960	163	1 123	148	107	142
Service workers N.E.S.	583	205	788	120	47	101
T o t a l	24 636	5 992	30 628	74	40	67
Farm managers and supervisors	163	2	165	165	60	166
Agriculture and animal husbandry workers	1 395	171	1 566	70	28	66
Fishermen, hunters and related workers	-	84	84	-	74	74
T o t a l	1 558	257	1 815	80	43	75
Production supervisors and general foremen	1 941	1 076	3 017	153	103	135
Miners, quarrymen, well drillers and related workers	35	398	433	101	117	116
Metal processors	20	76	96	97	43	54
Wood preparation workers and paper makers	3	1	4	106	100	105
Chemical processors and related workers	144	1 298	1 442	136	152	151
Food and beverage processors: tailors, dressmakers, sewers	36	1 161	1 197	109	39	41
Upholsterers and related workers	140	244	384	87	51	64
Shoemakers and leather goods makers	21	17	38	107	30	73
Cabinetmakers, and related woodworkers	411	522	933	94	49	69
Stonecutters and carvers	1	82	83	59	53	53
Blacksmiths, toolmakers and machine tool operators	396	275	671	98	60	82
Machinery fitters, machine assemblers and precision instrument makers (except electrical)	2 376	3 345	5 721	110	67	85
Electrical fitters and related electrical and electronics workers						
Broadcasting station, sound equipment operators and cinema projectionists	106	28	134	123	50	107
Plumbers, welders, sheet metal and structural metal preparers and erectors	1 743	2 875	4 618	84	65	72
Jewellery and precious metal workers	-	9	9	-	51	51
Rubber and plastic product makers	61	49	110	69	45	58
Printers and related workers	593	407	1 000	146	56	109
Production and related workers N.E.S.	-	34	34	-	49	49
Painters	270	477	747	73	50	58
Bricklayers, carpenters and other construction workers	1 156	3 639	9 797	90	37	43
Glass-makers , potters and related workers	11	844	955	86	46	47
Stationery, engine and related equipment operators	993	428	1 421	81	92	84
Material handling and related equipment operators, deckers and freight handlers	622	705	1 327	109	69	88
Transport equipment operators	5 510	4 513	10 023	127	53	93
Workers not classified by occupation	6 354	8 361	14 715	53	30	40
T o t a l	25 595	37 192	62 787	97	52	70
GRAND TOTAL	89 930	61 621	151 551	117	71	98

Source: Kuwait, Central Statistical Office, Ministry of Planning. Annual Statistical Abstract, 1977. p.126 - 125.

Establishments employing 10 workers and over are included only.

TABLE 5.4: KUWAIT: WAGES IN MANUFACTURING, 1976 (IN KD/MONTH)

	Private Sector		Public Sector	
Category	Kuwaitis	Non-Kuwaitis	Kuwaitis	Non-Kuwaitis
Engineers	353	351	353	351
Economists	360	550	281	481
Supervisors	315	400	224	127
Mining Workers	170	100	150	80
Workers in Metal Industries	217	132	193	110
Workers in Chemical Industries	213	215	195	205
Tailors	190	185	200	105
Workers in Plastic Industries	145	125	200	95
Drivers	225	165	205	115
Mechanics	250	215	225	125
Manufacturing Average	275	165	320	135

Source: Ministry of Finance and Industry 1978.

after they have located there. The Authority also provides a wide range of services at very low prices, e.g., fresh water, 250 fils (85 cents) per thousand gallons, electricity 1 fil (less than 1/2 cents) per kw; natural gas, 14 fils (5 cents) per thousand cubic foot; land at 50 fils (17 cents) per annum per square meter.

In addition to the Shuaiba area, Kuwait has established, or in the process of completing several other areas providing similar services. The list includes:

(1) ALRA with 1.95 million square meter (MSM)

(2) FAHYHYL with 0.21 MSM

(3) ALAHMADI with 0.90 MSM

(4) KIBAR AL MUQAWELEEN with 0.14 MSM

(5) ALSALIBIAH with 0.83 MSM

(6) Al Showeikh Industrial Area with 10 MSM

(7) MINA ABDALLAH with 20 MSM

The basic purpose of these industrial zones is to take advantage of external economies of large scale production and to control the harmful effects of pollution.

To date several industries have located in these areas. At Shuaiba one finds power and water desalination plants, the KNPC oil refinery, petrochemicals, fertilizers, cement, drilling mud, plastics, sulphur, oxygen and a liquid natural gas plant. It is interesting to note here that the plants operating there appear to have strong technical affinities which suggests the working of the agglomeration effect that is necessary for efficient large scale production. More important, however, is the fact that much of what is produced at Shuaiba for instance is a pre-requisite for further industrialization if the chains and sequences of production are carefully tied in together.

At Showeikh which is run by the municipality of Kuwait we find again an agglomeration of heavy and medium industries. This was not the intention of the policy-makers, but they seem to have accepted the process if not have encourgaed it. A number of industries have been located there, including: Kuwait Metal Pipes, Kuwait Prefabricated Buildings, Kuwait Flour Mills, Kuwait Transport, Kuwait Shipping Company and the United Fisheries of Kuwait.

At ALRA which is relatively new there are plants producing batteries, detergents, paint and varnish, asbestos, metal products and pipes. At KIBAR AL MUQAWEHEEN Asphalt production is the major activity besides storage and maintenance facilities for heavy construction equipment. Finally AL SALIBIAH area has specialized in metal pipes and prefabricated houses.

This part of the study concentrated on industrial infrastructure which has been described as adequate. It is also true that the general infrastructure of the economy appears to have received significant attention very early in the modern history of Kuwait. High priority was given to the construction of a modern network of roads, schools, dispensaries, hospitals and an up-to-date system of communications. The Kuwaiti harbour has been expanded a number of times to cope with the rapidly increasing imports. Even the much critized land purchases programme was promulgated to aid in the construction of houses and commercial buildings. Kuwait city was built according to a well conceived plan and this has been of far reaching consequences on the growth and development of economic activity in Kuwait.

The first desalination plant was constructed in 1953, and since then water supply has continued to enjoy the highest priority in all

TABLE 5.5 KUWAIT: PRODUCTION OF POTABLE & BRACKISH WATER (MILLION GALLONS) (1968-1977)

Years	Brackish Water*		Potable Water			
	Daily Average	Production	Daily Average	Total	Distilled Sea Water	Underground
1968	12.173	4 443	13.718	5 007	4 038	969
1969	15.307	5 587	16.071	6 866	5 415	751
1970	15.767	5 755	18.178	6 635	5 935	700
1971	15.088	5 507	21.025	7 674	6 941	733
1972	14.786	5 397	23.518	8 584	7 897	687
1973	17.795	6 495	25.181	9 191	8 524	667
1974	19.962	7 268	27.482	10 031	9 767	264
1975	22.819	8 329	31.784	11 601	11 214	387
1976	24.814	9 059	39.397	14 380	13 956	424
1977	25.556	9 328	47.445	17 321	16 831	490

* Underground Brackish water added to the distilled water

Source: Kuwait, Annual Statistical Abstract, Ministry of Planning, 1978.

TABLE 5.6 KUWAIT: ELECTRIC ENERGY PRODUCED AND CONSUMED (1968-1977)

Years	Load Coefficient	Utilization Coefficient	Domestic Consumption	Consumption by Power Stations	Total Energy Generated	Maximum Load	Installed Capacity
	(Percent)			(Million KW/H)		(M.W.)	
1968	34.3	85.9	1 538	121	1 659	378	440
1969	36.4	84.1	1 869	143	2 012	471	560
1970	40.9	74.4	2 055	158	2 213	516	694
1971	47.2	62.4	2 424	212	2 636	600	962
1972	43.0	68.0	3 009	286	3 295	745	1 096
1973	39.0	78.5	3 334	334	3 668	860	1 096
1974	43.8	71.5	3 632	460	4 092	975	1 364
1975	38.6	82.1	4 146	507	4 653	1 120	1 364
1976	36.2	83.4	4 636	566	5 202	1 205	1 445
1977	43.7	81.4	5 099	632	6 018	1 520	1 868

Note: Utilization Coefficient = $\frac{\text{Maximum Load}}{\text{Installed Capacity}} \times 100$

Load Coefficient = $\frac{\text{Installed Capacity}}{\text{Generated Energy-Maximum Load}} \times 100$

Source: Kuwait, Annual Statistical Abstract, Minsitry of Planning, 1978.

government plans. The growth of this activity has been phenomenal indeed. Production has increased from about 250 million gallons in 1957 to 2.2 billion in 1964 and to 6.6 billion by 1970. In 1978 it reached the highest level in the world with a production of 102 million gallons per day. This water is supplemented with underground water at Raudhatain in the north and Shakaiya in the west, with a combined daily rate of production exceeding 8 million gallons.

The introduction of desalination plants has also paved the way for the development of the country's power supply. The growth of electricity supply has also been exceptionally high. From 2.5 mw in the early 1950s, Kuwait's generating capacity rapidly increased to 160 mw in 1962, to over 500 mw in 1967 and to a staggering capacity of 2,618 mw at the end of 1978.

The Boundary of Production

The economic size of Kuwait is certainly larger than its physical size would suggest given the high per capita purchasing power of its citizens. However, by any criterion Kuwait is modestly small. Several factors account for this: first, the population is almost a million and this by any standards constitutes a small population size. Second, the uneven distribution of wealth and income constrains further the economic size as it reduces the marginal and average propensities to consume. Accually the short-run private marginal propensity to consume out of disposable income is below 0.36 per cent. The government marginal propensity to consume out of income is below 8 per cent.[36/] Third, the

open door policy with regards to imports is credited with limiting the Kuwaiti market for domestic products. Actually tariffs in Kuwait are perhaps the lowest in the world. This coupled with a general preference for foreign products and an overvalued exchange rate (trade-wise) implies a further reduction in the economic size of the market.[37/] Fourth, the lack of viable and effective regional cooperation have denied Kuwait access and entry into a larger market. It is a fact that not one of the Arab economies is industrially capable of sustaining itself. However, it is ironic that little has been achieved in terms of Arab Economic Cocperation. Kuwait's efforts in developing heavy industries and oil-down-stream operations, are of limited consequence if markets are not developed to absorb the minimum economically efficient output of these industries. Regional coordination of investment and freer trade are important imperatives for industrializtion. The recent Gulf Economic Area harmonization and cooperation promise to be a serious step in the right direction. Similar structures and approaches are found to facilitate cooperation among the various parties in the Gulf. However, it is doubtful that the Gulf, by itself, on account of its similar patterns of production can support and sustain optimal industrial masses. It is believed that there does not seem to be a serious substitute for wider Arab economic cooperation for Kuwait, particularly with th states of the Arab fertile crescent.

Kuwait is already participating with a number of Arab governments in financing and operating joint-venture projects. With Egypt it is involved in the production of cement, glass, paper,

phosphates, food processing. With Saudi Arabia it is involved in the production of petrochemicals, oil refining, iron and steel, textiles, glass, paper poducts, cement, etc. Kuwait has also participated in the projects of the Council of Arab Economic Unity. Joint-venture projects are an interesting vehicle for Arab economic co-operation and coordination. However, it is too narrow in scope and deals with coordination at the microeconomic level with limited interest in the general equilibrium aspects of coordination. The latter could only be served at the multi-country organizational level which unfortunately does not exist in the real sense needed to plan and implement Arab Economic Harmonization.

Raw Materials

Minerals, other than oil and natural gas, have not been discovered, as of yet, in commercial quanitities in Kuwait. There are limited quantitites of limestone and clay and other similar materials which can be used in the development of cement and other construction materials. Limestone is found around Osheririj on the Bay of Kuwait down to the Neutral Zone. These stones are rich in calcium content, and are used at present in the sand-lime brick plants. There are other kinds of stones, found in the northern parts of Kuwait, which are sutiable for the production of cement. Sand covers most of Kuwait, in particular the south-eastern and northern areas, with different gradings. The most important kind contains 80 per cent silicon, up to 5 per cent magnesium carbonate and up to 10 per cent iron and aluminium oxides. These sands are suitable for the manufacture of unclear glass and ceramics, but other possibilitities exist after removing the iron oxides.

Kuwaitis consume very large quantities of meat but export raw leather without any processing at home. The quantities exported of raw leather are such that they are believed to be sufficient to establish a leather processing plant given that much of the chemicals used in processing leather are now produced locally.

Shrimps and fish are now caught in large quantities in Kuwait. Upgrading forward the packaging and processing of these large volumes of shrimps and fish appear to have justifiable economic prospects and so is the backward up-grading of fishing and ship building and maintenance.

Kuwait now imports most of its requirements of raw materials other than oil and those mentioned above. Imports of raw materials constituted almost 1/3 of total imports during the period 1965-1976, and have increased by more than six times during the same period, rising from KD 45.5 million in 1965 to KD 319.8 million by 1976. The bulk of these imports are for manufacturing purposes. In fact, they have represented a very high percentage of manufacturing gross output in the sixties, reaching 64.4 per cent in 1966. In 1974, this percentage has fallen to less than 37 per cent. As a percentage of value added, however, they represent a significant proportion ranging between 78 per cent in 1966 and over 113 per cent in 1974.

The heavy dependence of manfacturing in Kuwait on foreign raw materials cannot be overestimated. It suggests that manufacturing potential will be highly correlated with cheap and stable supplies of these raw materials as well as the ability of Kuwait to link itself to other countries that can provide a subset of these resources.

Finance

In the early 1950s the private sector was perhaps the only source of industrial finance. But this source proved inadequate to finance the large industrial ventures of the late sixties and early seventies. Commercial banks are not suited for this type of financing and have participated rather marginally in industrial finance.

The first public finance institution to advance loans to the industrial sector was the Savings and Credit Bank (SCB). Although its main lending operations were principally confined to medium-term loans at low interest rates for the construction of houses, it has also extended some industrial loans. In 1966/1967 the SCB commited KD 460.0 thousand for industrial purposes or about 5 per cent of its total loans. In 1972/1973, however, the total value declined to less than KD 5 thousand and has not made any indstrial loans following the establishment of the Industrial Bank of Kuwait (IBK) in 1973. The IBK was established by the initiative of the Kuwaiti Covernment as a joint undertaking between the Ministry of Finance, the Central Bank, the commercial banks, insurance companies and even some large industrial establishments. The charter of the IBK included the following objectives:

(i) To develop a long-term strategy for industrial growth in Kuwait, identifying those sectors and activities which would best fit local conditions and constraints.

(ii) To initiate industrial projects and investments in the most promising sectors.

(iii) To provide equity and medium and long-term credits for new, sound and viable projects as well as for the expansion of existing ones.

(iv) To finance projects outside Kuwait to the extent that they benefit Kuwaiti industries and their development.

(v) To bring needed technology to Kuwait and find foreign partners, with the necessary expertise, to participate in such ventures.

The share of capital of the Bank has remained at KD 10 million and is fully paid. The Government of Kuwait holds 49 per cent of the total share capital, while 51 per cent is held by loal private institutions.

To complement the Bank's resources, a law was enacted in 1975 providing for a government loan of KD 100 million to the Bank. The loan duration was set at 15 years and bears a low interest of 3 per cent per annum. At the end of 1977, a total of KD 65 million had been drawn from the loan.

On the operational level, the IBK is composed of five departments:

(i) A Projects Department which is responsible for evaluating technical, economical and financial aspects of industrial projects according to the investment criteria of the Bank. It is also entrusted with negotiating the terms of financing. More importantly, however, is its responsibility for identifying and developing new industrial investment opportunities.

(ii) A follow-up unit which is responsible for monitoring and reviewing of projects during their implementation stage. It concentrates on identifying cost overruns and technical problems. It also provides technical assistance.

(iii) A Banking and Finance Department with the responsibility for investing IBK's resources and raising more funds to increase the Bank's lending capability.

(iv) An economic Research Department with responsibilities for providing background information to IBK's operating departments. Preparing studies on the strategy and direction of industrial development in Kuwait and monitoring economic developments in Kuwait and the Gulf region. There are also two other departments, one for legal affairs and the other for administration.

Over the five years since its inception, IBK financed a total of 114 projects costing KD 191.1 million. The total loans financed over the same period 1974-1978 amounted to KD 90.3 million. Construction materials industries received the largest share of 43 per cent of the total loans with more than 48 per cent of the total costs of the supported projects in this industry financed by the Bank. Metal Products industries received 22.9 per cent of the total loans made by IBK over the period again with about 48 per cent of the total costs of the supported projects financed by the Bank. Food and Beverages industries had 11 projects supported by the Bank which financed almost 45 per cent of their total costs. The percentage share of the total loans of the Bank allocated to this industry over 1974-1978 exceed 12.6 per cent. Furniture industries received KD 3.590 million about 4 per cent of total IBK's loans but of the four projects financed, the Bank covered almost 60 per cent of their cost. Chemical products' industries received almost 9 per cent of the total IBK loans. This is generally a low percentage given the capital requirements of this indstry. However, this industry is generally financed directly by the Government. Marine and oilfield services received almost 7 per cent of the total loans of the IBK over this period and paper and paper products received 2 per cent of the total loans.

This time profile of loan allocations indicates a rise in the share of construction material industries and a decline in metal products industries and food and beverages shares. It is also true that the share of oilfield services and chemical products have fallen over time whereas that of paper products has risen. There is also a general reduction in the number of projects financed and a market increase in the average size of commitments.

The major source of finance in the industrial sector is that of government either directly as the sole owner or as a participant with the private sector. Up until 1977 the share of govern ent in the mixed sector within manufacturing exceeded KD 349 million, of which KD 290 million has already been paid in the corresponding private paid in capital in th jointly financed industrial projects was less than KD 250 million by 1977. Thus the Government's share of total paid in capital in these projects exceeds 57.39 per cent.

Direct governemnt ownership and finance is restricted to three companies operating in the oil sector. This included KOC and KNPC as well as the Petrochemicals company. In 1977, the total paid in capital of these companies exceeded KD 77.2 million.

Although Kuwait has abundant financial capital, it seems that only a small fraction of which is directed towards domestic investments and a smaller percentage yet towards industrial projects.

Industrial Policy: Objectives and Incentives

Industrialization is not a collection of industries and does not emerge out of a random process. It is rather the outcome of number of favourable conditions and a systematic and delibrate pclicy. In view of the many barriers to industrial development in Kuwait, it is

Table 5.7 Classification of Commitments by Size

Size	Number of Projects 1976	1977	1978
KD1 million and over	5	8	8
Over KD 500,000 and under KD 1 million	3	5	1
KD 100,000 up to KD 500,000	8	29	15
KD 50,000 and under KD 100,000	6	4	5
Total	22	46	29

Source: Industrial Bank of Kuwait, Annual Reports, 1977, 1978.

Table 5.8 IBK's Cumulative Loan and Equity Commitments (1974-1978) Classified by Industrial Sub-Sector

Industrial Sub-Sector	No. of Projects	Total Cost of Projects (KD000)	IBK Financing (KD000)	Per Cent
Construction Materials	44	79,432	38,618	42.8
Metal Products and Engineering	18	43,024	20,735	22.9
Food and Beverages	11	25,557	11,400	12.6
Furniture	4	6,123	3,590	4.0
Marine and Oilfield Services	5	11,575	6,050	6.7
Chemical Products	23	17,172	7,960	8.8
Paper and Paper Products	8	7 838	1,830	2.0
Miscellaneous	1	381	150	0.2
Total	114	191,102	90,333	100.0

Source: Industrial Bank of Kuwait, Annual Report, 1978.

Table 5.9 IBK's Loans and Equity Commitments During 1978 Classified by Industrial Sub Sector

Industrial Sub-Sector	No. of Projects	Total cost of Projects	IBK Financing	Per Cent
		(US $ thousands)		
Construction Materials	6	24,312	11,445	43.2
Metal Products and Engineering	6	5,622	3,185	12.0
Food and Beverages	6	18,351	8,000	30.2
Furniture	1	2,880	1,650	6.2
Oilfield Services	1	2,185	1,050	4.0
Chemical Products	6	1,800	815	3.1
Paper and Paper Products	2	391	185	0.7
Miscellaneous	1	381	150	0.6
Total	29	55,922	26,480	100.0

unrealistic to imagine that industrial expansion will occur spontaneously. The many domestic and international obstacles cannot be overcome without a delibrate and systematic ordering of priorities and the allocation of resources in accordance with such an ordering.

The industrial policies in Kuwait are ennunciated in the two development plans and in the Industrial Act of 1965. From these documents and other separate statements on the subject it is possible to enumerate a number of inter-related objectives. The single most important industrial objective is to lessen the dependence of the Kuwaiti economy on oil and to transform it into a more diversified and balanced economy. This overall objective is served by a host of sub-objectives that are not less important. These are:

(i) the promotion of the development of an industrial base capable of producing at competitive costs a wide range of products for domestic use as well as for exports;

(ii) the encouragement of the full exploitation of Kuwait's comparative advantage arising from oil related products;

(iii) the encouragement of the full utilization of existing industrial capacity and facilitation of the expansion of industries to their optimal eonomic size;

(iv) the encouragement of the full exploitation of Kuwait's natural resources other than oil;

(v) the intensifiaction of end-processing activities and the promotion of intersectoral links to secure a mature pattern of production with complete forward and backward linkages;

(vi) the adoption of appropriate technologies that are consistent with the factor endowments of Kuwait;

(vii) the reduction of Kuwait's dependence on foreign workers by developing indigenous skills through education and training; and
(viii) the harmonization of Kuwaiti industrial plans with other Gulf states and the promotion of regional and Arab economic cooperation.

Objectives without incentives and instruments to implement them remain vacuous. A number of incentives and instruments have been used to realize these objectives. Below is a short list of some of the more important ones:

(i) the provision of industrial sites in industrial zones at nomial rates;
(ii) provision of loans and participation in equity capital either directly or through the IBK;
(iii) provision of operating subsidies and assistances;
(iv) exemption of imported machinery and equipment and raw materials from custom duties;
(v) tax exemptions of corporate profits;
(vi) preferential treatment of local products in government purchases;
(vii) granting of subsidies for training of Kuwaiti employees;
(viii) protective tariffs on competing imports;
(ix) assistance to entrepreneurs in the selection, formation and operation of new industries; and finally
(x) Kuwaitization of management and labour.

Some of these incentives have already been discussed in preceding sections. In what follows we will present a brief discussion of some of the main instruments that have not yet been dealt with previously.

Ordinance No. 6/1965 promulgating the Industry Act introduced a number of articles to foster industrial development. Article 14,

for instance, empowers the Minister of Finance and Industry [38/] to:

(a) Exempt industrial establishments registered or licensed from all taxes levied including income taxes for a maximum period of ten years starting from the date of granting the permit or of registration or the date commencement of production.

(b) Exempt the following imports from custom duties:

(1) Machines, equipment and spare parts required by the industrial establishment.

(2) Raw materials and semi-finished goods required by the industrial establishment for the realization of its production aims.

(c) Raise for a maximum period of ten years custom duties on imported goods of a nature similar to local products provided that consideration is given to the adequacy of local production in terms of quantity, quality, availability and consumers' interests. Moreover, upon submission by the Industrial Development Board, the Minister of Finance and Industry shall be entitled to order the continuation of imposition of the tariff increases for a period exceeding ten years where economic conditions and circumstances necessitate uninterrupted protection of local industry.

(d) Exempt exports of locally manufactured products from all export fees and taxes.

Article 15 of the Ordinance granted industrial establishments the privilege of applying for an industrial site and access to information, statistical data, technical maps/drawings, exploration results and other such surveys and research related to a particular industry. Article 16 allows, subject to approval by the Minister of Finance and Industry, the State to contribute financially to the

Table 5.10 The Value of Industrial Imports Exempted From Tariff, 1967-1975

(in K.D)

Sector	Machine & Equipment	Spare Parts	Raw Materials	Total
Public and Mixed Sector	40,188,678	23,343,013	52,163,774	115,695,465
Private Sector	7,490,816	939,008	47,953,079	56,382,903
Total	47,679,494	24,282,021	100,116,853	172,078,368

Source: Ministry of Trade and Industry. The Strategy and Development Trends in the Industrial Sector of Kuwait. 1976.

costs of survey and research undertaken by the owners of industrial establishment to ascertain the viability of their establishments. If the enterprise were to prove viable costs will be borne by the enterprise otherwise the State shall bear one-half of such expenses. Article 17 confers high priority on new industries' applications for loans. The Ordinance calls upon the Government to arrange its purchases such that local products are given preferential priority provided that such products be comparable to products of foreign manufacture in quality and range of prices. It also stipulates that permits to establish industrial establishments in Kuwait effective from the date in which the Ordinance is in effect, shall be granted only to Kuwaiti individuals or to firms established in conformity with the provisions of the Commercial Company Code and provided that the responsible Director be of Kuwaiti nationality or that the Board of Directors thereof be composed of members the majority of which are Kuwaitis. Industrial establishments, which at the time when the Ordinance came into effect, did not have Kuwaiti partners owning 51 per cent of the capital of the establishment were to conclude liquidation of their business within two years unless they re-arrange their structure of ownership to fulfill the conditions stipulated in this article. Article 21 declared that it was not permissible for the number of Kuwaiti labourers and employees in any industrial establishment to fall below 25 per cent of the total number of labourers and employees in the establishment. It allowed, however, for the Minister of Finance and Industry to exempt an establishment from such restriction or to reduce the proportion referred to where an adequate number of Kuwaitis is not available.

In November 1978, the Council of Ministers approved a number of amendments to the Kuwaiti tariff system. The major change involves the introduction of quantitative restrictions on imports of goods when competing local production reaches 75 per cent of domestic demand. The new policy represents a serious attempt at protecting domestic manufacturing given that tariffs in Kuwait are exceptionally low.

Recently an American consulting firm submitted a detailed report concerning the establishment of export promotion fund. This indicates that Kuwait is serious about promulgating policies and implementing systems to restrict the domestic market for local producers and to support exporters into penetrating foreign markets. The success of the industrial exhibit in Kuwait in 1979 have prompted the Government to carry the exhibit to a number of locations.

The preferential treatment and the priority given to the purchase of local products in government expenditure programmes was first stipulated, as mentioned earlier, in the Industry Act of 1965. In 1972, the Council of Ministers, in accordance with the Law No. 18 of 1970, conferred a 10 per cent premium in prices to domestic goods over imports, i.e., that local products' prices may rise up to 10 per cent over imports and still be purchased by government in preference over imports. However, it is believed now that importers were able to absorb the 10 per cent premium and have undercut local producers. There is now some concern that the 10 per cent premium may have to rise to over 25 per cent to be effective.

Kuwait is also trying to tie its aid to the purchase of Kuwaiti goods. The deal with Sudan in 1976/1977 where the latter bought Kuwaiti pipes as part of the deal is an example of how such policy might work. Some also believe that Kuwait's foreign investment should be directed in such a way as to allow Kuwait access to new technology, to industrial activities that could be transferred in time to Kuwait, and to activities in third world that could be tied in to the end-processing activities within Kuwait.

Institutional Framework and Industrial Organization

There are a large number of institutions, primarily public, that promote directly or indirectly industrialization in Kuwait. These institutions are responsible for setting, coordinating, and controlling the nature, pace and pattern of industrial development policy. Ironically, there appears to be a multiplicity of institutions overseeing the industrial sector that are loosely connected and with limited coordination. On the other hand, there is a limited number of public institutions that are directly in the industrial field like those established in Saudi Arabia (SABIC, PETROMIN, etc.). Below is a list of some of the public organizations involved in industrial activity:

(i) Ministry of Trade and Industry

The Department of Industrial Affairs within the ministry is responsible for supervising the indutrial sectors' performance and the provision of technical help ad incentives in accordance with the Industry Act of 1965.

(ii) Industrial Development Board

This was established by the Industry Act, 1965 to be within the Ministry of Finance and Indutry. Its composition is as follows:

1. The Minister of Finance and Industry (now Trade and Industry) or whosoever shall deputize for him.
2. A representative of the Department of Customs and Ports.
3. A representative of the Department of Industrial Affairs.
4. A representative of the Ministry of Trade (within the Ministry).
5. A representative of the Planning Board (now Ministry of Planning).
6. A representative of the Credit Bank (now IBK).
7. Three industrialists in the private sector nominated by the Kuwait Chamber of Commerce and Industry.

The main functions of the Industrial Development Board include:

(a) Analysis of the industrial trends and performance in Kuwait and the submission of recommendations for the systematization of protection and incentives of the industrial sector.

(b) Study of applications for industrial permits and the issuance of final recommendations concerning them to the Minister, and finally;

(c) Standardization of industrial performance and supervision.

(iii) Ministry of Planning

The Ministry of Planning provides general coordination services in terms of integrating industrial development with the general framework of the country's development and the overall plans.

(iv) Ministry of Finance

The Ministry supervises the financial affairs of the public sector and the mixed-sector companies and appoints the Government representatives on the Board of Directors of these companies.

(v) The Central Administration of the Shuaiba Industrial Zone

The Administration is responsible for the provision of infrastructural facilities and technical services for industries located in the zone. The municipality of Kuwait also plays a similar function.

(vi) The Central Administration of Technical Training and The Industrial Bank of Kuwait

These two institutions have already been discussed in the previous section.

(vii) Petroleum Supreme Council

The Council is responsible for the formulation of policies related to oil extraction, exploitation and processing.

(viii) Office of Development and Industrial Consultancy

The Office is responsible for the conduct and evaluation of industrial feasibility studies that are submitted to the Ministry of Trade and Industry.

What emerges out of this multiplicity is duplication of activities, lack of coordination and the absence of a central hierarchy. The latter is needed to avoid duplication, to formulate policies and priorities and to assign clear tasks and responsibilities. There is also an apparent dearth of public bodies specialized by industrial activities. For instance, a public body may be needed for the coordination and planning of industrial activities in oil. Another, may be needed in basic industries, a third in non-metallic industries, etc.

The rationalization of the organizational structure in terms of clear authorities and responsibilities is a necessity for Kuwait.

Conclusions

Industrialization in Kuwait is inextricably linked to the efforts, resources and foresight of the public sector. However, the Government appears to be committed to the operation of a private enterprise system. To harmonize the constraints with the objectives, there is no substitute for a systematic and deliberate policy that identifies and priorizes objectives and has at its disposal enough instruments and institutions capable of implementing it.

On objectives, the industrial policy is rather clear. What is lacking, however, is clear assignment of tasks over time and institutions and a will to balance foreign investment prerogatives against domestic opportunities. In particular, there appears to be some weak correspondences between authority and specialization among ministries and agencies. Furthermore, the institutional arrangements and policy considerations appear to pay little attention to two important aspects: the question of control and review, and the technical links and sectoral specialization of industry. More fundamental perhaps is the urgent need to systematize the presently uncoordinated system of incentives, subsidies, protection and finance. As development proceeds, the industrial sector will increasingly require more effective protection, greater technical (forward linkages) coordination, and allotment of support on solid but flexible bases.

The industrial infra-structure appears to be adequate, thanks to early attention and commitment on the part of the Kuwaiti Government. More attention need to be paid to the development of Kuwaiti human resources than hitherto has been the case. The type and number of graduates of technical schools is indeed way below the desired objective of 25 per cent Kuwaiti contingent in manufacturing.

Chapter VI

The Future Kuwaiti Manufacturing Structure

Introduction

The inter-relationships between the indutrial sector and the rest of the sectors of the econom[illegible] necessitate the modelling of the entire economy to forecast the indutrialization process. There are also a number of distinguishing features that are peculiar to Kuwait that require special attention and careful specification. Some of these distinguishing characteristics are listed below:

(a) The excessive reliance on oil exports to propel economic growth in Kuwait is the dominant feature of the Kuwaiti economy. It is the impact of export proceeds on the various variables of the model that forms its basic nucleus. The pattern of influence of export proceeds is through this influence on government revenues and expenditures. The latter in turn determine investment and its composition as well as consumption. In turn, consumption and investment determine imports. Thus government expenditure are no longer treated as exogenous to the model.

(b) The prevailing Keynesian macroeconomic model is uniquely tied to the circumstances and conditions of developed industrial economies. It is highly aggregative and devotes a great deal of attention to the conditions of aggregate demand. In Kuwait, production bottlenecks, shortages of labour and deficient technological conditions are decisive variables that qualify and define the production process and pattern. Thus Keynesian aggregative models are of limited utility in explaining and predicting economic performance in Kuwait.

(c) Dualism in the Kuwaiti economy implies that one sector models are clearly inadequate. Dualism is here taken to mean that there are advanced and modern sectors side by side with traditional and primitive sectors. Ideally one is able to model the behaviour of these sectors separately. The solution proposed is to disaggregate the eonomy into a number of sectors hoping to visualize sectoral differences.

(d) Kuwait is a member of OPEC and oil prices and production are now determined jointly. Given the heavy dependence of Kuwait on oil, OPEC decisions have important consequences on the Kuwaiti economy. Thus, modelling OPEC's decisions and linking them to the Kuwaiti specific model is an indispensable exercise.

The Structure of the Model

The model has three basic components. An OPEC decision sub-system, a macroeconometric model and an inter-industry model. The three components form a recursive hiearchy. The OPEC model generates the values of some exogenous variables of the macroeconomic model and the macroeconometric model generates data on the exgoenous variables of the input-output model.

The main objective for formulating this model is to predict and stimulate the future outlook of the Kuwaiti manufacturing sector. The exercise is to be extended until the year 2000. Forecasting is a hazardous exercise even when it is restricted to the very near future. It is all the more difficult and vulnerable when extended for the distant future. In an economy such as that of Kuwait, the past is a poor indicator of the future, and therefore, forecasting is denied one of its fundamental premises. The approach will rely

then more on simulation, the main consideration being the ability to consider several aternatives in a consistent and all-embracing manner.

The OPEC Decision Models

This model shares the same methodology framework with the original paper by Hotelling (1931) and subsequent refinements of the theory of exhaustible resources by Gordon (1967), Smith (1968), and Solow (1974). It is similar in many respects to recent OPEC decision models like that of Blitzer et. al (1975), Kalymon (1975), Kyle and Moshowitz (1975), Ezzati (1976), Marshalla (1977), Jideonwo and Kubursi (1978), and Butterfield, Jideonwo and Kubursi (1980).

The structure of the model includes an objective function on the basis of which OPEC seeks to maximize its discounted strean of net benefits:

$$(1) \quad \text{Max } J(t) = \int_0^T T[R(q)-C(q;x)]e^{-rt}dt$$

Where R(q) is the revenue function which depends on the quantity of oil extracted per period (q). C(q;x) is the cost function which depends not only on the quantity of oil extracted per period, but also on the cumilative extraction at time t,x(t). It is assumed that the cheapest oil is extracted first and the formulation takes account of the increasing cost of additional extraction.

Two constraints are added to the maximization problem which incorporates the initial and terminal conditions:

$$(2) \quad x(o) = 0 \text{ and } x(T) = \bar{X}$$

Where T is variable and represents the terminal period and $\bar{Y}$ represents total available reserves.

The analysis of the optimal rate of extraction is made more explicit by specifying particular cost and demand functions that satisfy a number of mathematical and statistical properties.

Thus, revenue function is specified as follows:

$$(3) \quad R[q(t)] = P(q(t))q(t) = [\alpha - Bq(t)]q(t)$$

Where the values of α and B are chosen such as to reflect the long-term elasticity of the world demand for OPEC's oil specified at (-.33), while at the same time generating the equilibrium price per barrel that ruled in 1975.

Similarly, the following cost function is specified:

$$(4) \quad C = eq + \frac{h}{2} q^2 + hxq + \frac{h}{2}x^2$$

The values of the basic parameters are taken from recent studies, including Kalymon (1975), and Marshalla (1977), mainly on the basis of the extent to which they reflect the current situation in the world oil market and the Arabian Gulf production costs. The cost parameters e and h are such that the marginal cost per barrel increases to 22 cents after 10 billion barrels and further to $3.62 after 500 billion barrels have been produced.

Substituting (3) and (4) in the equation of motion of the model the following is obtained:

$$(5) \quad q'(t) = rq(t) + \frac{h(1+r)}{2B + h} x(t) - \frac{r(\alpha - e)}{2B + h}$$

Using $q(t) = x'(t)$, (5) translates into:

$$(6) \quad x''(t) - rx'(t) - \frac{h(1+r)}{2B+h} x(t) = -\frac{r(\alpha - e)}{2B+h}$$

The general solution of (6) takes the following form:

$$(7)\quad X(t) = A_1 e\lambda_1{}^t + A_2 e\lambda_2{}^t + \frac{r(\lambda-c)}{h(1+r)}$$

The definite values of A_1 and A_2 depend, of course, on the initial conditions. Equation (7) describes the optimum profile of cumulative extraction over time, it is then used to determine q(t), the optimum extraction rate, per period.

The share of the Kuwait in total OPEC production will be determined using a number of assumptions. One of which is the past production record. Whatever the share of Kuwait that is determined in this process, it is then used in the general model below as a constraint on the production of and revenue from oil.

The Macroeconometric Model and the Input-Output System

The main objective is to tie the national accounts categories with sectoral final demands. Regression techniques may be used for this purpose, but since input-output in Kuwait are only available for a limited number of years, they maybe computed from the input-output relations for a given year to be adjusted later in terms of the error-equations specified to capture the differences between value added derived from the input-output system and independent estimates of these value added.

Input-output has traditionally been viewed as a method from converting a final demand bill of goods by industrial sectors to gross outputs by industrial sectors needed to support this final bill of goods. The approach taken here is an extension of the traditional one. However, the technique is to be married with the available data, resulting in a complete integration of the interindustry tool within a macro-model framework.

Rather than dealing with the problem of converting a final demand bill of goods to gross output levels, we consider the more general problem of converting final demands by final expenditure category (consumption, investment, government expenditure, etc.) to value added originating by industrial sector. The traditional input-output system can be solved for sales (gross output) x in terms of a final bill of goods f.

(1) $Ax + f = x$

expressed as $x = (I-A)^{-1} f$. Of more general interest within the context of large macro models is conversion of information on final expenditure category to sales levels by industry. An attempt will be made to devise a relationship between the expenditure components of GNP and value added orginating by industrial sector using as a guide the inter-industry framework.

The input-output tables of Kuwait for 1974/1975 will be used to link the six components of final demand (private consumption, public consumption, exports, change in inventories, investment and imports) to value added in thirteen sectors. The links will be established in terms of the matrix multiplier, the value added coeficients and the final demand convertor matrix. The mechanics of such a conversion are outlined below.

If the static input-output relationship (1) is accepted, then, as a matter of course, this implies a relationship between gross sales and gross output originating (value added)

$$(2) \quad y = Bx$$

where B is a matrix with off diagonal entries equal to zero and diagonal elements equal to one minus the column sums of A.

$$(3) \quad B_i = 1 - \sum_j a_{ij} \qquad j = 1, \ldots, n$$

Solving for gross flows (sales, or gross output)

$$(4) \quad x = B^{-1}y$$

Substitution of (4) in (1)

$$(5) \quad \begin{aligned} AB^{-1}y + F &= B^{-1}y \\ (I-A)B^{-1}y &= f \end{aligned}$$

the matrix $(I-A)B^{-1}$ has the property of adding to unity columnwise. If d_{ij} is a typical element of $(I-A)B^{-1}$, then

$$(6) \quad \sum_{j=1}^{n} d_{ij} = 1 \qquad j = 1, \ldots, n$$

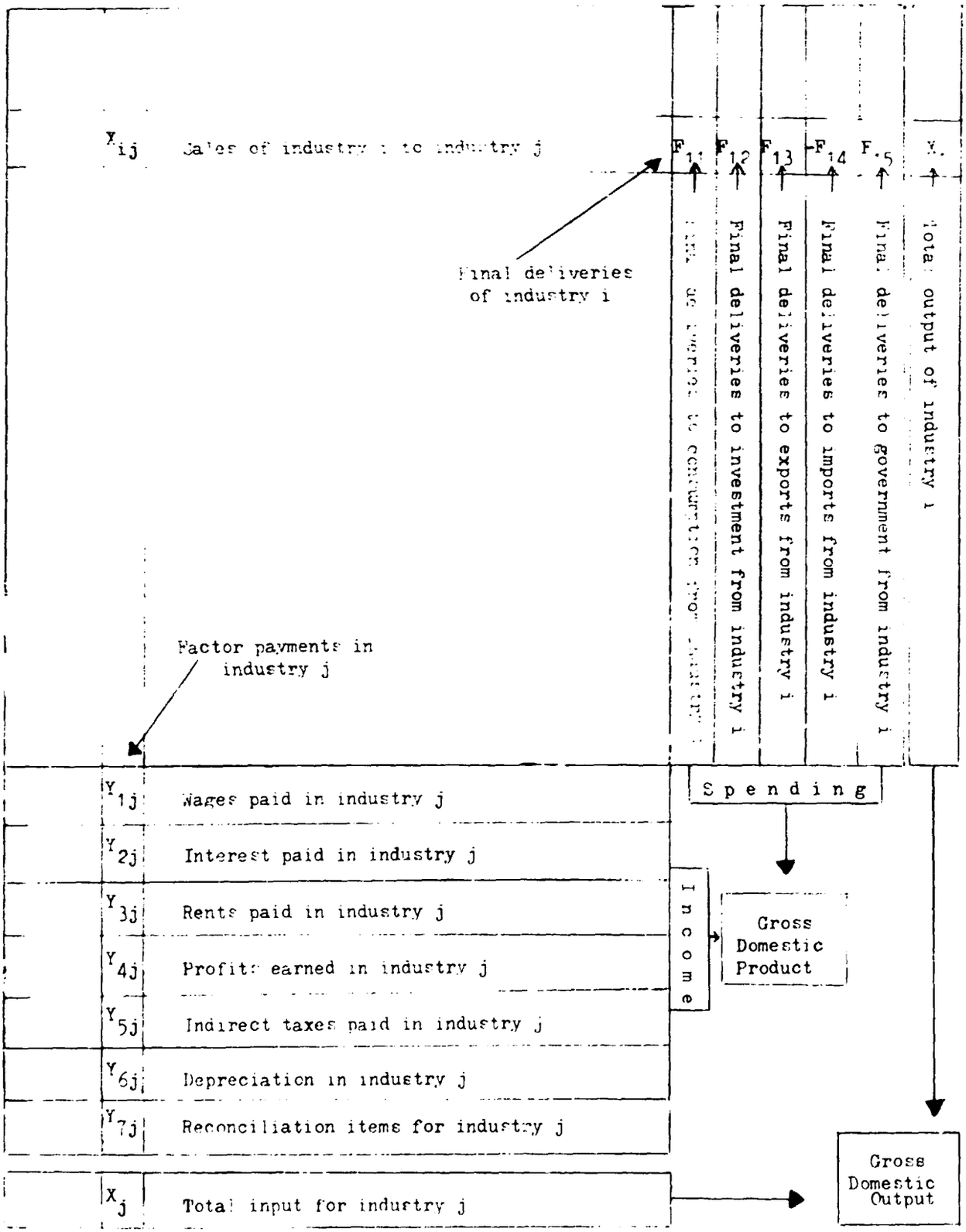
There now remains the link between the components of gross national product and final demand by industrial sector. The industrial distribution of final demand provides this link. This distribution is summarized by the matrix H. The typical element of a column of H provides the industrial distribution for a given expenditure category. For the elements of H:

$$(7) \quad \sum_{i=1}^{n} h_{ij} = 1 \qquad j = 1, \ldots, m$$

Using the industrial distribution of final demand, the final bill of

Figure 1

RELATIONSHIP BETWEEN INTERINDUSTRY TRANSACTIONS
FINAL DEMAND AND FACTOR PAYMENTS



goods can be expressed in terms of final demand by spending category

$$(8) \quad f = HG$$

where f is final demand by sector and G final demand categories consisting of GNP components.

Substituting (8) for f in (5)

$$AB^{-1}y + HG = B^{-1}y$$

$$(9) \quad y = B(I-A)^{-1}H\,G$$

The matrix $B(I-A)^{-1}$ H has as many rows as industries in the direct requirements matrix A and as many columns as spending categories in the industrial distribution of final demand matrix H. If

$C = B(I-A)^{-1}H$, equation (9) can be written

$$(10) \quad \begin{aligned} y_1 &= C_{11}\,G_1 \ldots\ldots + C_{1m}\,G_m \\ &\vdots \\ y_n &= C_{n1}\,G_1 \ldots\ldots + C_{nm}\,G_m \end{aligned}$$

The properties of the H matrix and the $(I-A)B^{-1}$ matrix imply

$$(11) \quad \sum_i C_{ij} = 1 \qquad j = 1, \ldots, m$$

and from (11) it is clear that

$$(12) \quad \sum_{i=1}^{n} y_i = \sum_{i=1} G_i = GPP$$

the sum of industry products equals the sum of final demands by spending category. In summary, given the direct requirements matrix A and the industrial distribution of final demand (at a point in time), a link can be constructed between spending categories and industry products. Furthermore, a link can be established between spending categories and

industry gross sales. From (4) and (9)

$$(13) \quad x = (I-A)^{-1} HG.$$

A major weakness of (12) and (13) becomes evident when this system is used within the context of a macro model for forecasting in a period far removed from the original period of construction. There is considerable evidence that the coefficients of the direct requirement matrix A and the industrial distribution of final demand are subject to wide variation over long periods of time. This variation could result in serious error when converting final demand to industry products and subsequently, affect labour requirements,capital formation and prices.

Several examples can be developed to demonstrate the extent of coefficient change during the postwar period for selected industries.

An index reflecting average movements of all coefficients for a given industry can be constructed as follows.

Consider the i^{th} industry in (10)

$$(14) \quad y_i = C_{i1}G_1 + C_{12}G_2 + \ldots + C_{im}G_m$$

with long time series on $G_1, \ldots, G_m$ an estimate of what y_i would have been if $C_{i1}, \ldots, C_{im}$ had remained constant over the (1960-1976) and may be more, can be constructed.

$$(15) \quad \bar{y}_{it} = C_{i1}G_{1t} + \ldots C_{im}G_{mt}$$

since long time series on y_{it} areaccessible, the ratio $y_{it}/\bar{y}_{it}$ is now a current weighted index of coefficient change in industry i. This ratio can be interpreted as

$$(16)\quad r_{it} = y_{it}/\bar{y}_{it} = \Big[\sum_{j=1}^{m} C_{ijt}G_{jt}\Big]\Big/\sum_{j=1}^{n} C_{ij}G_{jt} \qquad t = 1, \ldots, T$$

The factors that affect r_{it} are those which affect the coefficients of A and H in (9). r_{it} should reflect average changes in A and H for a given industry. Furthermore these changes in A and H would be expected to be slow and persistent.

The Estimation Results

The estimation results are those derived by M.S. Marzouk.[39/] The model was estimated with annual data over the period 1962/1963 to 1975/1976. Data on prices do not exist for the period before 1972, Marzouk uses his own series derived from Iraq and Saudi Arabia. Only Ordinary Least Squares were used given the small sample size and regardless of the fact that many of the endogenous variables are jointly determined. In the stochastic equations, the coefficient of determination adjusted for degrees of freedom R^2, the Durbin-Watson (D-W) serial correlation coefficient, and the t-statistic associated with the parameter estimates are presented. The first two statistics are below the estimated equation, and the t-statistic is in parentheses below the parameter estimates.

D. THE MODEL (EQUATIONS)

1. Production

(1.1) $X_1R = .0019ER - .0287\Delta HR + .020671R + .0083GGR + .0419CPR - .04153\ MR$

(1.2) $X_2R = .8825ER - .6171\Delta HR + .0782\ IR + .0848CRG + .0393CPR - .176\ MR$

(1.3) $X_3R = .0024ER - .0587\Delta HR + .033\ IR + .0246CGR + .0328CPR - .04776\ MR$

(1.4) $X_4R = .0035ER - .1445\Delta HR + .0451\ IR + .0689CGR + .0349CGR - .07823\ MR$

(1.5) $X_5R = .0308ER - .0456\Delta HR + .1104\ IR + .0284CGR + .0140CPR - .07939\ MR$

(1.6) $X_6R = .0010ER - .0356\Delta HR + .1045\ IR + .0103CGR + .0021CPR - .03857\ MR$

(1.7) $X_7R = .0144ER - .0026\Delta HR + .2538\ IR + .1573CGR + .0937CPR - .3332\ MR$

(1.8) $X_8R = .0056ER - .0073\Delta HR + .01\ IR + .1540CGR + .0406CPR - .01174\ MR$

(1.9) $X_9R = .0003ER - .00028\Delta HR + .1088\ IR + .0034CGR + .0025CPR - .00001\ MR$

(1.10) $X_{10}R = .0082ER - .0700\Delta HR + .1077\ IR + .0942CGR + .3323CGR - .0996\ MR$

(1.11) $X_{11}R = .0121ER - .01157\Delta HR + .0623\ IR + .2132CGR + .0569CPR - .0407\ MR$

(1.12) $X_{12}R = .0336ER - .0219\Delta HR + .056\ IR + .0809CGR + .2362CPR - .0379\ MR$

(1.13) $X_{13}R = .0037ER - .01009\Delta HR + .0156\ IR + .072\ CGR + .0730CPR - .0155\ MR$

(1.14) X11R $= X_3R + X_4R + X_5R + X_6R + X_7R + X_8R + X_9R + X_{11}R$

(1.15) GDPR $= \sum_{i=1}^{13} X_iR + GDPAD$

(1.16) GDP = GDPR*P

(1.17) GDPPC = GDP/PoP

(1.18) GNP = GDP + NFI

(1.19) GNPR = GNP/P

2. Expenditures (Private)

(2.1) $CPR - .344\ CPR_{-1} = 43.943 + .00767\ (NNPR - .344\ NNPR_{-1}) + .74189\ (CPR_{-1} - .334\ CPR_{-2})$
(6.613) (4.332)

$\bar{R}^2 = .8645$

$DW = 1.935$

3. Expenditures (Government)

(3.1) $CGR - .4073CGR_{-1} = 59.3056 + .00038\ (POP - .4073\ POP_{-1}) + .08299$

(6.799) (4.706)

$(GRR-.4073\ GRR_{-1})$

$\bar{R}^2$ .9366

.W. = 1.292

(3.2) $GRR = \frac{GR}{P}$

(3.3) $GR - .2379\ GR_{-1} = 093.3095 + .7685\ (EOL - .2379\ EOL_{-1})$

(27.939)

$\bar{R}^2$ = .984

D.W. = 1.949

(3.4) GER = CGR + IGR

(3.5) OGER = -7.5575 + .151043(GDPR) $\bar{R}^2$ = .6965

(5.552) D.W. = 1.14

(3.6) TGER = CGER + OGER

(3.7) TGE = TGER*P

(3.8) GS = GR - TGE

4. Employment and Labour Force:

(4.1) EA = X1R/PA

(4.2) EMN = X2R/PMN

(4.3) EMF = (X3R + X4R + X5R + X6R X7R)/PMF

(4.4) ELEC = X8R/PELEC

(4.5) ECNS = X9R/PCNS

(4.6) ETRD = (X10R + X12R)/PIRD

(4.7) ETRN = X11R/PIRN

(4.8) ESER = XBR/PSER

(4.9) $PA_t = PA_{t-1}(1+BA)$

(4.10) $PMN_t = PMN_{t-1}(1+BMN)$

(4.11) $PMF_t = PMF_{t-1}(1+BMF)$

(4.12) $PELEC_t = PELEC_{t-1}(1+BELEC)$

(4.13) $PCNS_t = PCNS_{t-1}(1+BCNS)$

(4.14) $PTRD_t = PTRD_{t-1}(1+BTRD)$

(4.15) $PTRN_t = PTRN_{t-1}(1+BTRN)$

(4.16) $PSER_t = PSER_{t-1}(1+BSER)$

(4.17) EMP = EA + EMN + EMF + ELEC + ECNS + ETRD + ETRN + ESER

(4.18) LF = 165583.0 + .13972 PoP $R^2 = .7416$ D.W. = 1.239
(6.189)

(4.19) (EMP = (LF-EMP)/LF

5. Income Distribution:

(5.1) W = Wrt * EMP

(5.2) NNP = GNP - DEP

(5.3) NNPR = NNP/P

(5.4) NWI = NNP - W - (ITNSR * P) - NFI

6. Wages and Prices

(6.1) $Wrt + .413\ Wrt_{-1} = 926.753 + .31411\ (GDP + .413\ GDP_{-1})$
(9.408)
$\bar{R}^2 = .916$
D.W. = 2.32

(6.2) P = .70381 + .00783 MS + .3471 PM + .00093 GDP $\bar{R}^2 = .9548$
(2.533) (5.439) (2.113) D.W. = 2.58

7. Foreign Trade

Exports:

(7.1) ENL = 6.08832 + .0643 GDPSI

(22.823)

$\bar{R}^2$ = .975

D.W. = 1.211

(7.2) ENLR = ENLXP

Imports:

(7.3) $MKR + .635\ MKR_{-1} = 32.4662 + .3828\ (IR + .635\ IR_{-1}) + .1638(XIIR+635\ XIIR_{-1}$

(3.83) (2.63)

$\bar{R}^2$ = .751

D.W. = 2.27

(7.4) $MIR+.2519\ MIR_{-1} = -22.165+.2531\ (XIIR+.2519\ XIIR_{-1}) + .4787\ (IR+.2519\ IR_{-1})$

(22.73) (15.86)

$\bar{R}^2$ = .991

D.W. = 2.29

(7.5) MCR = -21.304 + .00015 PoP + .02229 GDPR

(3.049) (1.425)

$\bar{R}^2$ = .892

D.W. = 1.262

(7.6) $MOR - .5426\ MOP_{-1} = -1.9348 + .00164\ (GDPR - .5426\ GDPR_{-1})$

(12.215)

$\bar{R}^2$ = .925

D.W. = 2.53

8. Capital Transfers and Foreign Transactions Balance

(8.1) $FCT + .8907\ FCT_{-1} = 196.76 + 1.080\ (GS + .8907\ GS_{-1})$

(21.376)

$\bar{R}^2 = .985$

D.W. = 1.33

(8.2) $NFI = .10189\ FCT + NFI_{-1}$

(8.3) NFIR = NFI/P

(8.4) NS = NFI + ONS

(8.5) MR = MKR + MIR + MCR + MOR

(8.6) EOLR = EOL/P

(8.7) ER = EOLR + ENLR

(8.8) NSR = NS/P

(8.9) BOIR = ER - MR

(8.10) BOPR = BOTR + NSR

9. Other Identities

(9.1) IR = IPR + IGR

(9.2) CR = CPR + CGR

(9.3) $\Delta HR = GDPR - (CR + IR + BOPR)$

E. THE MODEL (VARIABLES)

(Values are expressed in millions of 1972 Kuwaiti Dinars except where noted)

X_1R = Value added in the Livestock/Agriculture/Fishing sector.

X_2R = Value added in the Mining/Quarrying sector.

X_3R = Value added in the Food Manufacturing sector.

X_4R = Value added in the Software/Paper Industries sector.

X_5R = Value added in the Oil Refining/Chemical Industries sector.

X_6R = Value added in the Nonmetallic Industries sector.

X_7R = Value added in the Metal Working Industries sector.

X_8R = Value added in the Water/Electricity/Gas sector.

X_9R = Value added in the Construction sector.

$X_{10}R$ = Value added in the Trade sector.

$X_{11}R$ = Value added in the Transportation/Communication sector.

$X_{12}R$ = Value added in the Finance/Insurance/Real Estate sector.

$X_{13}R$ = Value added in the Services sector.

ER = Total Exports

ΔHR = Change in Stocks.

IR = Total Investment.

CGR = Government Consumption.

CPR = Private Consumption.

MR = Total Imports.

XIIR = Value added in the Nonprimary Nonservices sector.

GDFR = Real Gross Domestic Product.

*ITNSR = Indirect taxes net of subsidies.

GDP = Gross Domestic Product in millions of K.D.

P = Cost of living Index 1972 = 100.

GDPPC = Per Capita Gross Domestic Product in K.D.

POP = Population in persons.

NNPR = Real Net National Product.

GRR = Real Government Revenue.

GP = Government Revenue in millions of K.D.

*EOL = Exports of Oil in millions of K.D.

GER = Government Expenditure.

OGER = Other Government Expenditures.

IGER = Total Government Expenditures.

IGE = Total Government Expenditures in millions of K.D.

GS = Government Surplus in millions of K.D.

EMP = Employment persons.

L.F. = Labor Force in persons.

UEMP = Unemployment rate.

W = Wages in millions of K.D.

NWI = Nonwage Income in millions of K.D.

*PM = Imports Price Index 1972 = 1.0.

*MS = Supply of money in millions of K.D.

ENL = Non-Oil Exports in millions of K.D.

*GDPSI = Gross Domestic Product in Saudi Arabia and Iran in millions of U.S. Dollars.

ENLR = Non-Oil Exports.

MKR = Imports of Capital Goods.

MIR = Imports of Intermediate Goods.

MCR = Imports of Consumption Goods.

MOR = Imports of Nonclassified Goods.

FCI = Foreign Capital Transactions in millions of K.D.

NS = Net Services in millions of K.D.

NSR = Real Net Services.

BOTR = Balance of Trade.

BOPR = Balance of Payments.

WRT = Average Wage Rate in K.D. per year.

EOLR = Exports of Oil.

CR = Total Consumption Spending.

NNP = Net National Product Income in millions of K.D.

*IGR = Real Government Gross Fixed Capital Formation.

*IPR = Real Private Gross Fixed Capital Formation.

*GDPAD = Reconciling variable between value added and GDP (value added in Public Administration and Defence).

*DEP = Depreciation Charges in million K.D.

*ONS = Net services payments other than investment income in million K.D.

*BA = Growth rate of labour Productivity in Agriculture.

*BMN = Growth rate of labour Productivity in Mining.

*BMF = Growth rate of labour Productivity in Manufacturing.

*BELEC = Growth rate of labour Productivity in Electricity.

*BCNS = Growth rate of labour Productivity in Construction.

*BTRD = Growth rate of labour Productivity in Trade.

*BTRN = Growth rate of labour Productivity in Transportation.

*BSER = Growth rate of labour Productivity in Services.

PA = Labour Productivity in Agriculture in thousands of 1972 K.D.

PMN = Labour Productivity in Mining in thousands of 1972 K.D.

PMF = Labour Productivity in Manufacturing in thousands of 1972 K.D.

PELEC = Labour Productivity in Electricity in thousands of 1972 K.D.

PCNS = Labour Productivity in Construction in thousands of 1972 K.D.

PTRD = Labour Productivity in Trade in thousands of 1972 K.D.

PTRN = Labour Productivity in Transportation in thousands of 1972 K.D.

PSER = Labour Productivity in Services in thousands of 1972 K.D.

GNP = Gross National Product in million K.D.

GNPR = Real Gross National Product.

NFI = Net factor income from abroad in million K.D.

NFIR = Real net factor income from abroad in million K.D.

EP = Employment in persons in Agriculture.

EMN = Employment in persons in Mining.

EMF = Employment in persons in Manufacturing.

ELEC = Employment in persons in Electricity.

ECNS = Employment in persons in Construction.

ETRD = Employment in persons in Trade.

ETRN = Employment in persons in Transportation.

ESER = Employment in persons in Services.

* Variables marked with an asterik are exogenous.

The Simulation Results

Forecasting the future is a difficult task particularly where structures are not stable and the economy is undergoing rapid and fundamental changes. However, the framework adopted in this study allows simultation of the Kuwaiti economy under a number of assumptions in a consistent and coherent way. Although the outcome of only one simulation exercise, will be reported, the system is developed in such details as to allow interested parties the luxury of entertaining any collection of simulation receipes.

The values of exogenous variables from 1975 to the year 2000 are presented in Table 6.1. The value of the exogenous variables were derived on the basis of projected trends of their values in 1975. For instance, the import price index is assumed to grow at an annual rate of 10 per cent, and so does the money supply and oil revenues in nominal dollars. Government investment, however, is postulated to grow at 14 per cent, private investment at 13.1 per cent, whereas depreciation is assumed to grow at 4.8 per cent. These values are assigned on the basis of past averages and/or the judgement of policy makers. They need not be correct or invariant. They could easily change and as such should be interpreted as benchmarks and the results should be evaluated carefully and critically.

The system as depicted by the model in the previous section was adjusted to reflect long-run stationery equilibrium states. Lagged variables were set equal to current variables and therefore eliminated. Short-run parameters were replaced by their long-run values. The technique used is simple. For instance, let short-run consumption be defined by equation (i) below:

defined by equation (i) below;

$$\text{(i)} \quad c_t = \alpha + \beta y_t + \lambda c_{t-1}$$

the long-run version is obtained by setting.

$$\text{(ii)} \quad c_t = c_{t-1} = \bar{c}$$

Thus

$$\text{(iii)} \quad \bar{c} = \alpha + \beta y_t + \lambda \bar{c}$$

or

$$\bar{c} = \frac{\alpha}{1-\lambda} + \frac{\beta}{1-\lambda} y_t$$

$$\bar{c} = \alpha^* + \beta^* y_t$$

Now α^* and β^* are treated as the long-run parameters of the model. In particular β^* is the long-run marginal propensity to consume. 40/

The results presented in Table 6.2 reveal an interesting structure. The gross domestic product in constant 1972 prices increases at the rate of 4.2 per cent per year between 1975 and 2000. However, real manufacturing value added shows an annual rate of growth of 6.2 per cent per year. Thus the ratio of real MVA to GDP increases from 5 per cent in 1975 to 6 per cent in 1985 and to 8 per cent in the year 2000. Although the rate of increase is relatively high, it fails to raise the percentage share of MVA to GDP to a level that is consistent with the linear targets that how the real rate of growth of MVA to exceed an average 9.2 per cent per annum. Thus any rise in MVA and its share in GDP can not be expected to emerge within the current structure of production and behaviour

TABLE 6.1
TIME PATH OF THE EXOGENOUS VARIABLES (1975-2000)

VARIABLE	1975	1980	1985	1990	1995	2000
GDPAD	171.200	217.500	276.220	350.860	445.670	566.100
IPR	80.000	148.050	273.980	507.030	938.300	1736.420
POP	994837.000	1331316.000	1781601.000	2384104.000	3190577.000	4269711.000
PM	166.000	267.350	430.560	693.420	1116.770	1798.550
DEP	83.100	105.050	132.810	167.890	212.240	268.310
ITNSR	155.000	197.020	252.480	322.230	411.260	524.890
IGR	104.000	200.240	385.550	742.350	1429.320	2752.040
MS	284.500	458.190	737.920	1188.430	1913.970	3082.470
GDPSI	38071.000	76242.030	152684.370	305769.900	612343.140	1226295.130
EOL	2337.700	3764.890	6063.390	9765.150	15726.880	25328.290
ONS	-79.000	-100.830	-128.680	-164.240	-209.610	-267.520

Table 6.2

Simulation Results on Selected Variables

Kuwait (1975-2000)

Variable	1975	1980	1985	1990	1995	2000
X1R	13.2	19.4	21.8	23.2	25.6	27.8
X2R	3449.2	4388.5	5462.4	6734.8	8288.6	10231.3
X3R	23.2	37.7	43.4	49.6	58.7	69.9
X4R	51.8	87.9	101.1	130.6	160.5	198.2
X5R	117.7	153.9	192.2	255.6	380.9	550.6
X6R	10.8	22.5	29.0	38.7	51.5	68.6
X7R	20.7	26.5	40.8	68.9	79.6	111.4
X8R	113.2	113.9	117.5	122.8	191.9	140.7
X9R	19.6	24.3	30.6	38.6	48.9	62.3
X10R	171.7	185.0	194.8	197.3	204.6	226.8
X11R	159.9	163.2	172.3	185.9	204.9	230.3
X12R	244.0	271.4	310.1	360.5	420.6	525.5
X13R	71.3	73.7	75.3	79.6	83.6	86.9
GDPR	4466.3	5567.9	6791.3	8285.8	10199.9	12530.3
GDP	5626.3	10305.8	18469.8	33110.2	59888.4	108100.2
GNP	6566.66	12664.74	22403.05	37524.40	65308.7	116522.9
GNPR	5212.8	6842.3	8237.6	9390.4	11123.1	13506.6
MVAR	224.2	328.5	406.5	543.1	731.2	998.7
MVA/GDP	.050	.060	.060	.066	.072	.08

parameterized within the model. Significant industrialization is certainly a departure from current trends, allocation and processes.

The magnitude and rates of increase of the sub-manufacturing sectors provide a better picture of the future structure of Kuwaiti manufacturing depicted by this scenario. First, food and beverages show the lowest real rate of annual growth at 4.5. Non-metallic mineral products, on the other hand, exhibit the highest annual rate of growth within the manufacturing sector with a rate of 7.7 per cent. Fabricated metals show a 7 per cent rate of growth, chemicals a 6.4 per cent and paper and paper products 5.5 per cent. Second, chemicals and related products will retain the largest percentage share of MVA all through the eighties and nineties. However, its share which stood at 52.5 per cent in 1975 declines to 47.3 per cent in 1985. By the year 2000 it re-emerges with a 55.1 per cent share. The share of the food sector rises slightly between 1975 and 1985, but falls to less than 7 per cent of total MVA in the year 2000.

For achievement of these modest rates of increase in MVA and its sub-components there will be massive increases in investments, private and public. The rate of increase of real private investment is put at 13.1 per cent per annum and that of government real investment at 14 per cent per annum. Although these rates of increase are high they are certainly within bounds of available investable surpluses in Kuwait. The real binding constraint is the availability of all grades of labour.

Table 6.3 Percentage Share of the Manufacturing Sectors in Total Manufacturing Value Added, 1975-2000

Sector	1975	1985	2000
X3R	10.3	10.7	7.0
X4R	23.1	24.8	19.8
X5R	52.5	47.3	55.1
X6R	4.8	7.1	6.9
X7R	9.2	10.0	11.1

TABLE 6.4
SIMULATION RESULTS ON EMPLOYMENTS AND LABOUR FORCE
KUWAIT (1975-2000)

VARIABLE	1975	1980	1985	1990	1995	2000
EA	16.	34.	56.	73.	61.	55.
EMN	9.	17.	31.	57.	103.	187.
EMF	42.	85.	148.	233.	329.	397.
ELEC	14.	20.	30.	47.	73.	116.
ECNS	27.	49.	90.	166.	310.	579.
ETRD	109.	176.	286.	462.	743.	1185.
ETRN	120.	181.	280.	443.	718.	1185.
LF	304582.	351594.	414508.	498701.	611370.	762147.

The model also solves, under the hypothesis of zero rates of change in productivity in the various sectors, the required levels of labour needed to sustain the outputs of these sectors. Table 6.4 presents data on the employment requirements in the various sectors and the total available domestic labour. The gap between supply and demand need to be imported or measures and strategies need to be implemented to raise the productivity and up-grade the skills of the present labour pool. Should productivity remain constant in manufacturing this sector will require almost 397,000 workers by the year 2000 or almost half as much would be needed or almost 189 thousand workers. Were productivity to rise by 5 per cent per annum the needed labour in this sector will fall to 117 thousand workers, or almost 15 per cent of the available labour force.

These figures serve to underline the importance of up-grading the Kuwaiti labour force and to the adoption of appropriate technology. Indeed, the whole argument is contingent upon the projection of current structures and trends to the year 2000. This is a questionable premise. Therefore, these results should be used carefully and with a great deal of caution.

Chapter VII

Summary and Concluding Remarks

Economic activity in Kuwait, as in other major oil producing and exporting countries of the region, has and continues to be dominated by developments in the oil sector. The influence of the sector is not only direct, being the major contributor to GDP, but, through government expenditure of oil revenues, it is also by far the single most important determinant of economic activity in other sectors as well. Kuwaiti economic policy, however, has invariably aimed at lessening this dependence by diversifiying the economic base of the country.

The abundant supply of foreign exchange and the enormous excess savings over domestic investment have eliminated these traditional barriers to economic growth. Nevertheless growth and development in Kuwait remain to be severely constrained by the small size of the country, scarcity of skills in the indigenous population, unproductive attitudes towards work, hostile climate and inadequate planning machinery. A major implication of the Kuwaiti climate is that the opportunities for agricultral development are limited. The promotion of the services sector independent of a productive-commodity base appears to be of limited returns. Thus development will remain dependent on oil in a manner that reduces its contribution to the diversification of the economy. Besides, the export potential of services is limited and would, therefore, contribute very little to the generation of substitute earnings of foreign exchange. This suggests that indutrialization is perhaps the only domestic process through which Kuwait can transform its non-renewable oil into a stream of continuous productive human and physical capacities.

Industrialization, however, is not a random process and has never been an inevitable phenomenon. A host of "pre-requisites" and "pre-conditions" should precede or accompany the industrialization effort. A clear commitment on the part of the Government is indispensable. A planning machinery to translate the overall commitment into detailed tasks and policies is also indispensable. Availability of raw materials, access to large markets, cheap energy, accummulation of capital, stable political system, flexible social system, adequate supply of human skills, a fund of scientific knowledge, an adequate social overhead are but a few of the "pre-conditions" for indutrialization generally mentioned in the development literature. Moreover, apart from these "pre-requisites", industrialization entails vast increases in productivity which only technological change through innovation and adaptations can bring around. It is a generally held view that industrialzation during the industrial revolution of the 19th century was sustained by the application of machinery and power to textile production, by advances in the technology of iron manufacture, by the invention of the steam engine and the birth of engineering and the machine tool industry, and by the overhauling of methods in a host of other industries. Industrialization was invariably composed of surges of "leading sectors" which, over long periods of time, replaced each other in economic primacy.

Kuwait industrialization effort is of recent vintage, is half-hearted and achievements fall short of targets. There is general preference for foreign investments. This preference is understandable given the limited absorptive capacity of the domestic economy. But absorptive capacity is not a fixed number, it is a dynamic process which is endogenous to the

development process and industrial effort. Learning by doing has to start from an initial state and Kuwait appears to be trading off cheaply domestic benefits against foreign returns. The uncertainties implicit in foreign investments are far more serious than has been hithero recognized by the Kuwaities. Surely the returns on foreign investment are already covering a substantial portion of the import bill and this is a real achievement. But industrialization of Kuwait is proceeding slowly and has not kept pace with the magnitudes of investments abroad and Kuwait is not availing itself on the spin-offs associated with domestic productive activity. The nature of the industrialization effort and its successes and failures are documented below:

(1) Manufacturing activity in Kuwait is rather limited. The Kuwaiti economy exhibits several of the characteristics of a single-product export oriented developing economy. The activities are dualistic; oil employs the most efficient technology, is export oriented, is alienated from the other productive sectors of the economy, is capital intensive and pays relatively very high wages. Non-oil manufacturing and other economic sectors, on the other hand, slow low technical capabilities, low labour productivity, high cost per unit of output, little capital per worker and limited export potential.

(2) Kuwait's comparative advantage demonstrates itself in energy intensive and capital intensive industries. This calls for the intensification of the efforts to move to down-stream operations. But this will only be successful if it is coordinated on a regional basis. This is the serious challenge of industrialization in Kuwait, the whole fertile crescent, the Arabian Gulf and the whole of the Arab world. The current boundaries of production are too restrictive to permit feasible

industrialization in any Arab state and especially in any Gulf state. Regional cooperation is a matter of necessity. The region is fortunate in the sense that it is complementary, but its complementarities are beginning to dwindle as each state pursues similar objectives and develops similar industries. What is urgently needed is a well defined regional investment plan. Given that there does not exist a single state that is decisively more industrialized than the rest, simplifies matters as there would not likely be problems associated with a given state attracting the lion's share at the expense of others.

What is being argued for here is very simple. Moving down-stream even into operations where a given state is most capable of is unlikely and no state could profitably do so without coordinating its plans with the other states in the region. Industrialization of Kuwait is far fetched without proper links with the Fertile Crescent and/or the Gulf. The first region offers a larger market and significant diversification possibilities. The second offers more political homogeneity.

(3) Diversification implies several growth poles. Moving into oil down-stream operations is not sufficient. The establishment of a metal core-complex is consistent with the comparative advantages of Kuwait being energy-intensive and capital intensive. But again without the proper market there is not much to be derived from such costly activities.

(4) Developments in the oil sector have generally been detrimental to the traditional sectors in Kuwait. There has been, however, encouraging developments in the fishing industry and the ship building industries. These developments should be encouraged and promoted.

(5) There are a number of institutions, primarily public, that promote directly or indirectly, industrialization in Kuwait. The pattern

of growth of these institutions has not been orderly and consistent. There is a general lack of correspondence between objectives and practices, between specialization and authority. More co-ordination and harmonization are needed among the institutions and between the institutions and policy makers.

(6) If the structure of production and the institutional structure that define and qualify economic performance in Kuwait were not to change, only limited industrialization could be expected in the future. Massive and substantial industrialization, as the model presented in this study demonstrates, requires a decisive departure from the existing system and structure.

(7) Dependence on the foreign sector is likely to increase over time rather than decrease. For a considerable period of time Kuwait will be importing goods and services, particularly capital goods. The rising incomes of the Kuwaitis are expected to increase their consumption of imported goods. Furthermore, the economy would rely in an increasing manner on foreign labour and the Kuwaitis will most likely remain as one of the major foreign investors. If the activities of the foreign sector are not coordinated properly with the industrialiation effort, it may very well frustrate whatever has been achieved or started in the domestic economy. Imports should be examined in terms of their substitutability with local products. The tariff system as it exists now is incoherent and limited in coverage and scope and administered on an ad-hoc case by case basis. Foreign investments should be evaluated against the direct and indirect benefits of domestic opportunities. Furthermore, foreign labour should be allocated to activities and over sectors according to a well defined system of national priorities. As things stand in Kuwait,

there is very little coordination among these different elements of industrial concern.

(8) The nature of the policy process in Kuwait is such that a well coordinated system of resource allocation cannot be expected. Each individual ministry has its own political base, and it is difficult for outside institutions and organizations to change their plans. Furthermore, planning in Kuwait is not a serious exercise. The two plans have never been approved. They are generally improperly designed and reflect straight line projections of unacceptable trends. The Ministry of Planning in Kuwait is not even allowed to add up the shopping list of the state. Planning with the object of synthesizing and harmonizing priorities and responsibilities is an indispensable task of growth and development in general and industrialization in particular.

The achievements of Kuwait in general have been extraordinary. Industrialization, however, is not yet a serious Kuwaiti endeavour.

FOOTNOTES

1/ H.R.P. Dicksonn. Kuwait and Her Neighbours. London: Allen and Unwin, 1956.

2/ H.A. Al Ibrahim. Kuwait: A Political Study. Kuwait: Kuwait University Press, 1975.

3/ E.M. Earle. Turkey The Great Powers and the Baghdad Railway. New York: Macmillan, 1923.

4/ M.W. Khouja and P.G. Sadler. The Economy of Kuwait: Development and Role in International Finance. London, Macmillan, 1979, p. 12.

5/ Obviously the terms of the agreement suggest that Britain must have had a fair idea about Kuwait's oil potential.

6/ Mean annual rainfall is 4 to 5 inches and average daytime summer temperature exceeds 100°F. Dry and hot northwesterly winds (Simmoon) prevail and dust storms occur rather regularly in the summer.

7/ Kuwait's per capita income now exceeds $13,345, which is the highest in the world. See the World Bank, World Development Report, 1979.

8/ With 1970 as a base year the Net Barter terms of trade have increased to 422 in 1972. The Income Terms of Trade however increased only to 263.7 in 1977. See table 6.3, page 75 in Khouja and Sadler.

9/ There is little unemployment among non-Kuwaitis since the 1969 Foreign Residents Law only allows non-Kuwaitis who hold employment permits to enter the country.

10/ These figures were obtained from an unpublished document prepared by the Ministry of Industry and Commerce, Office of Development and Industrial Consultancy, 1978, p. 26 (Arabic).

11/ The national Assembly was suspended by the Amir in August 1976 pending the drafting of amendments to the constitution.

12/ A government organization responsible for administering official aid to countries and areas in the Arabian Peninsula.

13/ A number of problems preclude a complete consolidation of the Government's financial system. For instance, financial operations financed directly from the reserve account are not included in the general budget and some budgetary operations on the expenditure side are not presented on a strictly cash basis and so on and so forth.

14/ Development expenditures will be discussed in the section devoted to the Plans.

15/ M.W. Khouja and P.G. Sadler. Ibid., p. 45.

16/ Two-thirds of which are now public compared to less than half in the sixties.

17/ In 1975 Kuwait established a "Fund for Future Generations" which is entrusted with investing abroad the ten per cent of oil revenues earmarked to it annually.

18/ This section is based on an interesting but unpublished disertation of Sulayman S. Al-Qudsi. Growth and Distribution in Kuwait: A Quantitative Approach.

19/ This is rather an unexpected result, given the shortages of labour in Kuwait and the highly embodied skills of labour. Al-Qudsi uses an estimate of the capital stock that does not correspond to the net investment series published for Kuwait. The estimated equation is:

$$Y = B_0K + 2B_1\sqrt{KL} + B_2L$$

where Y is output, K is capital, L is labour.

The estimated values of the coefficients are:

$$B_0 = \underset{(.19)}{-0.22} \qquad B_1 = \underset{(19)}{42.3} \qquad B_2 = \underset{(1876)}{-1332} \qquad \bar{R}^2 = .98$$

The marginal products of labour and capital are both positive, but both labour and capital above have statistically insignificant coefficients (the numbers in parentheses are the standard errors of the coefficients).

20/ Perhaps Al-Qudsi should have estimated his equation for non-oil GDP.

21/ Only under Hicks' neutral technical change did the explanatory power of the re-estimated equation equal the explanatory power of the original equation. Al-Qudsi, Ibid., p. 73.

22/ See table 1.24 (p. 48) on the structure of family income 1972/1973, published by the Central Statistical Office, Ministry of Planning, Annual Statistical Abstract 1977, p. 224.

23/ The first Plan was to cover the period 1966/1967 - 1970/1971 but was later revised to cover the period 1967/1968 - 1971/1972.

24/ Kuwaiti's Company Law allows foreign participation in local companies that is does not exceed 49 per cent of the capital.

25/ The Kuwait Neutral Zone is an area of land roughly 100 square kilometers in size in the south of Kuwait. It is administered and owned jointly with Saudi Arabia under an agreement concluded at Uguain Conference in 1922, which settled borders in this area. Kuwait was represented by the British political agent only as the agreement saw a large part of land belonging to Kuwait passed to Saudi Arabia as a placetory judgement. Saudi Arabia and Kuwait exploit oil in the Neutral Zone jointly on a 50-50 basis.

26/ H.B. Chenery and T. Watanabe. "International Comparisons of the Structure of Production" Econometrica (October, 1958, pp. 487-521).

27/ The Ontario figure for instance is 0.61. See A.A. Kubursi and R.H. Frank, "Sectoral Characteristics of the Ontario Structure of Production" Ontario Economic Review, 1972, pp. 1-37.

28/ The direct effects are embodied in the coefficients aij, representing xij/xj, where xij is the amount of resource i shipped from industry j, xj represents total output of industry j. If A is the matrix of coefficients, $(I-A)^{-1}$ is known as the matrix multiplier and its elements represent the direct plus indirect output effects per unit changes in final demand.

29/ Norreghard P. Rasmussen. Studies in Intersectoral Relations. Amsterdam: North Holland Publishing Co., 1952, p. 113.

30/ See A. O. Hirschman, The Strategy of Economic Development. New Haven: Yale University Press, 1958. See also Baharat R. Hazari, "Empirical Indentification of Key Sectors in the Indian Economy". Review of Economics and Statistics (May, 1970), pp. 301 and 305 and, A.A. Kubursi and R.H. Frank, "Sectoral Characteristics of the Ontario Structure of Production" Ontario Economic Review, 1972, pp. 1-37.

31/ These two sectors had to be added together as separate data on each were not available in the manner needed to classify them separately.

32/ Please note that where data is missing for some particular sector, the percentage share of any given sector will not be comparable with other figures for which data is complete.

33/ The Industry Division of ECWA has already worked out such an assignment for Syria and Jordan and may carry over its work to Kuwait.

34/ See Chapter Six, (The Structure of the Model, p. 206), for details.

35/ This logic may lead to some inappropriate conclusions in the chemical, petroleum, rubber and plastics sector where price increases may have outstripped value increases.

36/ These numbers are derived from Khouja and Sadlers' econometric model estimated from constant price data.

37/ The exchange value of the KD is high vis-a-vis the dollar being determined primarily by the high value of oil exports and foreign reserves. This, however, militates against non-oil exports and encourages imports.

38/ The Ministry of Finance is now independent of the Ministry of Trade and Industry.

39/ M.S. Marzouk, "A Sectoral Macroeconometric Model of Kuwait". Paper presented to the LINK SEMI Annual Meeting, United Nations, New York, March 13-15, 1979. However, several of his results were adjusted as will be pointed out in the text.

40/ It was not possible to apply the simultaneous system of non-linear equations developed by Marzouk. Therefore, the model had to be linearaized by deleting the price variable and introducing it as a parameter with a trend.

STATISTICAL ANNEX

TABLE A1
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1966)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER'S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	VALUE OF CAPITAL
31	FOOD, BEVERAGES AND TOBACCO	3375	397	8868.2	3235.8	638.5	4513.
32	TEXTILES, WEARING APPAREL AND LEATHER	527	894	2695.8	2181.7	16.5	221.
33	WOOD AND WOOD PRODUCTS	2300	363	5115.7	2309.6	202.6	1038.
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	431	16	873.9	543.4	165.7	647.
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	810	10	65001.3	62515.4	9409.9	15326.
36	NON-METALLIC MINERAL PRODUCTS	2629	116	6512.5	3183.2	8281.5	9965.
37	BASIC METAL INDUSTRIES	N.A.	1	295.5	145.8	69.5	516.
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	N.A.	123	2913.8	1917.3	123.0	731.
39	OTHER MANUFACTURING INDUSTRIES	293	104	875.7	373.3	1.8	30.
	TOTAL	10365	2024	93152.4	76455.5	18909.0	32998.

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A2
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
PERCENTAGES OF TOTAL
KUWAIT (1966)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER,S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	VALUE OF CAPITAL
31	FOOD, BEVERAGES AND TOBACCO	32,56	19,61	9,52	4,30	3,38	13,69
32	TEXTILES, WEARING APPAREL AND LEATHER	5,08	44,17	2,89	2,85	,09	,67
33	WOOD AND WOOD PRODUCTS	22,19	17,93	5,49	3,02	1,07	3,12
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	4,16	,79	,94	,71	,88	1,95
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	7,81	,49	69,78	81,77	49,76	46,47
36	NON-METALLIC MINERAL PRODUCTS	25,36	5,73	6,99	4,16	43,30	30,28
37	BASIC METAL INDUSTRIES	N,A,	,05	,32	,19	,37	1,57
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	N,A,	6,08,	3,13	2,51	,65	2,28
39	OTHER MANUFACTURING INDUSTRIES	2,83	5,14	,94	,49	,01	,03
	TOTAL	100,00	100,00	100,00	100,00	100,00	100,00

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A3
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1966)

ISIC CODE	INDUSTRIAL ACTIVITY	EMPLOYMENT PER ESTABLISHMENT	CAPITAL PER EMPLOYMENT	CAPITAL PER ESTABLISHMENT	GROSS OUTPUT PER EMPLOYMENT	GROSS OUTPUT PER ESTABLISHMENT	VALUE ADDED PER EMPLOYMENT	VALUE ADDED PER ESTABLISHMENT	GROSS CAPITAL FORMATION PER EMPLOYMENT	GROSS CAPITAL FORMATION PER ESTABLISHMENT
31	FOOD, BEVERAGES AND TOBACCO	8,50	1,34	11,37	2,63	22,34	,97	8,28	,19	1,61
32	TEXTILES, WEARING APPAREL AND LEATHER	,59	,42	,25	5,12	3,02	4,14	2,44	,03	,02
33	WOOD AND WOOD PRODUCTS	6,34	,45	2,83	2,22	14,09	1,00	6,36	,09	,56
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	26,94	1,50	40,46	2,03	54,62	1,26	33,96	,38	10,26
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	81,00	18,92	1532,66	80,25	6500,13	77,18	6251,54	11,62	940,79
36	NON-METALLIC MINERAL PRODUCTS	22,66	3,79	85,91	2,48	56,14	1,21	27,44	3,15	71,39
37	BASIC METAL INDUSTRIES	N,A,	N,A,	516,50	N,A,	295,50	N,A,	145,80	N,A,	69,33
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	N,A,	N,A,	5,95	N,A,	23,69	N,A,	15,59	N,A,	1,10
39	OTHER MANUFACTURING INDUSTRIES	2,82	,10	,29	2,99	8,42	1,27	3,59	,01	,03
	TOTAL	5,12	3,18	16,30	8,99	46,02	7,38	37,77	1,82	9,34

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A4
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN K.D.)
KUWAIT (1966)

ISIC CODE	INDUSTRIAL ACTIVITY	VALUE ADDED PER GROSS OUTPUT	CAPITAL PER VALUE ADDED	GROSS CAPITAL FORMATION PER VALUE ADDED	GROSS CAPITAL FORMATION PER GROSS OUTPUT
31	FOOD, BEVERAGES AND TOBACCO	.371	1.374	.194	.072
32	TEXTILES, WEARING APPAREL AND LEATHER	.809	.101	.008	.006
33	WOOD AND WOOD PRODUCTS	.451	.445	.088	.040
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.622	1.191	.305	.190
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.962	.245	.151	.145
36	NON-METALLIC MINERAL PRODUCTS	.489	3.131	2.602	1.272
37	BASIC METAL INDUSTRIES	.493	3.543	.477	.235
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.658	.382	.064	.042
39	OTHER MANUFACTURING INDUSTRIES	.426	.082	.005	.002
	TOTAL	.821	.431	.247	.203

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A5
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
KUWAIT (197[illegible])

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER'S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	VALUE OF CAPITAL
31	FOOD, BEVERAGES AND TOBACCO	4037	443	15484.8	6366.1	745.3	5291.7
32	TEXTILES, WEARING APPAREL AND LEATHER	977	N.A.	4999.2	4045.9	56.4	524.3
33	WOOD AND WOOD PRODUCTS	4254	651	11512.8	5805.3	281.6	1107.4
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	970	31	2623.4	1555.1	172.0	1267.7
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	2558	15	113819.1	88140.1	5495.2	73037.8
36	NON-METALLIC MINERAL PRODUCTS	3180	131	8732.9	4476.0	564.5	2611.5
37	BASIC METAL INDUSTRIES	2214	246	1229.1	606.4	161.2	455.0
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	7280	1554	5981.9	3936.2	623.8	1926.3
39	OTHER MANUFACTURING INDUSTRIES	307	76	359.1	280.0	.6	84.5
	TOTAL	25777	3147	164742.3	115211.1	8100.6	89366.2

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A6
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
PERCENTAGES OF TOTAL
KUWAIT (1971)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER,S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	VALUE OF CAPITAL
31	FOOD, BEVERAGES AND TOBACCO	15,66	14,08	9,40	5,53	9,20	5,92
32	TEXTILES, WEARING APPAREL AND LEATHER	3,79	N.A.	3,03	3,51	,70	,59
33	WOOD AND WOOD PRODUCTS	16,50	20,69	6,99	5,04	3,48	1,24
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	3,76	,99	1,59	1,35	2,12	1,42
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	9,92	,48	69,09	76,50	67,84	85,15
36	NON-METALLIC MINERAL PRODUCTS	12,34	4,16	5,30	3,89	6,97	2,92
37	BASIC METAL INDUSTRIES	8,59	7,82	,75	,53	1,99	,51
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	28,24	49,38	3,63	3,42	7,70	2,15
39	OTHER MANUFACTURING INDUSTRIES	1,19	2,41	,22	,24	,01	,09
	TOTAL	100,00	100,00	100,00	100,00	100,00	100,00

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A7
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1971)

ISIC CODE	INDUSTRIAL ACTIVITY	EMPLOYMENT PER ESTABLISHMENT	CAPITAL PER EMPLOYMENT	CAPITAL PER ESTABLISHMENT	GROSS OUTPUT PER EMPLOYMENT	GROSS OUTPUT PER ESTABLISHMENT	VALUE ADDED PER EMPLOYMENT	VALUE ADDED PER ESTABLISHMENT	GROSS CAPITAL FORM. PER EMPLOYMENT	GROSS CAPITAL FORM. PER ESTABLISHMENT
31	FOOD, BEVERAGES AND TOBACCO	9.11	1.31	11.95	3.84	34.95	1.58	14.37	.18	1.64
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	.54	N.A.	5.12	N.A.	4.14	N.A.	.06	N.A.
33	WOOD AND WOOD PRODUCTS	6.53	.26	1.70	2.71	17.68	1.36	8.92	.07	.62
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	31.29	1.31	40.89	2.70	84.63	1.60	50.16	.18	5.68
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	170.53	29.75	5073.19	44.50	7587.94	34.46	5876.01	2.15	366.25
36	NON-METALLIC MINERAL PRODUCTS	24.27	.82	19.94	2.75	66.66	1.41	34.17	.18	4.31
37	BASIC METAL INDUSTRIES	9.00	.21	1.85	.56	5.00	.27	2.47	.07	.63
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	4.68	.26	1.24	.82	3.85	.54	2.53	.09	.40
39	OTHER MANUFACTURING INDUSTRIES	4.04	.28	1.11	1.17	4.73	.91	3.68	.00	.01
	TOTAL	8.19	3.47	28.40	6.39	52.35	4.47	36.61	.31	2.57

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A8
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN K.D.)
KUWAIT (1971)

ISIC CODE	INDUSTRIAL ACTIVITY	VALUE ADDED PER GROSS OUTPUT	CAPITAL PER VALUE ADDED	GROSS CAPITAL FORMATION PER VALUE ADDED	GROSS CAPITAL FORMATION PER GROSS OUTPUT
31	FOOD, BEVERAGES AND TOBACCO	.411	.831	.117	.048
32	TEXTILES, WEARING APPAREL AND LEATHER	.809	.130	.014	.011
33	WOOD AND WOOD PRODUCTS	.504	.191	.049	.024
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.593	.815	.111	.066
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.774	.863	.062	.048
36	NON-METALLIC MINERAL PRODUCTS	.513	.583	.126	.065
37	BASIC METAL INDUSTRIES	.493	.751	.266	.131
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.658	.489	.158	.104
39	OTHER MANUFACTURING INDUSTRIES	.780	.302	.002	.002
	TOTAL	.699	.776	.070	.049

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A9
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1972)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER,S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	VALUE OF CAPITAL
31	FOOD, BEVERAGES AND TOBACCO	3981	433	16431.9	7339.7	706.0	6218.6
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	1210	6521.8	5461.0	32.8	555.6
33	WOOD AND WOOD PRODUCTS	4085	647	12013.7	6230.9	259.5	1695.5
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	1116	34	3607.7	2454.8	254.3	2122.7
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	2803	19	134647.1	38191.0	1253.5	67935.6
36	NON-METALLIC MINERAL PRODUCTS	3348	133	9565.9	4922.2	207.1	2752.7
37	BASIC METAL INDUSTRIES	N.A.	N.A.	2395.7	912.1	13.7	402.1
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	N.A.	N.A.	6595.6	4051.5	342.4	1931.3
39	OTHER MANUFACTURING INDUSTRIES	371	58	899.3	493.6	51.5	255.9
	TOTAL	15704	2534	192678.7	70056.8	3120.8	83870.0

SOURCE = CENTRAL STATISTICAL OFFICE = MINISTRY OF PLANNING = INDUSTRIAL STATISTICS

TABLE A10
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
PERCENTAGES OF TOTAL
KUWAIT (1972)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER.S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	VALUE OF CAPITAL
31	FOOD, BEVERAGES AND TOBACCO	25.35	17.09	8.53	10.48	22.62	7.41
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	47.75	3.38	7.80	1.05	.66
33	WOOD AND WOOD PRODUCTS	26.01	25.53	6.24	8.89	8.32	2.02
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	7.11	1.34	1.87	3.50	8.15	2.53
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	17.85	.75	69.88	54.51	40.17	81.00
36	NON-METALLIC MINERAL PRODUCTS	21.32	5.25	4.96	7.03	6.64	3.28
37	BASIC METAL INDUSTRIES	N.A.	N.A.	1.24	1.30	.66	.43
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	N.A.	N.A.	3.42	5.78	10.97	2.30
39	OTHER MANUFACTURING INDUSTRIES	2.36	2.29	.47	.70	1.65	.31
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A11
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1972)

ISIC CODE	INDUSTRIAL ACTIVITY	EMPLOYMENT PER ESTABLISHMENT	CAPITAL PER EMPLOYMENT	CAPITAL PER ESTABLISHMENT	GROSS OUTPUT PER EMPLOYMENT	GROSS OUTPUT PER ESTABLISHMENT	VALUE ADDED PER EMPLOYMENT	VALUE ADDED PER ESTABLISHMENT	GROSS CAPITAL FORM. PER EMPLOYMENT	CA ES IS	GROSS FIXED CAPITAL FORMATION
31	FOOD, BEVERAGES AND TOBACCO	9.19	1.56	14.36	4.13	37.95	1.84	16.95	.18	1 63	
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	.46	N.A.	5.39	N.A.	4.51	N.A.	.03	
33	WOOD AND WOOD PRODUCTS	6.31	.42	2.62	2.94	18.57	1.53	9.63	.06	.40	
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	32.82	1.90	62.43	3.23	106.11	2.20	72.20	.23	7.48	
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	147.53	24.24	3575.56	48.04	7086.69	13.63	2010.05	.45	65.97	
36	NON-METALLIC MINERAL PRODUCTS	25.17	.82	20.70	2.86	71.92	1.47	37.01	.06	1.56	
37	BASIC METAL INDUSTRIES	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
39	OTHER MANUFACTURING INDUSTRIES	6.40	.69	4.41	2.42	15.51	1.33	8.51	.14	.89	
	TOTAL	6.20	5.34	33.10	12.27	76.04	4.46	27.65	.20	1.23	

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A12
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN K.D.)
KUWAIT (1972)

ISIC CODE	INDUSTRIAL ACTIVITY	VALUE ADDED PER GROSS OUTPUT	CAPITAL PER VALUE ADDED	GROSS CAPITAL FORMATION PER VALUE ADDED	GROSS CAPITAL FORMATION PER GROSS OUTPUT
31	FOOD, BEVERAGES AND TOBACCO	.447	.847	.096	.043
32	TEXTILES, WEARING APPAREL AND LEATHER	.837	.102	.006	.005
33	WOOD AND WOOD PRODUCTS	.519	.272	.042	.022
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.680	.865	.104	.070
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.284	1.779	.033	.009
36	NON-METALLIC MINERAL PRODUCTS	.515	.559	.042	.022
37	BASIC METAL INDUSTRIES	.381	.441	.015	.006
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.614	.477	.085	.052
39	OTHER MANUFACTURING INDUSTRIES	.549	.518	.104	.057
	TOTAL	.364	1.197	.045	.016

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A13
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1973)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER'S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	VALUE OF CAPITAL
31	FOOD, BEVERAGES AND TOBACCO	4367	473	23401.5	9279.5	1379.1	5733.7
32	TEXTILES, WEARING APPAREL AND LEATHER	4162	1216	21292.6	8226.7	93.2	49.1
33	WOOD AND WOOD PRODUCTS	2847	548	11150.5	5277.0	348.0	850.1
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	1245	34	3833.8	2273.0	183.5	1641.2
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	3601	32	181065.0	42780.0	4402.2	64289.2
36	NON-METALLIC MINERAL PRODUCTS	3271	131	13380.8	6548.7	595.0	3180.3
37	BASIC METAL INDUSTRIES	421	12	2746.7	1196.7	80.4	587.2
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	4422	498	15686.6	8862.7	635.6	2527.6
39	OTHER MANUFACTURING INDUSTRIES	255	74	769.7	440.1	11.0	14.4
	TOTAL	24591	3018	273327.2	84884.4	7728.0	78888.8

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A14
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
PERCENTAGES OF TOTAL
KUWAIT (1973)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER,S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	VALUE OF CAPITAL
31	FOOD, BEVERAGES AND TOBACCO	17,76	15,67	8,56	10,93	17,85	7,28
32	TEXTILES, WEARING APPAREL AND LEATHER	16,92	40,29	7,79	9,69	1,21	,06
33	WOOD AND WOOD PRODUCTS	11,58	18,16	4,08	6,22	4,50	1,09
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	5,06	1,13	1,40	2,68	2,37	2,08
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	14,64	1,06	66,24	50,40	56,96	81,49
36	NON-METALLIC MINERAL PRODUCTS	13,30	4,34	4,90	7,71	7,70	4,00
37	BASIC METAL INDUSTRIES	1,71	,40	1,00	1,41	1,04	,74
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	17,98	16,50	5,74	10,44	8,22	3,20
39	OTHER MANUFACTURING INDUSTRIES	1,04	2,45	,28	,52	,14	,02
	TOTAL	100,00	100,00	100,00	100,00	100,00	100,00

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A15
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1973)

ISIC CODE	INDUSTRIAL ACTIVITY	EMPLOYMENT PER ESTABLISHMENT	CAPITAL PER EMPLOYMENT	CAPITAL PER ESTABLISHMENT	GROSS OUTPUT PER EMPLOYMENT	GROSS OUTPUT PER ESTABLISHMENT	VALUE ADDED PER EMPLOYMENT	VALUE ADDED PER ESTABLISHMENT	GROSS CAPITAL FORM. PER EMPLOYMENT	GROSS CAPITAL FORM. PER ESTABLISHMENT
31	FOOD, BEVERAGES AND TOBACCO	9.23	1.31	12.13	5.36	49.47	2.12	19.62	.32	2.92
32	TEXTILES, WEARING APPAREL AND LEATHER	3.42	.01	.04	5.12	17.51	1.98	6.77	.02	.08
33	WOOD AND WOOD PRODUCTS	5.20	.30	1.57	3.92	20.35	1.85	9.63	.12	.64
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	36.62	1.32	48.27	3.08	112.76	1.83	66.85	.15	5.50
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	112.53	17.85	2009.04	50.28	5658.28	11.88	1336.88	1.22	137.07
36	NON-METALLIC MINERAL PRODUCTS	24.97	.97	24.28	4.09	102.14	2.00	49.99	.18	4.54
37	BASIC METAL INDUSTRIES	35.08	1.39	48.93	6.52	228.89	2.84	99.72	.19	6.70
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	8.88	.57	5.08	3.55	31.50	2.00	17.80	.14	1.23
39	OTHER MANUFACTURING INDUSTRIES	3.45	.06	.19	3.02	10.40	1.73	5.95	.04	.15
	TOTAL	8.15	3.21	26.14	11.11	90.57	3.45	28.13	.31	2.56

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A16
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN K.D.)
KUWAIT (1973)

ISIC CODE	INDUSTRIAL ACTIVITY	VALUE ADDED PER GROSS OUTPUT	CAPITAL PER VALUE ADDED	GROSS CAPITAL FORMATION PER VALUE ADDED	GROSS CAPITAL FORMATION PER GROSS OUTPUT
31	FOOD, BEVERAGES AND TOBACCO	.397	.619	.149	.059
32	TEXTILES, WEARING APPAREL AND LEATHER	.386	.006	.011	.004
33	WOOD AND WOOD PRODUCTS	.473	.163	.066	.031
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.593	.722	.081	.048
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.236	1.503	.103	.024
36	NON-METALLIC MINERAL PRODUCTS	.489	.486	.091	.044
37	BASIC METAL INDUSTRIES	.436	.491	.067	.029
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.565	.285	.072	.041
39	OTHER MANUFACTURING INDUSTRIES	.572	.033	.025	.014
	TOTAL	.311	.929	.091	.028

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A17
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1974)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER'S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	VALUE OF CAPITAL
31	FOOD, BEVERAGES AND TOBACCO	4422	461	26886.0	7948.7	4330.1	8454.4
32	TEXTILES, WEARING APPAREL AND LEATHER	4287	1214	19283.0	7391.8	38.1	42.7
33	WOOD AND WOOD PRODUCTS	2879	538	12421.0	5420.8	99.3	938.1
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	1268	34	4945.5	2077.9	83.1	1907.9
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	5013	36	358180.7	109519.2	7398.7	61532.9
36	NON-METALLIC MINERAL PRODUCTS	3173	126	18092.4	8166.4	282.8	3027.0
37	BASIC METAL INDUSTRIES	538	10	4970.1	1983.3	139.8	1423.8
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	4490	475	19801.9	10324.9	512.4	3652.2
39	OTHER MANUFACTURING INDUSTRIES	250	73	2620.6	730.0	24.2	21.2
	TOTAL	26320	2967	467204.2	153563.0	12908.5	81130.2

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A18 -
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
PERCENTAGES OF TOTAL
KUWAIT (1974)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER,S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	VALUE OF CAPITAL
31	FOOD, BEVERAGES AND TOBACCO	16,80	15,54	5,75	5,18	33,54	10,42
32	TEXTILES, WEARING APPAREL AND LEATHER	16,29	40,92	4,13	4,81	,30	,05
33	WOOD AND WOOD PRODUCTS	10,94	18,13	2,66	3,53	,77	1,22
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	4,82	1,15	1,06	1,35	,64	2,35
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	19,05	1,21	76,66	71,32	57,32	75,91
36	NON-METALLIC MINERAL PRODUCTS	12,05	4,25	3,87	5,32	2,19	3,73
37	BASIC METAL INDUSTRIES	2,04	,34	1,06	1,29	1,08	1,75
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	17,06	16,01	4,24	6,72	3,97	4,54
39	OTHER MANUFACTURING INDUSTRIES	,95	2,46	,56	,48	,19	,03
	TOTAL	100,00	100,00	100,00	100,00	100,00	100,00

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A19
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1974)

ISIC CODE	INDUSTRIAL ACTIVITY	EMPLOYMENT PER ESTABLISHMENT	CAPITAL PER EMPLOYMENT	CAPITAL PER ESTABLISHMENT	GROSS OUTPUT PER EMPLOYMENT	GROSS OUTPUT PER ESTABLISHMENT	VALUE ADDED PER EMPLOYMENT	VALUE ADDED PER ESTABLISHMENT	GROSS CAPITAL FORMATION PER EMPLOYMENT	GROSS CAPITAL FORMATION PER ESTABLISHMENT
31	FOOD, BEVERAGES AND TOBACCO	9,59	1,91	18,34	6,08	58,32	1,80	17,24	,98	9,40
32	TEXTILES, WEARING APPAREL AND LEATHER	3,53	,01	,04	4,50	15,88	1,72	6,09	,01	,03
33	WOOD AND WOOD PRODUCTS	5,35	,34	1,84	4,32	23,09	1,88	10,08	,03	,18
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	37,29	1,50	56,11	3,90	145,46	1,64	61,11	,07	2,44
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	139,25	12,28	1710,64	71,45	9949,46	21,85	3042,20	1,48	205,92
36	NON-METALLIC MINERAL PRODUCTS	25,18	,95	24,02	5,70	143,59	2,57	64,81	,09	2,24
37	BASIC METAL INDUSTRIES	53,80	2,65	142,38	9,24	497,01	3,69	198,33	,26	13,98
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	9,45	,82	7,75	4,41	41,69	2,30	21,74	,11	1,03
39	OTHER MANUFACTURING INDUSTRIES	3,42	,08	,29	10,48	35,90	2,92	10,00	,10	,33
	TOTAL	8,87	3,08	27,34	17,75	157,47	5,83	51,76	,49	4,35

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A20
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN K.D.)
KUWAIT (1974)

ISIC CODE	INDUSTRIAL ACTIVITY	VALUE ADDED PER GROSS OUTPUT	CAPITAL PER VALUE ADDED	GROSS CAPITAL FORMATION PER VALUE ADDED	GROSS CAPITAL FORMATION PER GROSS OUTPUT
31	FOOD, BEVERAGES AND TOBACCO	.296	1.064	.545	.161
32	TEXTILES, WEARING APPAREL AND LEATHER	.383	.006	.005	.002
33	WOOD AND WOOD PRODUCTS	.436	.182	.018	.008
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.420	.418	.040	.017
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.306	.562	.068	.021
36	NON-METALLIC MINERAL PRODUCTS	.451	.371	.035	.016
37	BASIC METAL INDUSTRIES	.399	.718	.070	.028
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.521	.357	.050	.026
39	OTHER MANUFACTURING INDUSTRIES	.279	.029	.033	.009
	TOTAL	.329	.528	.084	.028

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A21
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1977)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER'S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	VALUE OF FIXED CAPITAL
31	FOOD, BEVERAGES AND TOBACCO	N.A.	397	42942.0	24884.0	1786.0	N.A.
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	1646	16408.0	3549.0	87.0	N.A.
33	WOOD AND WOOD PRODUCTS	N.A.	635	29238.0	16489.0	595.0	N.A.
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	N.A.	38	11362.0	9253.0	442.0	N.A.
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	N.A.	33	531478.0	323875.0	11042.0	N.A.
36	NON-METALLIC MINERAL PRODUCTS	N.A.	130	41067.0	23244.0	7273.0	N.A.
37	BASIC METAL INDUSTRIES	N.A.	13	9400.0	5086.0	1133.0	N.A.
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	N.A.	388	30180.0	18531.0	1630.0	N.A.
39	OTHER MANUFACTURING INDUSTRIES	N.A.	108	2089.0	1454.0	0.0	N.A.
	TOTAL	N.A.	3398	[illegible]	[illegible]	23938.0	[illegible]

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A22
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
PERCENTAGES OF TOTAL
KUWAIT (1977)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER,S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	VALUE OF CAPITAL
31	FOOD, BEVERAGES AND TOBACCO	N.A.	11.72	6.01	5.84	7.45	N.A.
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	48.58	2.30	.83	.36	N.A.
33	WOOD AND WOOD PRODUCTS	N.A.	18.74	4.09	3.87	2.48	N.A.
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	N.A.	1.12	1.59	2.17	1.84	N.A.
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	N.A.	.97	74.42	75.96	46.03	N.A.
36	NON-METALLIC MINERAL PRODUCTS	N.A.	3.84	5.75	5.45	30.32	N.A.
37	BASIC METAL INDUSTRIES	N.A.	.38	1.32	1.19	4.72	N.A.
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	N.A.	11.45	4.23	4.35	6.80	N.A.
39	OTHER MANUFACTURING INDUSTRIES	N.A.	3.19	.29	.34	0.00	N.A.
	TOTAL	N.A.	100.00	100.00	100.00	100.00	N.A.

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A23
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1977)

ISIC CODE	INDUSTRIAL ACTIVITY	EMPLOYMENT PER ESTABLISHMENT	CAPITAL PER EMPLOYMENT	CAPITAL PER ESTABLISHMENT	GROSS OUTPUT PER EMPLOYMENT	GROSS OUTPUT PER ESTABLISHMENT	VALUE ADDED PER EMPLOYMENT	VALUE ADDED PER ESTABLISHMENT	GROSS CAPITAL FORM. PER EMPLOYMENT	GROSS CAPITAL FORM. PER ESTABLISHMENT
31	FOOD, BEVERAGES AND TOBACCO	N.A.	N.A.	N.A.	N.A.	108.17	N.A.	62.68	N.A.	4.50
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.	9.97	N.A.	2.16	N.A.	.05
33	WOOD AND WOOD PRODUCTS	N.A.	N.A.	N.A.	N.A.	46.04	N.A.	25.97	N.A.	.91
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	N.A.	N.A.	N.A.	N.A.	299.00	N.A.	243.58	N.A.	11.60
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	N.A.	N.A.	N.A.	N.A.	16105.39	N.A.	9814.33	N.A.	334.61
36	NON-METALLIC MINERAL PRODUCTS	N.A.	N.A.	N.A.	N.A.	315.90	N.A.	176.80	N.A.	55.95
37	BASIC METAL INDUSTRIES	N.A.	N.A.	N.A.	N.A.	723.08	N.A.	391.23	N.A.	87.13
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	N.A.	N.A.	N.A.	N.A.	77.78	N.A.	47.76	N.A.	4.20
39	OTHER MANUFACTURING INDUSTRIES	N.A.	N.A.	N.A.	N.A.	19.34	N.A.	12.46	N.A.	.00
	TOTAL	N.A.	N.A.	N.A.	N.A.	210.79	N.A.	125.85	N.A.	7.05

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A2
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN K.D.)
KUWAIT (1977)

ISIC CODE	INDUSTRIAL ACTIVITY	VALUE ADDED PER GROSS OUTPUT	CAPITAL PER VALUE ADDED	GROSS CAPITAL FORMATION PER VALUE ADDED	GROSS CAPITAL FORMATION PER GROSS OUTPUT
31	FOOD, BEVERAGES AND TOBACCO	.579	N.A.	.072	.042
32	TEXTILES, WEARING APPAREL AND LEATHER	.216	N.A.	.025	.005
33	WOOD AND WOOD PRODUCTS	.564	N.A.	.036	.020
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.815	N.A.	.048	.039
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.609	N.A.	.034	.021
36	NON-METALLIC MINERAL PRODUCTS	.566	N.A.	.313	.177
37	BASIC METAL INDUSTRIES	.541	N.A.	.223	.121
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.614	N.A.	.088	.054
39	OTHER MANUFACTURING INDUSTRIES	.696	N.A.	.000	.000
	TOTAL	.597	N.A.	.056	.034

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A25
EMPLOYMENT PER ESTABLISHMENT
(VALUES IN THOUSANDS OF K.D.)
KUWAIT (1966,1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	8.50	9.11	9.19	9.23	9.59	N.A.
32	TEXTILES, WEARING APPAREL AND LEATHER	.59	N.A.	N.A.	3.42	3.53	N.A.
33	WOOD AND WOOD PRODUCTS	6.34	6.53	6.31	5.20	5.35	N.A.
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	26.94	31.29	32.82	36.62	37.29	N.A.
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	81.00	170.53	147.53	112.53	139.25	N.A.
36	NON-METALLIC MINERAL PRODUCTS	22.66	24.27	25.17	24.97	25.18	N.A.
37	BASIC METAL INDUSTRIES	N.A.	9.00	N.A.	35.08	53.80	N.A.
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	N.A.	4.68	N.A.	8.88	9.45	N.A.
39	OTHER MANUFACTURING INDUSTRIES	2.82	4.04	6.40	3.45	3.42	N.A.
	TOTAL	5.12	8.19	6.20	8.15	8.87	N.A.

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A26
CAPITAL PER ESTABLISHMENT
(VALUES IN THOUSANDS OF K.D.)
KUWAIT (1966,1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	11.37	11.95	14.6	12.13	18.34	N.A.
32	TEXTILES, WEARING APPAREL AND LEATHER	.25	N.A.	.45	.04	.04	N.A.
33	WOOD AND WOOD PRODUCTS	2.83	1.70	2.62	1.57	1.84	N.A.
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	40.46	40.89	62.43	48.27	56.11	N.A.
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	1532.66	5073.19	3575.56	2009.04	1710.64	N.A.
36	NON-METALLIC MINERAL PRODUCTS	85.91	19.94	20.70	24.26	24.02	N.A.
37	BASIC METAL INDUSTRIES	516.50	1.85	N.A.	48.93	142.38	N.A.
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	5.95	1.24	N.A.	5.08	7.75	N.A.
39	OTHER MANUFACTURING INDUSTRIES	.29	1.11	4.41	.19	.29	N.A.
	TOTAL	16.30	28.40	33.10	26.14	27.34	N.A.

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A27
VALUE ADDED PER ESTABLISHMENT
(VALUES IN THOUSANDS OF K.D.)
KUWAIT (1966,1971-[illegible], AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	8,28	14,37	16,95	19,62	17,24	62,90
32	TEXTILES, [illegible] APPAREL AND LEATHER	2,44	N.A.	4,91	6,77	6,[illegible]	2,1
33	WOOD AND [illegible] PRODUCTS	6,36	[illegible],42	9,69	9,[illegible]	10,08	25,97
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	33,99	50,16	72,[illegible]	64,85	61,11	243,58
35	CHEMICAL, [illegible] AND PLASTIC PRODUCTS	6251,54	587[illegible],11	2[illegible],75	1336,[illegible]	3042,2[illegible]	8814,83
36	NON-METALLIC MINERAL PRODUCTS	27,44	34,17	37,31	49,93	64,81	178,[illegible]
37	BASIC METAL INDUSTRIES	145,80	2,47	N.A.	99,72	198,33	391,2[illegible]
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	15,59	2,53	N.A.	17,80	21,74	47,76
39	OTHER MANUFACTURING INDUSTRIES	3,59	3,68	8,51	5,95	10,00	13,46
	TOTAL	37,77	35,51	27,[illegible]5	2[illegible],13	[illegible],79	125,4[illegible]

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A28
GROSS CAPITAL FORMATION PER EMPLOYMENT
(VALUES IN THOUSANDS OF K.D.)
KUWAIT (1966,1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	.19	.18	.18	.32	.98	N.A.
32	TEXTILES, WEARING APPAREL AND LEATHER	.03	.06	N.A.	.02	.01	N.A.
33	WOOD AND WOOD PRODUCTS	.09	.07	.06	.12	.03	N.A.
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.38	.18	.23	.15	.07	N.A.
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	11.62	2.15	.45	1.22	1.48	N.A.
36	NON-METALLIC MINERAL PRODUCTS	3.15	.18	.06	.18	.09	N.A.
37	BASIC METAL INDUSTRIES	N.A.	.07	N.A.	.19	.26	N.A.
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	N.A.	.09	N.A.	.14	.11	N.A.
39	OTHER MANUFACTURING INDUSTRIES	.01	.00	.14	.04	.10	N.A.
	TOTAL	1.82	.31	.20	.31	.49	N.A.

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A29
GROSS CAPITAL FORMATION PER ESTABLISHMENT
(VALUES IN THOUSANDS OF K.D.)
KUWAIT (1966,1971-1974, AND 1977)

CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977 -
31	FOOD, BEVERAGES AND TOBACCO	1,61	1,68	1,63	2,92	9,39	4,50
32	TEXTILES, WEARING APPAREL AND LEATHER	,02	N,A,	,03	,08	,03	,05
33	WOOD AND WOOD PRODUCTS	,56	,43	,40	,64	,18	,94
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	10,36	5,55	7,48	5,40	2,44	11,63
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	940,99	366,35	65,97	137,57	205,52	334,61
36	NON-METALLIC MINERAL PRODUCTS	71,39	4,31	1,56	4,54	2,24	55,95
37	BASIC METAL INDUSTRIES	69,50	,66	N,A,	6,70	13,98	87,15
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	1,00	,40	N,A,	1,28	1,08	4,20
39	OTHER MANUFACTURING INDUSTRIES	,02	,01	,89	,15	,33	,00
	TOTAL	9,34	2,57	1,23	2,56	4,35	7,08

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A30
GROSS CAPITAL FORMATION PER GROSS OUTPUT
VALUES IN K.D.
KUWAIT (1966, 1971-1974, AND 1977)

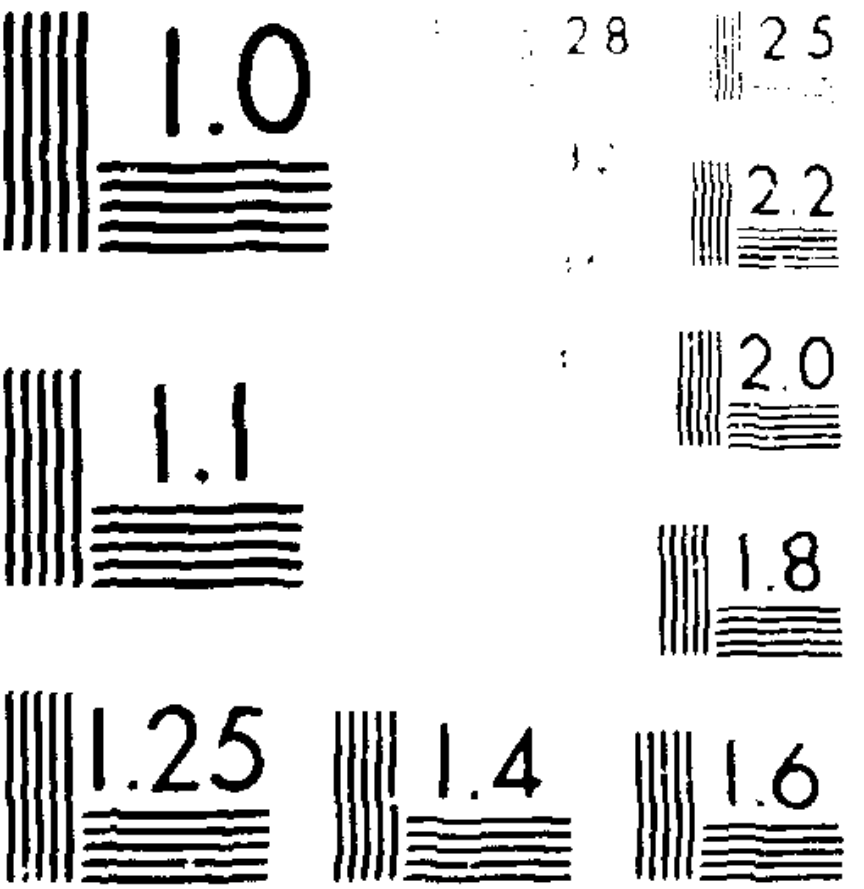
CODE	INDUSTRIAL ACTIVITY	1966	1971	1972	1973	1974	1977
31	FOOD, BEVERAGES AND TOBACCO	.072	.048	.043	.059	.161	.042
32	TEXTILES, WEARING APPAREL AND LEATHER	.006	.011	.005	.004	.002	.005
33	WOOD AND WOOD PRODUCTS	.040	.024	.022	.031	.008	.020
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.190	.066	.070	.048	.017	.039
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.145	.048	.009	.024	.021	.021
36	NON-METALLIC MINERAL PRODUCTS	1.272	.065	.022	.044	.016	.177
37	BASIC METAL INDUSTRIES	.235	.131	.006	.029	.028	.121
38	FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.042	.104	.052	.041	.026	.054
39	OTHER MANUFACTURING INDUSTRIES	.002	.002	.057	.014	.009	.001
	TOTAL	.203	.049	.016	.028	.028	.034

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A31
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1967)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER.S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	COMPENSATION EMPLOYEES
31	FOOD, BEVERAGES AND TOBACCO	1130	15	5688.7	1815.9	1004.5	645.0
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	681	11	1690.4	824.0	0.0	463.8
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	226	5	439.4	219.5	79.3	110.1
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	1032	7	61179.1	56297.5	647.0	1677.0
36	NON-METALLIC MINERAL PRODUCTS	1222	10	3514.9	1405.9	425.4	775.5
37-38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	777	25	2503.3	1439.3	83.3	573.4
39	OTHER MANUFACTURING INDUSTRIES	2	1	27.5	4.8	0.0	1.3
	TOTAL	5070	74	75043.3	62011.9	2239.5	4246.1

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS


1.0
2.8
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2.2
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1.8
1.25
1.4
1.6

TABLE A32
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
PERCENTAGES OF TOTAL
KUWAIT (1967)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER,S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	COMPENSATION OF EMPLOYEES
31	FOOD, BEVERAGES AND TOBACCO	22,29	20,27	7,58	2,93	44,85	15,19
32	TEXTILES, WEARING APPAREL AND LEATHER	N,A,	N,A,	N,A,	N,A,	N,A,	N,A,
33	WOOD AND WOOD PRODUCTS	13,43	14,86	2,25	1,34	0,00	10,92
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	4,46	6,76	,59	,35	3,54	2,59
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	20,36	9,46	81,53	90,78	28,89	39,50
36	NON-METALLIC MINERAL PRODUCTS	24,10	13,51	4,68	2,27	19,00	18,26
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	15,33	33,78	3,34	2,32	3,72	13,50
39	OTHER MANUFACTURING INDUSTRIES	,04	1,35	,04	,01	0,00	,02
	TOTAL	100,00	100,00	100,00	100,00	100,00	100,00

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A33
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1967)

ISIC CODE	INDUSTRIAL ACTIVITY	EMPLOYMENT PER ESTABLISHMENT	COMPENSATION PER EMPLOYMENT	COMPENSATION PER ESTABLISHMENT	GROSS OUTPUT PER EMPLOYMENT	GROSS OUTPUT PER ESTABLISHMENT	VALUE ADDED PER EMPLOYMENT	VALUE ADDED PER ESTABLISHMENT	GROSS CAPITAL FORM. PER EMPLOYMENT	GROSS CAPITAL FORM. PER ESTABLISHMENT
31	FOOD, BEVERAGES AND TOBACCO	75.33	.57	43.00	5.03	379.25	1.61	121.06	.89	66.97
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	61.91	.68	42.16	2.48	153.67	1.22	75.36	.00	.00
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	45.20	.49	22.02	1.94	87.88	.97	43.90	.35	15.96
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	147.43	1.63	239.57	59.28	8739.87	54.55	8042.50	.63	92.43
36	NON-METALLIC MINERAL PRODUCTS	122.20	.63	77.05	2.88	351.49	1.15	140.59	.35	42.54
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	31.08	.74	22.94	3.22	100.13	1.85	57.57	.11	3.33
39	OTHER MANUFACTURING INDUSTRIES	2.00	.65	1.30	13.75	27.50	2.40	4.80	.00	.00
	TOTAL	68.51	.84	57.38	14.80	1014.10	12.23	838.00	.44	30.26

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A34
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN K.D.)
KUWAIT (1967)

ISIC CODE	INDUSTRIAL ACTIVITY	VALUE ADDED PER GROSS OUTPUT	COMPENSATION PER VALUE ADDED	GROSS CAPITAL FORMATION PER VALUE ADDED	GROSS CAPITAL FORMATION PER GROSS OUTPUT
31	FOOD, BEVERAGES AND TOBACCO	.319	.355	.553	.177
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	.490	.559	.000	.000
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.500	.502	.361	.180
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.920	.030	.011	.011
36	NON-METALLIC MINERAL PRODUCTS	.400	.552	.303	.121
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.575	.398	.058	.033
39	OTHER MANUFACTURING INDUSTRIES	.175	.271	.000	.000
	TOTAL	.826	.068	.036	.030

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A35
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1968)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER.S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	COMPENSATION OF EMPLOYEES
31	FOOD, BEVERAGES AND TOBACCO	1229	14	6336.1	2025.2	396.9	765.0
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	728	14	1876.8	990.9	0.0	488.1
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	231	7	577.9	177.0	116.6	136.6
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	1990	9	68983.6	58084.5	7620.2	3672.1
36	NON-METALLIC MINERAL PRODUCTS	1130	12	2818.7	1173.4	313.0	653.5
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	904	28	2772.6	1489.5	200.2	575.4
39	OTHER MANUFACTURING INDUSTRIES	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	TOTAL	6212	84	83365.7	63940.5	9146.9	6391.6

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A36
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
PERCENTAGES OF TOTAL
KUWAIT (1958)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER'S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	COMPENSATION OF EMPLOYEES
31	FOOD, BEVERAGES AND TOBACCO	19.78	16.67	7.60	3.17	9.81	14.98
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	11.72	16.67	2.25	1.55	0.00	7.64
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	3.72	8.33	.69	.28	1.27	2.14
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	32.03	10.71	82.75	90.84	83.31	57.45
36	NON-METALLIC MINERAL PRODUCTS	18.19	14.29	3.38	1.84	3.42	10.22
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	14.55	33.33	3.33	2.33	2.19	10.57
39	OTHER MANUFACTURING INDUSTRIES	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A37
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1968)

ISIC CODE	INDUSTRIAL ACTIVITY	EMPLOYMENT PER ESTABLISHMENT	COMPENSATION PER EMPLOYMENT	COMPENSATION PER ESTABLISHMENT	GROSS OUTPUT PER EMPLOYMENT	GROSS OUTPUT PER ESTABLISHMENT	VALUE ADDED PER EMPLOYMENT	VALUE ADDED PER ESTABLISHMENT	GROSS CAPITAL FORM. PER EMPLOYMENT	GROSS CAPITAL FORM. PER ESTABLISHMENT
31	FOOD, BEVERAGES AND TOBACCO	87.79	.62	54.71	5.16	452.58	1.65	144.66	.73	64.06
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	52.00	.67	34.86	2.58	134.06	1.36	70.78	.00	.00
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	33.00	.59	19.51	2.50	82.56	.77	25.29	.50	16.66
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	221.11	1.85	408.01	34.67	7664.84	29.19	6453.83	3.83	846.60
36	NON-METALLIC MINERAL PRODUCTS	94.17	.58	54.46	2.49	234.89	1.04	97.78	.28	26.00
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	32.29	.75	24.12	3.07	99.02	1.65	53.20	.22	7.15
39	OTHER MANUFACTURING INDUSTRIES	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	TOTAL	73.95	1.03	76.09	13.42	992.45	10.29	761.20	1.47	108.89

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A38
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN K.D.)
KUWAIT (1968)

ISIC CODE	INDUSTRIAL ACTIVITY	VALUE ADDED PER GROSS OUTPUT	COMPENSATION PER VALUE ADDED	GROSS CAPITAL FORMATION PER VALUE ADDED	GROSS CAPITAL FORMATION PER GROSS OUTPUT
31	FOOD, BEVERAGES AND TOBACCO	.320	.378	.443	.142
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	.528	.493	.000	.000
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.306	.772	.659	.202
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.842	.063	.131	.110
36	NON-METALLIC MINERAL PRODUCTS	.416	.557	.267	.111
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.537	.453	.134	.072
39	OTHER MANUFACTURING INDUSTRIES	N.A.	N.A.	N.A.	N.A.
	TOTAL	.767	.100	.143	.110

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A39
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1969)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER'S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	COMPENSATION OF EMPLOYEES
31	FOOD, BEVERAGES AND TOBACCO	1389	15	7115.2	2039.5	1449.1	918.1
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	633	13	1594.2	796.9	0.0	439.0
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	232	7	527.7	216.0	436.9	122.6
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	2073	9	58570.6	30862.8	1362.0	479.5
36	NON-METALLIC MINERAL PRODUCTS	1285	14	3541.9	1554.9	700.3	995.9
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	1395	35	3930.0	1811.9	443.9	1079.6
39	OTHER MANUFACTURING INDUSTRIES	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	TOTAL	7010	93	75279.6	37282.0	4392.2	8349.7

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A40
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.).
PERCENTAGES OF TOTAL
KUWAIT (1969)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER.S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	COMPENSATION OF EMPLOYEES
31	FOOD, BEVERAGES AND TOBACCO	19.81	16.13	9.45	5.47	32.99	11.00
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	9.03	13.98	2.12	2.14	0.00	5.26
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	3.31	7.53	.70	.58	9.95	1.47
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	29.57	9.68	77.80	82.78	31.01	57.42
36	NON-METALLIC MINERAL PRODUCTS	18.37	15.05	4.70	4.17	15.94	11.93
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	19.90	37.63	5.22	4.86	10.11	12.93
39	OTHER MANUFACTURING INDUSTRIES	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE . A41
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1969)

ISIC CODE	INDUSTRIAL ACTIVITY	EMPLOY-MENT PER ESTABL-ISHMENT	COMPEN-SATION PER EMPLOY-MENT	COMPEN-SATION PER ESTABL-ISHMENT	GROSS OUTPUT PER EMPLOY-MENT	GROSS OUTPUT PER ESTABL-ISHMENT	VALUE ADDED PER EMPLOY-MENT	VALUE ADDED PER ESTABL-ISHMENT	GROSS CAPITAL FORM. PER EMPLOY-MENT	GROSS CAPITAL FORM. PER ESTABL-ISHMENT
31	FOOD, BEVERAGES AND TOBACCO	92.60	.66	61.21	5.12	474.35	1.47	135.97	1.06	96.41
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	48.69	.69	33.77	2.52	122.63	1.26	61.30	.00	.00
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	33.14	.53	17.51	2.27	75.39	.93	30.86	1.80	62.41
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	230.33	2.31	532.72	28.25	6507.84	14.89	3427.20	.69	151.33
36	NON-METALLIC MINERAL PRODUCTS	92.00	.77	71.14	2.75	252.99	1.21	111.06	.54	50.02
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	39.86	.77	30.85	2.82	112.29	1.30	51.77	.32	12.69
39	OTHER MANUFACTURING INDUSTRIES	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	TOTAL	75.38	1.19	89.78	10.74	809.46	5.32	400.88	.63	47.23

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A42
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN K.D.)
KUWAIT (1969)

ISIC CODE	INDUSTRIAL ACTIVITY	VALUE ADDED PER GROSS OUTPUT	COMPEN-SATION PER VALUE ADDED	GROSS CAPITAL FORMATION PER VALUE ADDED	GROSS CAPITAL FORMATION PER GROSS OUTPUT
31	FOOD, BEVERAGES AND TOBACCO	.287	.450	.711	.204
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	.500	.551	.000	.000
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.409	.568	2.023	.828
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.527	.155	.044	.023
36	NON-METALLIC MINERAL PRODUCTS	.439	.640	.450	.198
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.461	.596	.245	.113
39	OTHER MANUFACTURING INDUSTRIES	N.A.	N.A.	N.A.	N.A.
	TOTAL	.495	.224	.118	.058

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A43
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1970)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER,S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	COMPENSATION TO EMPLOYEES
31	FOOD, BEVERAGES AND TOBACCO	1429	16	7385.1	1955.8	1021.5	911.9
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	628	14	1690.1	834.4	0.0	538.1
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	219	7	533.6	253.6	107.7	132.7
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	2193	9	90877.6	63592.4	2085.0	4813.6
36	NON-METALLIC MINERAL PRODUCTS	1344	12	3369.5	939.2	652.9	1000.7
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	1799	37	4385.8	2175.6	322.5	1379.8
39	OTHER MANUFACTURING INDUSTRIES	14	1	62.0	29.1	4.4	8.5
	TOTAL	7626	96	108303.7	69780.1	4194.0	8855.9

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A44
PRINCIPAL INDICATORS OF INDUSTRIAL ACTIVITY (VALUES IN THOUSANDS OF K.D.)
PERCENTAGES OF TOTAL
KUWAIT (1970)

ISIC CODE	INDUSTRIAL ACTIVITY	NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENT	GROSS OUTPUT IN PRODUCER'S VALUE	VALUE ADDED (NET)	GROSS FIXED CAPITAL FORMATION	COMPENSATION OF EMPLOYEES
31	FOOD, BEVERAGES AND TOBACCO	18.74	16.67	6.82	2.80	24.36	10.30
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	8.23	14.58	1.56	1.20	0.00	6.08
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	2.87	7.29	.49	.36	2.57	1.50
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	28.76	9.38	83.91	91.13	49.71	54.35
36	NON-METALLIC MINERAL PRODUCTS	17.62	12.50	3.11	1.35	15.57	12.20
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	23.59	38.54	4.05	3.12	7.69	15.48
39	OTHER MANUFACTURING INDUSTRIES	.18	1.04	.06	.04	.10	.10
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A45
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN THOUSANDS OF K.D.)
KUWAIT (1970)

ISIC CODE	INDUSTRIAL ACTIVITY	EMPLOYMENT PER ESTABLISHMENT	COMPENSATION PER EMPLOYMENT	COMPENSATION PER ESTABLISHMENT	GROSS OUTPUT PER EMPLOYMENT	GROSS OUTPUT PER ESTABLISHMENT	VALUE ADDED PER EMPLOYMENT	VALUE ADDED PER ESTABLISHMENT	GROSS CAPITAL FORM. PER EMPLOYMENT	GROSS CAPITAL FORM. PER ESTABLISHMENT
31	FOOD, BEVERAGES AND TOBACCO	89.31	.64	56.99	5.17	461.57	1.37	122.24	.71	63.34
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	44.86	.86	38.44	2.69	120.72	1.33	59.60	.00	.00
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	31.29	.61	18.99	2.44	76.23	1.16	36.23	.49	15.33
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	243.67	2.19	534.82	41.44	10097.51	29.00	7065.82	.95	231.67
36	NON-METALLIC MINERAL PRODUCTS	112.00	.80	90.03	2.51	280.79	.70	78.27	.49	54.41
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	48.62	.76	37.05	2.44	118.56	1.21	58.80	.18	8.72
39	OTHER MANUFACTURING INDUSTRIES	14.00	.61	8.50	4.43	62.00	2.08	29.10	.31	4.40
	TOTAL	79.44	1.16	92.25	14.20	1128.16	9.15	726.88	.55	43.69

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A46
PERFORMANCE INDICES OF MANUFACTURIAL ACTIVITIES (VALUES IN K.D.)
KUWAIT (1970)

ISIC CODE	INDUSTRIAL ACTIVITY	VALUE ADDED PER GROSS OUTPUT	COMPEN-SATION PER VALUE ADDED	GROSS CAPITAL FORMATION PER VALUE ADDED	GROSS CAPITAL FORMATION PER GROSS OUTPUT
31	FOOD, BEVERAGES AND TOBACCO	.265	.466	.322	.138
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	.494	.645	.000	.000
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.475	.524	.425	.202
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.700	.076	.033	.023
36	NON-METALLIC MINERAL PRODUCTS	.279	1.150	.695	.194
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.496	.630	.148	.074
39	OTHER MANUFACTURING INDUSTRIES	.469	.292	.151	.071
	TOTAL	.644	.127	.060	.039

SOURCE - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A47
COMPENSATION OF EMPLOYEES BY ECONOMIC ACTIVITY
KUWAIT (1967-1970)
(VALUES IN THOUSANDS OF K.D.)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	645.0	765.9	918.1	911.9
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	463.8	488.1	439.0	538.1
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	110.1	136.6	122.6	132.9
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	1677.0	3672.1	4794.5	4813.4
36	NON-METALLIC MINERAL PRODUCTS	775.5	653.5	995.9	1080.3
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	573.4	675.4	1079.6	1370.8
39	OTHER MANUFACTURING INDUSTRIES	1.3	N.A.	N.A.	8.5
	TOTAL	4246.1	6391.6	8349.7	8855.9

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A48
COMPENSATION OF EMPLOYEES BY ECONOMIC ACTIVITY.
PERCENTAGES TO TOTAL
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	15,19	11,98	11,00	10,30
32	TEXTILES, WEARING APPAREL AND LEATHER	N,A,	N,A,	N,A,	N,A,
33	WOOD AND WOOD PRODUCTS	10,92	7,64	5,26	6,08
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	2,59	2,14	1,47	1,50
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	39,50	57,45	57,42	54,35
36	NON-METALLIC MINERAL PRODUCTS	18,26	10,22	11,93	12,20
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	13,50	10,57	12,93	15,48
39	OTHER MANUFACTURING INDUSTRIES	,03	N,A,	N,A,	,10
	TOTAL	100,00	100,00	100,00	100,00

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A49
EMPLOYMENT PER ESTABLISHMENT
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	75,33	87,79	92,60	89,31
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	61,91	52,00	48,69	44,86
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	45,20	33,00	33,14	31,29
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	147,43	221,11	230,33	243,67
36	NON-METALLIC MINERAL PRODUCTS	122,20	94,17	92,00	112,00
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	31,08	32,29	39,86	48,62
39	OTHER MANUFACTURING INDUSTRIES	2,00	N.A.	N.A.	14,00
	TOTAL	68,51	73,95	75,38	79,44

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A50
COMPENSATION PER EMPLOYMENT
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	.57	.62	.66	.64
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	.68	.67	.69	.86
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.49	.59	.53	.61
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	1.63	1.85	2.31	2.19
36	NON-METALLIC MINERAL PRODUCTS	.63	.58	.77	.80
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.74	.75	.77	.76
39	OTHER MANUFACTURING INDUSTRIES	.65	N.A.	N.A.	.61
	TOTAL	.84	1.03	1.19	1.16

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A51
COMPENSATION PER ESTABLISHMENT
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	43,00	54,71	61,21	56,99
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	42,16	34,86	33,77	38,44
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	22,02	19,51	17,51	18,99
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	239,57	408,01	532,72	534,82
36	NON-METALLIC MINERAL PRODUCTS	77,55	54,46	71,14	90,03
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	22,94	24,12	30,85	37,05
39	OTHER MANUFACTURING INDUSTRIES	1,30	N.A.	N.A.	8,50
	TOTAL	57,38	76,09	89,78	92,25

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE AS2
GROSS OUTPUT PER EMPLOYMENT
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	5,03	5,16	5,12	5,17
32	TEXTILES, WEARING APPAREL AND LEATHER	N,A,	N,A,	N,A,	N,A,
33	WOOD AND WOOD PRODUCTS	2,48	2,58	2,52	2,69
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	1,94	2,50	2,27	2,44
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	59,28	34,67	28,25	41,44
36	NON-METALLIC MINERAL PRODUCTS	2,88	2,49	2,75	2,51
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	3,22	3,07	2,82	2,44
39	OTHER MANUFACTURING INDUSTRIES	13,75	N,A,	N,A,	4,43
	TOTAL	14,80	13,42	10,74	14,20

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A53
GROSS OUTPUT PER ESTABLISHMENT
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	197
31	FOOD, BEVERAGES AND TOBACCO	379,25	452,58	474,35	461,57
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	153,67	134,06	122,63	120,72
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	87,88	82,56	75,39	76,23
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	8739,87	7664,84	6507,84	10097,51
36	NON-METALLIC MINERAL PRODUCTS.	351,49	234,89	252,99	280,79
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	100,13	99,02	112,29	118,54
39	OTHER MANUFACTURING INDUSTRIES	27,50	N.A.	N.A.	62,00
	TOTAL	1014,10	992,45	809,46	1128,16

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A54
VALUE ADDED PER EMPLOYMENT
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	1.31	1.65	1.47	1.37
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	1.22	1.36	1.26	1.33
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.97	.77	.93	1.16
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	54.55	29.19	14.89	29.00
36	NON-METALLIC MINERAL PRODUCTS	1.15	1.04	1.21	.70
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	1.05	1.65	1.30	1.21
39	OTHER MANUFACTURING INDUSTRIES	2.40	N.A.	N.A.	2.08
	TOTAL	12.23	10.29	5.32	9.15

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A55
VALUE ADDED PER ESTABLISHMENT
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	121,06	144,66	135,97	122,24
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	75,36	70,78	61,30	59,60
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	43,90	25,29	30,86	36,23
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	8042,50	6453,83	3429,20	7065,82
36	NON-METALLIC MINERAL PRODUCTS	140,59	97,78	111,06	78,27
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	57,57	53,20	51,77	58,80
39	OTHER MANUFACTURING INDUSTRIES	4,80	N.A.	N.A.	29,10
	TOTAL	833,00	761,20	400,88	726,88

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A56
GROSS CAPITAL FORMATION PER EMPLOYMENT
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1960	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	.89	.73	1.04	.71
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	.00	.00	.00	.00
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.35	.50	1.88	.49
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.63	3.83	.66	.95
36	NON-METALLIC MINERAL PRODUCTS	.35	.28	.54	.49
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.11	.22	.32	.18
39	OTHER MANUFACTURING INDUSTRIES	.00	N.A.	N.A.	.31
	TOTAL	.44	1.47	.63	.55

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A57
GROSS CAPITAL FORMATION PER ESTABLISHMENT
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	66,97	64,06	96,61	63,84
32	TEXTILES, WEARING APPAREL AND LEATHER	N,A,	N,A,	N,A,	N,A,
33	WOOD AND WOOD PRODUCTS	,00	,00	,00	,00
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	15,86	16,66	62,41	15,39
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	92,43	846,69	151,33	231,67
36	NON-METALLIC MINERAL PRODUCTS	42,54	26,08	50,02	54,41
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	3,33	7,15	12,68	8,72
39	OTHER MANUFACTURING INDUSTRIES	,00	N,A,	N,A,	4,40
	TOTAL	30,26	108,89	47,23	43,69

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A58
VALUE ADDED PER GROSS OUTPUT
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	.319	.320	.287	.265
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	.490	.528	.500	.494
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.500	.306	.409	.475
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.920	.842	.527	.700
36	NON-METALLIC MINERAL PRODUCTS	.400	.416	.439	.279
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.575	.537	.461	.496
39	OTHER MANUFACTURING INDUSTRIES	.175	N.A.	N.A.	.469
	TOTAL	.826	.767	.495	.644

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A59
COMPENSATION PER VALUE ADDED
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	.355	.378	.450	.466
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	.559	.493	.551	.645
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.502	.772	.568	.524
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.030	.063	.155	.076
36	NON-METALLIC MINERAL PRODUCTS	.552	.557	.640	1.150
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.398	.453	.596	.630
39	OTHER MANUFACTURING INDUSTRIES	.271	N.A.	N.A.	.292
	TOTAL	.068	.100	.224	.127

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A60
GROSS CAPITAL FORMATION PER VALUE-ADDED
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	.553	.443	.711	.522
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	.000	.000	.000	.000
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.361	.659	2.023	.425
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.011	.131	.044	.033
36	NON-METALLIC MINERAL PRODUCTS	.303	.267	.450	.695
37+38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.058	.134	.245	.148
39	OTHER MANUFACTURING INDUSTRIES	.000	N.A.	N.A.	.151
	TOTAL	.036	.143	.118	.060

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS

TABLE A61
GROSS CAPITAL FORMATION PER GROSS OUTPUT
KUWAIT (1967-1970)

CODE	INDUSTRIAL ACTIVITY	1967	1968	1969	1970
31	FOOD, BEVERAGES AND TOBACCO	.177	.142	.204	.138
32	TEXTILES, WEARING APPAREL AND LEATHER	N.A.	N.A.	N.A.	N.A.
33	WOOD AND WOOD PRODUCTS	.000	.000	.000	.000
34	PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING	.180	.202	.828	.202
35	CHEMICAL, PETROLEUM, RUBBER AND PLASTIC PRODUCTS	.011	.110	.023	.023
36	NON-METALLIC MINERAL PRODUCTS	.121	.111	.198	.194
37-38	BASIC METAL INDUSTRIES AND FABRICATED METAL PRODUCTS, MACHINES AND EQUIPMENTS	.033	.072	.113	.074
39	OTHER MANUFACTURING INDUSTRIES	.000	N.A.	N.A.	.071
	TOTAL	.030	.110	.058	.039

SOURCES - CENTRAL STATISTICAL OFFICE - MINISTRY OF PLANNING - INDUSTRIAL STATISTICS