Economic Horizons (2012), Vol. 33, No. 122.

Economic Diversification in the United Arab Emirates

Dr. Salem Al-Jundi
Assistant Professor of Economics
Al-Ain University of Science & Technology
Abu Dhabi, UAE

التنويع الاقتصادي في الامارات العربية المتحدة

د. سالم الجندي

استاذ الاقتصاد المساعد

جامعة العين للعلوم و التكنولوجيا

أبو ظبي، الامارات العربية المتحدة

الملخص

يقصد بالتنويع الاقتصادي ــ في سياق اقتصاد دولة الامارات العربية المتحدة ــ تقليل الاعتماد على قطاع النفط الخام من خلال تطوير الاقتصاد غير النفطي، حتى يصبح قادرا على النمو المستدام بعد انقضاء احتياطات النفط و الغاز.

تهتم الدراسة باختبار مدى النجاح في مساعي التنويع الاقتصادي في الامارات من خلال المؤشرات التالية:

- **انخفاض مساهمة النفط في توليد الناتج المحلي الاجمالي خلال الفترة 1975–2010.**
- **التغير الهيكلي للناتج المحلي الاجمالي عدا النفط.**
- **لماذا فشلت مساعي التنويع الاقتصادي في العراق بعد توقف صادرات النفط مطلع تسعينات القرن الماضي؟**
- **هل انفك الارتباط بين النمو الاقتصادي و التذبذب في اسعار النفط و الازمات الاقتصادية الدولية؟**
- **مساهمة الايرادات النفطية من مجمل الايرادات العامة.**
- **مساهمة الصادرات غير النفطية في تمويل الاستيرادات.**

Abstract

Economic diversification, in the context of the UAE economy, means reducing dependence on the crude oil sector by developing a non-oil economy, till it becomes capable of sustainable growth after the short-lived oil reserves exhaust.

The study is interested in assessing the extent of success in economic diversification process in the UAE by the following indicators:

- The decrease in the contribution of oil sector in the generation of gross domestic product during the period of 1975 – 2010.
- Structural change of non-oil GDP.
- Why did economic diversification fail in Iraq after a pause of oil exports in the beginning of the 1990's of the last century?
- Is there still a connection between economic growth and fluctuations in the oil prices and global economic crises?
- The contribution of oil revenues to public revenues.
- Contribution of non-oil exports in funding for imports.

Keywords: Crude oil, Economic Development, Economic Diversification, GDP, Structural change.

Introduction

Economic diversification, in the context of finance, means diversifying investment portfolio to be a good number of shares and bonds. If one or more of investment tools experienced a decline in their prices, the financial position will not be damaged. Diversification can be expanded to diversifying the investor portfolio by the retention of gold and real properties in addition to investing in various economic activities such as industry and commerce. The main goal of diversification in this case is to provide a high degree of risk reduction.[1] "*We can think of a large portfolio as one where an investor keeps increasing the number of securities without limit. In practice, effective diversification would occur if at least a few dozen securities were held*".[2]

Economic diversification, in the context of this study, UAE economy, gulf cooperation council economies and oil-producing and exporting countries (OPEC), means reducing dependence on the crude oil sector by developing a non-oil economy. It can be done by developing non-oil activities in agriculture, industry, services and distribution.[3]

Economic diversification represents a strategic and long –run goal as in UAE. The main goal is to develop the traditional (non-oil) economy in which it becomes capable to satisfy population and labour force needs. The non-oil economy should be capable to maintain the high level of income per capita which is achieved by the UAE economy. The most important thing is to guarantee sustainable growth after the exhaustion of the short-lived oil and gas reserves.[4]

Economic diversification aims to build a developed economy in which it can survive without oil revenues stimulation and to maintain economic achievements after the end of the oil era.

The study aims to examine a hypothesis as "economic diversification efforts in UAE succeeded in reducing dependence on oil sector. Non-oil economy developed and became capable of sustainable growth without oil revenues stimulation."

In order to examine the hypothesis of the research, we will examine a number of measures to assess the success of economic diversification in reducing dependence on oil sector as follows:

- Contribution of oil sector in the generation of GDP in UAE during the period of 1975 – 2010.
- Evolution of structural change of non-oil GDP and comparison with other countries which achieved income per capita level as the one gained in UAE.
- Analyzing growth capabilities of economic activities to compare among different sectors in achieving high growth.
- Comparison as case study with the economic diversification experience in Iraq. Did non-oil economy stand firmly after oil exports paused in 1991 as a result of United Nations' penalties?
- Did huge developments in non-oil economy lead to stability? Or economic growth of the economy as a whole or for non-oil economy is still sensitive to changes in oil revenues (oil prices and export quantities). Is the economy still sensitive to global economic crises?
- Did economic diversification process lead to a continuous reduction in the contribution of oil revenues to public revenues in the last 25 years?
- Contribution of non-oil exports to total exports. Did the composition of the non-oil exports reflect the maturity of non-oil economy?

The researcher benefits from the statistics of UAE National Bureau of Statistics and studies in economic diversification in addition to the researcher's papers since 1987. The most important conclusions derived by the study are as follows:

- The contribution of oil sector to GDP decreased from 66% (1975) to 31% (2010).
- Economic Diversification process succeeded to build a production structure similar to other countries which achieved an income per capita level as the one gained in UAE. However, the contribution of manufacturing industries and social services is still lower than other countries.

- Despite the diversification process since 1950's, non-oil Iraqi economy collapsed by 50% in 1991 because of its heavy dependence on government expenditures and imports in which both these were funded by oil revenues.
- Economic growth of GDP still fluctuates as a result of oil price fluctuation in the international market. Additionally, economic growth of non-oil GDP is more sensitive to oil revenues than the GDP as a whole.
- Oil revenues have averaged 77% of public revenues since 1985.
- UAE succeeded to develop non-oil exports but mostly they were consuming goods.

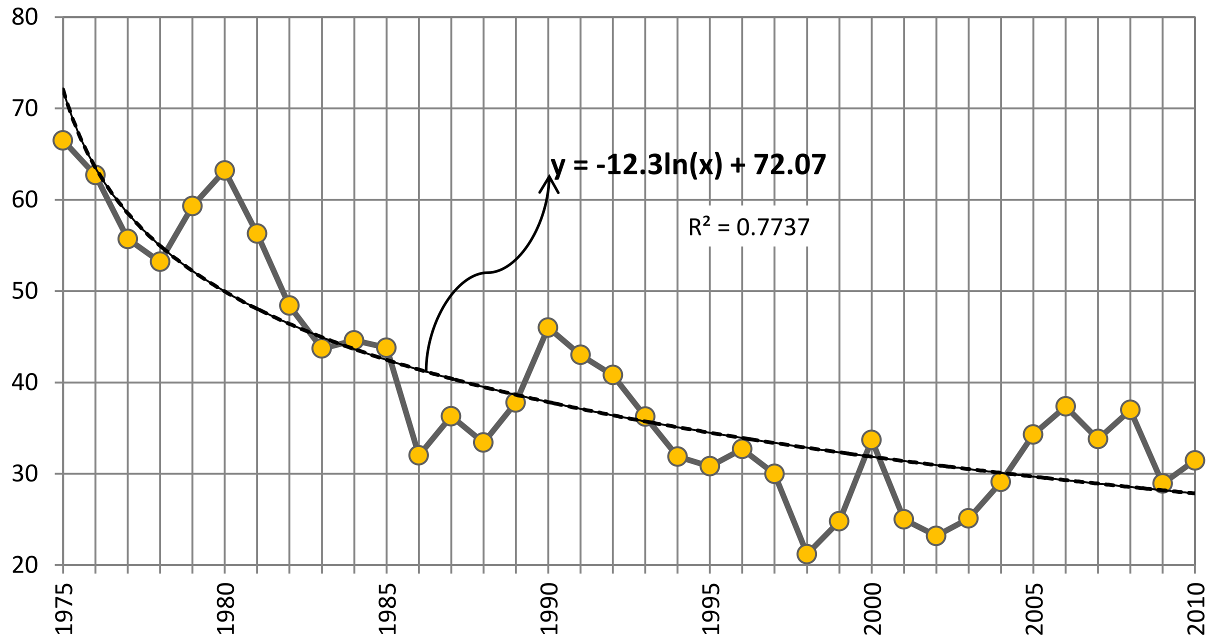
We can now re-formula the research hypothesis as "Economic diversification in UAE succeeded to develop non-oil economy by benefitting from oil revenues. UAE covered a big round of diversification; however it has to cover more rounds represented by building technologically intensive industry, applying a comprehensive taxation system, encouraging foreign investment, supporting small and medium enterprises and funding research and innovation. All these efforts can eliminate the effect of oil price fluctuations and global economic crises on local economic stability and sustainable development."

Contribution of oil sector to GDP

Contribution of oil sector to GDP reached 66% in 1975. That came as a result of the first oil boom (1973 – 1974), in which the international demand on oil increased due to developed countries' expansion and the pioneer role of OPEC in correcting oil prices accompanied by the war of the 6th October, 1973. That reveals the conventional economy in different economic activities was extremely limited. The contribution of non-oil GDP to the whole GDP did not exceed 34% in 1975.

The non-oil economy, at the beginning of 1970's, can be described as heavily dependent on oil exports, small size of private sector, scarcity of agricultural and mineral resources, limitation of manpower and their skills.[5]

Figure 1. Contribution of oil sector to GDP in UAE 1975 - 2010 (%)



Sources: Calculated & plotted from 1. UAE National Bureau of Statistics website, Retrieved June 20, 2011 from http://www.uaestatistics.gov.ae/ReportDetailsEnglish/tabid/121/Default.aspx?ItemId=1933&PTID=104&MenuId=1

UAE Ministry of Economy website, Retrieved June 20, 2011 from .2 http://www.economy.gov.ae/English/economicandstatisticreports/economicreports/pages/nationalabstract.aspx

UAE Ministry of Planning, 1998, "*Economic & Social Development in UAE 1990-1995*", Abu .3 .Dhabi. P.174

UAE Ministry of Planning, 1993, "*Economic & Social Development in UAE 1985-1990*", Abu .4 .Dhabi. P.166

UAE Ministry of Planning, 1987, "*Economic & Social Development in UAE 1975-1985*", Abu .5 .Dhabi. P.217

Figure 1 shows that the contribution of oil sector to GDP, during the period 1975 – 2010, highly fluctuated due to oil price and quantity fluctuations. Comprehensive development process and political stability resulted in reducing oil contribution from 66% (1975) to 31% (2010). However the contribution reached a minimum level of 21% in 1998.

The figure indicates that the general trend with high coefficient of determination of 77% and using logarithmic equation shows that a continuous decline at a decreasing rate i.e. if the trend continues in the future, oil sector would take lower importance in the economic life than it is, as we can predict from the figure or the historical data.[6]

The Emirate of Abu Dhabi expected that oil contribution to GDP would decline from 59% (2006) to 36% in 2030 as stated in "Abu Dhabi Economic Vision 2030".[7]

Referring to the first and essential goal of economic diversification, reducing oil contribution to GDP or increasing non-oil GDP contribution, has been substantially achieved or the development process has succeeded or at least it is going to diversify the economy and reduce the dependence on oil sector. Needless to say; as oil contribution to GDP decreases, the effect of oil price fluctuations on development efficiency for the local economy would be less i.e. this is one of the economic diversification goals.

Abu Dhabi Economic Vision 2030 noticed that the Abu Dhabi economy suffers from fluctuations less than in 20 years ago in which the fluctuation in economic growth of GDP was 31%. This ratio decreased to 8% during the last decade.[8]

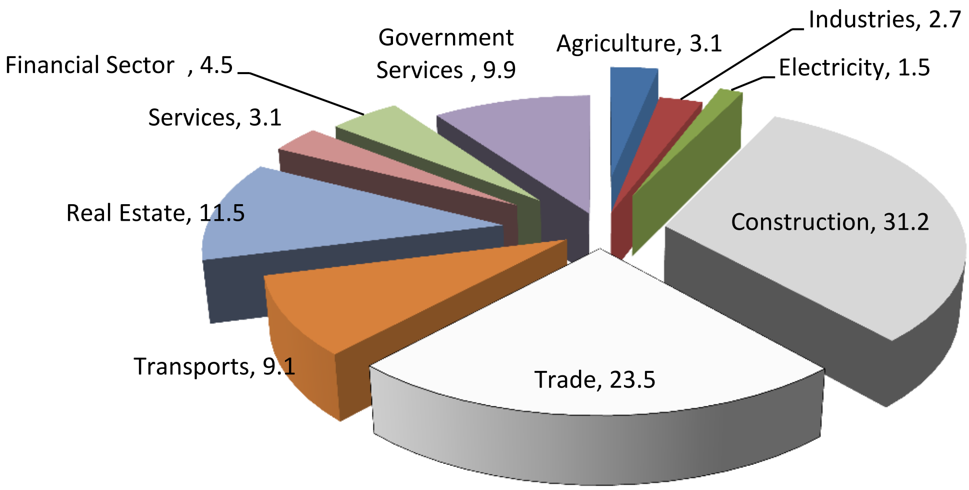
Structural change of non-oil GDP

The national economy can be considered as a sophisticated structure, in which there are many structures such as production, investment and employment structures. The Production structure means a relative contribution of different economic activities in generation of GDP. Developing countries characterize with an imbalance of economic structure in which primary production takes high importance in generating GDP and absorbing high percentage of employment.

Economic development can be described as structural changes process in which it can transfer the economy from less developed to developed structure. Hence, the structural change means a change in relative contributions of different economic activities or sectors.

To get a clear indicator about the structural change of GDP in UAE, in which it can give a clear and significant explanation for the development efficiency, we will analyze non-oil GDP or follow up structural change of GDP except oil sector. As the goal of development is to build a developed and mature non-oil economy, as it can be assumed the exhaustion of oil reserves.

Figure 2. Contribution of economic activities to non-oil GDP in UAE, 1975 (%)

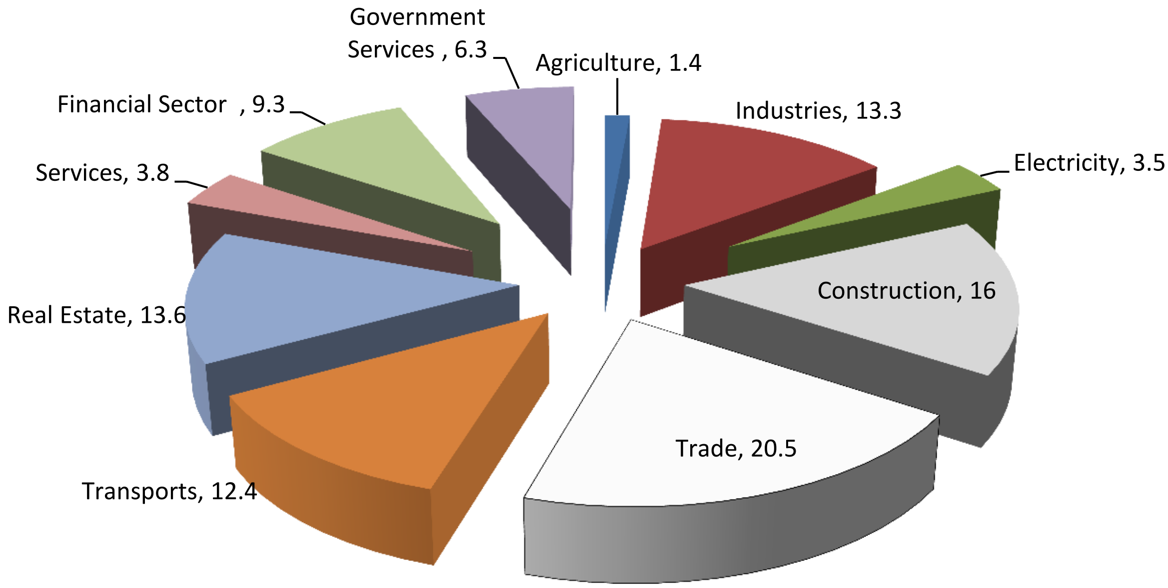


Source: Calculated & plotted from: UAE Ministry of Planning, 1987, "*Economic & Social Development in UAE 1975-1985*", Abu Dhabi. P.216.

Figure 2 represents the contribution of economic activities to non-oil GDP. The figure reflects the status of conventional economy since the first oil boom. It seems that industrial and agricultural production did not exceed 6% in 1975. Additionally agricultural contribution of 3.1% exceeds the contribution of manufacturing industries of 2.7%.

Needless to say, oil revenues and large government expenditure allowed the development for construction sector (31%) in which it reflects government investment expenditure on expanding infra-structures. The trade sector contribution of 23% took care of fulfilling local demand on agricultural and industrial products or consuming and capital goods via imports. The local demand on services and distribution highly increased, imports could not fulfill that demand, business sector expanded such activities and they were more profitable than producing physical commodities.

Figure 3. Contribution of economic activities to non-oil GDP in UAE, 2010 (%)

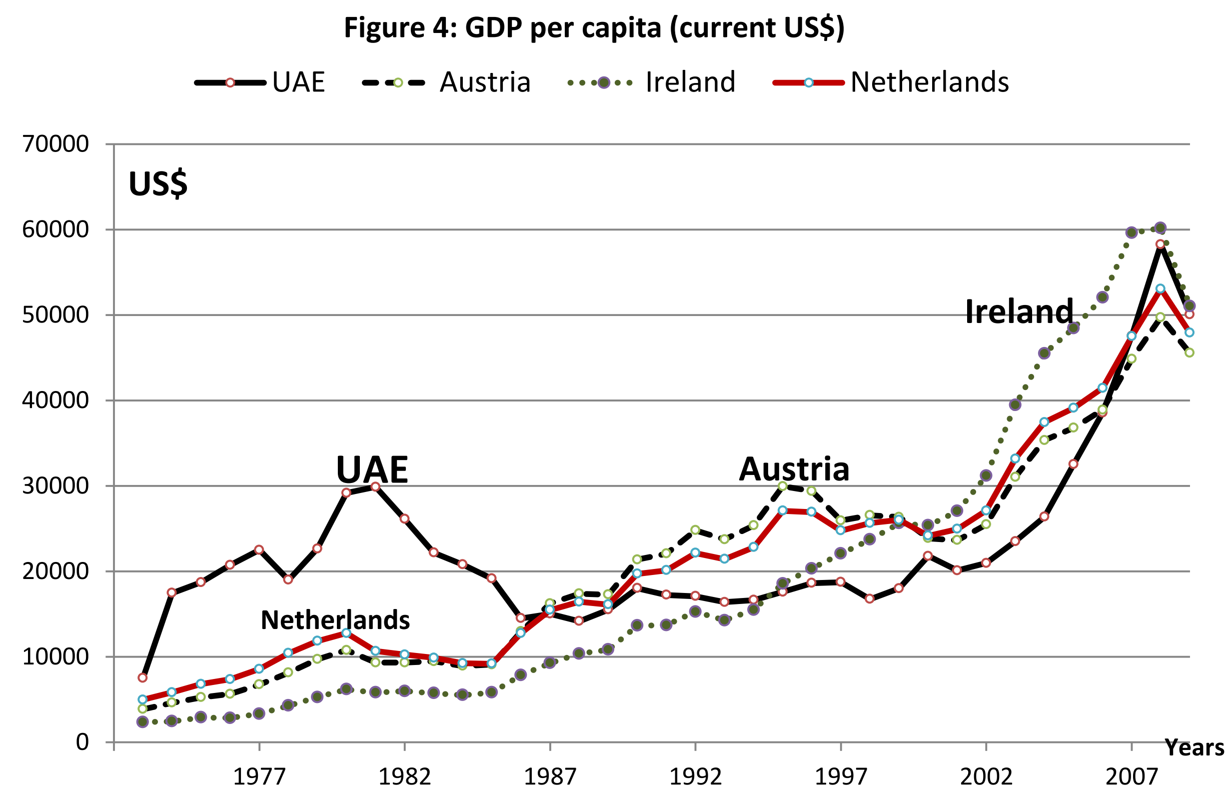


Source: Calculated & plotted from: UAE National Bureau of Statistics website, Retrieved June 20, 2011 from http://www.uaestatistics.gov.ae/ReportDetailsEnglish/tabid/121/Default.aspx?ItemId=1933&PTID=104&MenuId=1

After 35 years, in 2010, important developments have occurred in the non-oil GDP structure. The contribution of manufacturing industries increased from 2.7% (1975) to 13.3% (2010) as shown in figure 3. However the contribution of agriculture to non-oil GDP decreased from 3.1% to 1.4% respectively because of modest growth rates. The contribution of construction and trade decreased while the contribution of services and distribution increased such as transports and financial services. The contribution of government services decreased as a result of privatization or transferring services to private sector. For example, the contribution of government sector declined from 11% (2004) to 4% (2008) in the emirate of Abu Dhabi.[9]

The production structure is still deformed due to the low contribution of manufacturing industries in addition to agriculture. The imports, funded by oil exports, allow fulfilling local demand on consuming and capital goods. Government expenditure, funded by oil revenues, became an accelerator to grow services and distribution sectors in which it is impossible to import such products from abroad.

To analyze the efficiency of economic diversification efforts, in which the process succeeded in decreasing the contribution of oil sector to GDP, non-oil economy has to be examined since it becomes in greater size than 35 years ago. Economic diversification aims to build developed and mature economy, which would gain independence from the oil sector. It is useful to benefit from international experience for comparison between UAE economy and other economies which achieved income per capita as in UAE.



Source: Plotted from The World Bank website, World Development Indicators, Retrieved June 24, 2011 from http://data.worldbank.org/indicator/NY.GDP.PCAP.CD/countries/AE-GB?display=default

Figure # 4 shows that GDP per capita in UAE is very close to the average of three countries (the Netherlands, Ireland and Austria). Population in Ireland is similar to UAE. Population in Austria is less than the double of UAE while the population in the Netherlands exceeds three times of the population in the UAE as mentioned in table # 1.

Table 1: Population in UAE and other countries in 2009.

Country	Population	Ratio to UAE
Austria	8,363,882	1.8 : 1
Ireland	4,515,450	1 : 1
Netherlands	16,592,232	3.6 : 1
UAE	4,598,600	1 : 1

Last column is calculated by the researcher.

Sources: United Nations Statistics Division website, Retrieved July 5, 2011 from http://unstats.un.org/unsd/snaama/dnlList.asp

Table 2: Shares of breakdown of GDP at current prices in 2009 (%)

Economic Activities:	Austria	Ireland	Netherlands	UAE
Agriculture, hunting, forestry, fishing	1.5	1.0	1.7	1.1
Mining, Utilities	3.2	2.1	5.3	35.6
Manufacturing	18.6	24.2	12.6	12.4
Construction	7.3	5.6	6.0	7.0
Wholesale, retail trade, restaurants and hotels	16.9	11.7	14.0	17.2
Transport, storage and communication	6.6	5.4	6.3	5.2
Other Activities	45.8	50.0	54.1	21.5

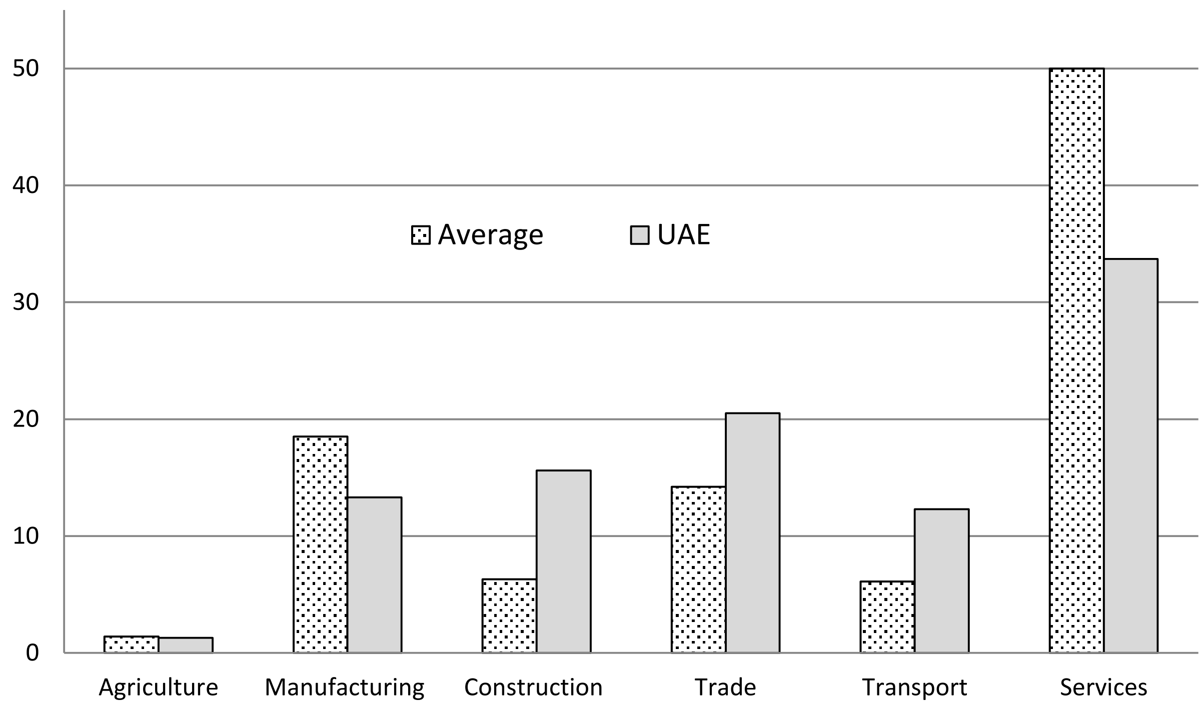
Source: United Nations Statistics Division website, Retrieved July 5, 2011 from http://unstats.un.org/unsd/snaama/dnlList.asp

Table # 2 shows the status of UAE economy in comparison with the three countries in 2009. It can be concluded that:

- The raw material production in UAE is much greater than it is in other countries. The oil contribution in UAE was 35% to GDP while the highest ratio was 5% in the Netherlands for mining activities.
- There are no significant differences regarding to agriculture and construction.
- The contribution of manufacturing industries is close to that in the Netherlands. While it was less than that in the other two countries. The manufacturing industry in UAE is around half of that in the Ireland.
- Social services such as education and medical care in UAE are less than in the other countries. Their contribution in UAE is half of theirs in the three countries.[10]

The table reveals that the development in UAE requires mainly developing manufacturing industries. However that needs more expansion in social services.

Figure 5. Contribtion of economic activities to non-oil GDP in 2009 (%).



Notes: 1. the average of Austria, Ireland & Netherlands. 2. Mining and utilities are excluded.
Sources: Calculated & plotted from: 1. United Nations Statistics Division website, Retrieved July 5, 2011 from http://unstats.un.org/unsd/snaama/dnlList.asp
2. UAE National Bureau of Statistics website, Retrieved June 20, 2011 from http://www.uaestatistics.gov.ae/ReportDetailsEnglish/tabid/121/Default.aspx?ItemId=1933&PTID=104&MenuId=1

Let's finally check the structure of non-oil GDP in UAE in comparison with an average of the three countries as shown in figure # 5. As final experiment, there is no significant difference between UAE and the average of the three countries regardless to the agricultural sector. Manufacturing industries' contribution in UAE is lower than that in other countries. That requires developing manufacturing industries. However the last needs more expansion in social services because these services in UAE are lower than these in other countries. The relative contributions of distribution sectors (trade and transports) and construction in UAE are higher than these in other countries. The stimulation of government expenditure in UAE, funded by oil revenues, allowed such developments.

Table 3: High-technology exports (% of manufactured exports)

Country	2005	2006	2007	2008
UAE	1.8	NA	1.2	3.2
Ireland	34.5	34.3	27.9	26.5
Austria	13.5	13.1	11.3	10.9
Netherlands	30.5	28.6	25.7	22.2

Source: The World Bank website, World Development Indicators, Retrieved June 26, 2011 from http://data.worldbank.org/indicator/TX.VAL.TECH.MF.ZS/countries?display=default

The manufacturing industries contribution in UAE is less than that in the three countries. Table # 3 indicates that the contribution of high – technology exports to manufactured exports in the other countries is much higher than that in UAE, because of the control of consuming industries and the weakness of research and innovation in UAE. The economy depends on imported technologies. In field study conducted in Abu Dhabi, it is noticed that mainly medium sized industries tried to mix between imported technologies with home-made machines and equipment.[11]

Growth Elasticities

Main sectors do not grow at the same rate because of the difference of sector growth elasticities. Sector growth elasticity means sector product growth rate divided by national product growth rate.

The difference of growth elasticities among sectors can explain changes on the national product structure. It can also reflect growth opportunities among sectors. It can be explained by income elasticity of demand. As income per capita increases, demand shifts from agricultural products to industrial products and then into services. As a result in the less developed countries, economic activity is focused on agriculture while in the developed countries; it is focused on high quality services.

Economic policies affect real growth opportunity for each sector. We can support agricultural and industrial activities or even desired activities via selected policies for support or investment allocation in order to build infra-structure which stimulates the growth for a desired sector.

Table 4: GDP By Economic Activities at current prices in UAE (Million Dirhams)

Sectors	1975	2008	Annual Growth Rate 1975-2008 %	Growth Elasticities
- Agriculture , Livestock and Fishing	329	9,585	10.8	0.8
- Mining and Quarrying :	26,462	429,105	8.8	0.7
Crude oil and Natural Gas	26,364	427,666	8.8	0.7
Quarrying	98	1,439	8.5	0.7
- Manufacturing Industries	369	99,641	18.5	1.4
- Electricity , Gas and water	209	20,581	14.9	1.2
- Construction	4,308	122,242	10.7	0.8
- Wholesale & Retail Trade and Repairing Services, Restaurants and Hotels	3,248	168,946	12.7	1.0
- Transports , Storage and Communication	1,255	88,815	13.8	1.1
- Real Estate and business Services	1,592	125,697	14.2	1.1
- Social and Personal Services	382	20,859	12.9	1.0
- The Financial Corporations Sector	627	73,185	15.5	1.2
Government Services Sector	1,364	38,733	10.7	0.8
- Domestic Services of Households	40	4,158	15.1	1.2
Less : Imputed Bank Services	550	45,277	14.3	1.1
Total	39,635	1,156,267	10.8	0.8
Non-Oil GDP	13,271	728,602	12.9	1.0

Last two columns are calculated by the researcher.

Sources: 1. UAE National Bureau of Statistics website, Retrieved June 20, 2011 from http://www.uaestatistics.gov.ae/ReportDetailsEnglish/tabid/121/Default.aspx?ItemId=1933&PTID=104&MenuId=1

2. UAE Ministry of Planning, 1987, "*Economic & Social Development in UAE 1975-1985*", Abu Dhabi. P.216.

Table # 4 shows that the growth elasticities are different among economic activities. Manufacturing industry achieved the highest ratio of 1.4 which allowed increasing the contribution of this sector in the generation of non-oil product. The growth elasticity of oil sector is lower than the growth ability of non-oil GDP in which it allowed a decrease in the contribution of oil sector to GDP. The growth elasticity of agriculture is less than the growth ability of non-oil GDP. The personal, social and governmental services grow at a rate lower than the level of economic activity.

Table 5: GDP By Economic activities at Constant 2007 Prices in UAE (Million Dirhams)

Sectors	2001	*2010	Annual Growth Rate 2001-2010 %	Growth Elasticities
- Agriculture , Livestock and Fishing	10,964	7,834	(3.7)	(0.54)
- Mining and Quarrying :	283,746	308,588	0.9	0.14
Crude oil and Natural Gas	282,961	306,808	0.9	0.13
Quarrying	786	1,780	9.5	1.40
- Manufacturing Industries	63,394	93,459	4.4	0.65
- Electricity , Gas and water	10,064	25,324	10.8	1.59
- Construction	43,062	114,921	11.5	1.69
- Wholesale & Retail Trade and Repairing Services	71,374	130,194	6.9	1.02
- Restaurants and Hotels	14,561	17,667	2.2	0.32
- Transports , Storage and Communication	38,141	91,816	10.3	1.51
- Real Estate and business Services	67,921	95,141	3.8	0.56
- Social and Personal Services	9,705	22,580	9.8	1.45
- The Financial Corporations Sector	25,187	64,980	11.1	1.63
- Government Services Sector	24,888	43,361	6.4	0.94
- Domestic Services of Households	2,585	3,555	3.6	0.53
Less : Imputed Bank Services	12,859	42,092	14.1	2.07
Total	652,734	977,329	4.6	0.67
Non-Oil GDP	369,773	670,521	6.8	1.00

** Estimated .*

Last two columns are calculated by the researcher

Source: UAE National Bureau of Statistics website, Retrieved June 20, 2011 from http://www.uaestatistics.gov.ae/ReportDetailsEnglish/tabid/121/Default.aspx?ItemId=1933&PTID=104&MenuId=1

Table # 5 represents a short run view for the last decade. The high growth abilities were for construction and financial services in which they pushed the UAE economy into recession later; as a result of an excessive expansion in these two sectors as against real productive activities. The growth pattern weakens the desired activities such as manufacturing industries and agriculture. For instance, foreign direct investment allocated 8% of total value of FDI in 2007. Most of foreign investment went to financial, trade and real properties sectors.[12]

Let's focus on the growth elasticity of manufacturing industry. In the long run view it was 1.4 while in the short run it was 0.65. The ability was higher than the economic activity level in the long run but lower than the level at the expansion ended in the end of 2008. As a conclusion, the economic policies could allow a great opportunity for this important activity to growth via a support of small and medium businesses, subsidizing research and innovation and encouraging foreign investment. For instance, the government of Abu Dhabi has started to encourage knowledge-based applications in the whole economy.[13]

Case Study: Iraq 1991

Why did Iraq severely fail to diversify the economy? The reason is that the economy was oil-based. Iraq did not succeed in building non-oil economy which could stand without oil stimulation. The oil-based economy leads to exposure to the global market as cleared by high foreign trade ratio to GDP. As oil revenue diminishes for political or economic reasons, the whole economy becomes unable to grow continuously.

During 1970's oil revenues increased immensely as Iraq never experienced such an increase. The revenues of 1979 exceeded those of 1972 by 21 times.[14] The contribution of oil sector to GDP increased from 31% (1970) to 60% (1980) because of oil nationalization and an increase in oil prices and quantities due to an increase of international demand for oil as a result of the expansion in the developed countries and the pioneer role of OPEC for correcting oil prices. On the other hand non-oil economy could not follow the growth of oil sector.[15]

Non-oil economy in the second half of the 1970's achieved very high economic growth rates as a result of the government behavior of transferring monetary funds of oil revenues to fixed assets which led to an increase in government investment expenditures and loans and facilities to the private sector. However the absorptive capacity of investment limited the growth process,[16] Even though the total investment exceeded the limitation of this capacity many times which led to a decline in the investment effectiveness.[17]

During 1980's the Iraqi economy was affected by the Iraq-Iran war (September 1980 – August 1988) which led to the closure of some of oil exporting outlets accompanied by a decline in the international demand for oil and a decline in its prices. The outcomes were a sharp decline of oil revenues and the contribution of oil sector to GDP dropped to 17% in 1988. The recession was enforced by pulling manpower to the war efforts and cutting imports down.[18]

In the first two years of the war (1981 and 1982), the expansion continued with lower rate of 1970's expansion as a result of the usage of public reserves of foreign assets. As the war continued, the decline in oil revenues led to a decline in government investment and expenditure accompanied with privatization and encouraging the private sector.[19]

During 1980's, income per capita in Iraq became close to those in Brazil, Uruguay and Argentina. As comparison between non-oil GDP structure with the average of GDP structure in the three countries, it is noticed that the structural change of non-oil product in Iraq was similar to the three countries. The manufacturing industry in Iraq was lower than it should have been and the services and distribution sectors were higher than they should have been. Economic diversification in Iraq is limited by oil sector. Oil revenues gave opportunity to services and distribution to grow faster than commodities sectors. Without oil revenues the commodities production in agriculture and industry would control the expansion degree in services and distribution sectors.[20]

Before the economy could clear the results of Iraq-Iran war, Iraq was affected by the second Gulf war and the economic blockade in the beginning of 1990's. The most severe consequences of the second Gulf war was the pause of oil exporting and the economy lost the main resource for national income and foreign currencies. As a result imports sharply dropped for consumption and intermediate goods.[21]

During the period of blockade in the 1990's, the development process suffered a severe setback. In addition to a pause of oil exporting, a main resource of national income, the oil contribution became close to zero. Non-oil GDP drastically dropped by 50% in 1991 due to a pause, destruction and devastation of most producing units. In 1992, non-oil GDP grew again by 21% compared to the last year due to the efforts of the reconstruction campaign for operating energy and manufacturing units.[22] The growth ability of the economy during the period of blockade can be shown by the growth rate of non-oil GDP of -13% in 1993.[23]

The sharp decline of growth rate for the non-oil economy is caused by little additions to the production capacities, and the heavy dependence of operating production capacities on imported intermediate goods in which it was difficult and costly to get them because of a sharp decline in foreign currencies as a result of a pause of oil exporting.[24]

Despite the multiplicity of oil revenues in 1970's and the government efforts to build a non-oil economy, the contribution of oil sector to GDP decreased from the highest ratio of 60% (1980) to zero in 1991. Why did the non-oil economy collapse by 50% in 1991 or even shrink by 13% in 1993? The reason is a heavy dependence on oil revenues and imports stimulation. When income per capita decreased in the beginning of 1990's to the level lower than that in the beginning of 1970's and when imports dropped sharply, local demand changed also. Factories and shops were closed in a great number as a result of demand diminishing on luxurious products or difficulties of importing necessary intermediate goods to operate producing units.[25]

Measuring the Success

To measure the degree of progress of economic diversification achieved in the UAE, the following indicators will be used though we can use other indicators in other studies:

A. Contribution of oil sector to GDP: UAE succeeded in decreasing the contribution of oil to GDP from 66% (1975) to 31% (2010), even though it reached a minimum level of 21% in 1998. This high progress was accompanied by transferring the traditional or conventional economy to a modern one with extensive use of technology and knowledge applications. Additionally, the development efforts resulted in building a mammoth infra-structure which it would give a great opportunity for non-oil economy for further expansion.

Despite this progress, it cannot be depended on this ratio only because oil revenues are still an important factor to finance government expenditures. The later play an important role to stimulate the economic activity. The real contribution of oil sector to the UAE economy would still be larger than the ratio given above.[26] Oil revenues play an important role to finance imports. According to Iraqi experience, a pause of oil exporting led to a collapse of Iraqi economy during the period of blockade. That reveals that the UAE economy has not got rid of oil characteristics and its dependence on oil despite the huge government investment in building non-oil economy.

B. Structural change of non-oil economy: The UAE succeeded in building and diversifying non-oil economy in comparison to the international experience. If we compare UAE with countries achieved income per capita close to that in the UAE, it can be noticed that manufacturing industries are still small in addition to the dominance of consuming industries. In order to developing industry and increasing the contribution of technologically intensive industries, the government should participate in funding research and innovation, encourage foreign investment and support small and medium businesses.[27] The development of industry requires improving indicators of human development or social services i.e. investment in human resources via improving education and health care.

Table 6: Growth Rates of GDP at constant 2007 Prices in UAE, 2002 – 2010. %

Years	2002	2003	2004	2005	2006	2007	2008	*2009	**2010
GDP	2.4	8.8	9.6	4.9	9.9	3.2	3.3	(1.6)	1.4
Non-oil GDP	9.0	10.5	11.0	6.4	9.1	9.4	6.2	(4.2)	5.0

* Preliminary
** Estimated
Source: UAE National Bureau of Statistics website, Retrieved March 26, 2012 from http://www.uaestatistics.gov.ae/ReportDetailsEnglish/tabid/121/Default.aspx?ItemId=1933&PTID=104&MenuId=1

C. Fluctuations of GDP Growth Rates: Table # 6 shows that non-oil product grew faster than GDP. That reveals high growth potential for the UAE economy. Non-oil product strictly follows growth rates of GDP. There is still high fluctuation for growth rates of GDP due to fluctuations of oil prices and their exporting quantities. Global economic crises, such as the one at the end of 2008, pointedly affect UAE economy due to its exposure to the international market.[28]

Fluctuations of non-oil product are higher than those of GDP. Since fluctuations of oil prices affect the level of government expenditures, the later determines the level of economic activity for the non-oil economy. Global financial crisis at the end of 2008 affected the growth rates of non-oil product as shown by the data of 2009.

Because the emirate of Abu Dhabi depends in higher degree on oil sector, GDP fluctuated and the maximum fluctuation was 31% in the period 1985 – 1990. While the fluctuation reached 1% for the same period in oil producing countries which succeeded in diversifying their economies such as Canada and Norway.[29]

Table 7: Ratio of Crude Oil Revenues to Public Revenues in UAE, 2001 – 2010.

(Billion Dirhams)

Years	2001	2002	2003	2004	2005	2006	2007	2008	*2009	**2010
Crude oil revenues	51.6	40.9	56.7	73.3	111.4	164.8	176.3	361.5	174.1	239.3
Total Public Revenues	68.6	57.2	77.0	94.8	143.9	201.2	228.8	430.6	235.4	297.0
Oil Revenues Ratio %	75	72	74	77	77	82	77	84	74	81

* Preliminary

** Estimated

Source: UAE National Bureau of Statistics website, Retrieved March 26, 2012 from http://www.uaestatistics.gov.ae/ReportDetailsEnglish/tabid/121/Default.aspx?ItemId=1933&PTID=104&MenuId=1

D. Contribution of oil revenues to total public revenues: As shown in table # 7, the average of the contribution of oil revenues to public revenues was 77% during the last decade, while it was 91% in 1975 and then it increased to 93% in 1980 and it became 77% in 1985[30] i.e. there was no progress in this field for the last 25 years (1985 – 2010).

Oil revenues still fluctuate due to fluctuations of oil prices and its exporting quantities. In order to achieve parallel progress to the one achieved regarding to decreasing the contribution of oil sector to GDP, it requires setting up modern and comprehensive taxation system as in non-oil producing countries. It becomes crucial to impose value added and income taxes.[31]

After the success of modernizing the economy and building infra-structure, the feasibility of enterprises can be judged by their ability of financing public services and imports via bringing foreign currencies by exports. The government subsidies to big enterprises should be linked with social feasibility studies, in which the projects could pay taxes and diversify export composition.

Table 8: Importance of Non- Hydrocarbon Exports to Total Exports & Imports in UAE.

%

Years	2001	2009	2010
Non-Hydrocarbon Exports to total Exports	**31.3**	**39.3**	**40.4**
Non-Hydrocarbon Exports to total Imports	**29.3**	**29.3**	**31.6**
Non-Hydrocarbon Exports to (Imports – Re Exports)	**46.6**	**63**	**67.8**

Source: Calculated from: UAE Central bank website**,** Retrieved March 26, 2012 from http://www.centralbank.ae/en/index.php?option=com_content&view=article&id=100&Itemid=88

E. Evolution of non-oil exports: Exports in UAE compose crude oil and gas and hydrocarbon products and non-hydrocarbon products in addition to re-exports. Non-hydrocarbon products formed 31% of the total exports excluding re-exports in 2001. This ratio improved to 40% in 2010. That represents impressive and promising development for the exporting industries in UAE relative to it when formed a little ratio in the mid of 1970's.[32] The UAE entered the international trade organization in 1996. That would encourage exporting industries and foreign investment since our products could enter international markets.[33]

Non-oil exports are still focused on consuming goods while intermediate and capital goods formed a little ratio due to the data issued by the UAE National Bureau of Statistics in 2010.[34] Table # 8 shows that non-oil exports finance an average of 30% of imports. If re-exports are deducted from imports, non-oil exports would fund 47% of net imports in 2001. This ratio improved to 68% in 2010. That represents noticeable success in economic diversification.

In the emirate of Abu Dhabi, non-oil exports financed 10% of net imports in 2007, this ratio dropped down to 7.4% in 2008.[35] Then, it fluctuates up to more than 12% in January 2012 according to the newest statistics.[36] Machinery and transport equipment formed a minor part of total non-oil exports which averaged 6% in January 2011 and slightly dropped to 5% in January 2012 against the majority of hydrocarbon and consuming goods.[37] It seems that Abu Dhabi economy is more oil-based than other emirates within UAE.

Conclusions:

1. Economic diversification efforts succeeded in decreasing the contribution of oil sector in the generation of GDP from a maximum of 66% in 1975 to 31% in 2010 even the ratio reached a minimum of 21% in 1998.

2. The UAE succeeded in building a modernized economy by building extensive infra-structure and making extensive use of technology and knowledge applications.

3. Structural change of non-oil GDP is consistent with countries which reached income per capita as in UAE. Manufacturing industries in UAE are lower than they should have been. Industrial development requires parallel development in human development indicators and social services (education and medical care).

4. Despite the industrial development progress in the field of hydrocarbon and consuming products in addition to the improvement in exporting abilities, it requires encouraging private sector and foreign investment to invest in technologically intensive industries which mainly design for exports.

5. The relative growth ability of manufacturing industries can be enforced by supporting small and medium businesses, participating in the funding of research and innovation and encouraging the foreign investment.

6. According to the Iraqi experience in the field of economic diversification, a pause of oil exporting led to a sudden collapse of the non-oil economy by 50% in 1991. The reason is the Iraqi economy heavily depended on government expenditures and imports in which both of them were financed by oil revenues.

7. The UAE economy, as a whole, depends on oil prices and its exporting quantities. Thus the economy is highly exposed to the international market. GDP growth rates strongly fluctuate. That leads to higher fluctuations of non-oil product because of a close relationship with government expenditure financed by oil revenues.

8. Oil revenues have formed a high proportion of public revenues with a ratio of 77% since 1985. That requires applying modern and comprehensive taxation system and imposing value added and income taxes.

9. Non-oil exports developed and became able to finance imports in a higher degree after deducting re-exports as the ratio reached 68% in 2010. That reveals high growth potential and exporting competitive abilities of private sector in UAE.

References:

---

[1] Block, Stanley B. & Hirt, Geoffrey A. 2005, "*Foundations of Financial Management*". 7/ed. McGraw-Hill. New York. PP 397-400

[2] Ross, S., Westerfield, R. & Jaffe, J., 2005, "*Corporate Finance*". 11/ed. McGraw-Hill. New York. P. 305.

[3] Department of Economic Development. 2009, "*Diversification of economic base in the Emirate of Abu Dhabi, reality and future challenges*", Abu Dhabi. P. 3.

[4] United Nations. Economic and Social Commission for Western Asia. 2001, "*Economic Diversification in the oil producing countries. The case of the Gulf Cooperation Council Economies*", New York. PP. 1-3.

[5] *IBID*, P. 2.

[6] Keller, G. & Warrack, B., 2000, "*Statistics for Management and Economics***"**, 5/d. Duxbury, Pacific Grove, PP. 644-646.

[7] The Government of Abu Dhabi, 2008, "*The Abu Dhabi : Economic Vision 2030*". Abu Dhabi. P 127.

[8] *IBID*, P. 27.

[9] Department of Economic Development, 2009, "*Economic Development and its Effect on Social Structural Change in the Emirate of Abu Dhabi*", Abu Dhabi, P. 17.

[10] *IBID*, P. 22.

[11] Department of Economic Development, 2011, "*Economic report for The Emirate of Abu Dhabi 2010*", Abu Dhabi. P. 134.

[12] UAE National Bureau of Statistics, 2008, "*Foreign Direct Investments Survey Results 2007*", Abu Dhabi, PP. 12-14.

[13] Department of Economic Development, 2010, "*Towards building a knowledge-based Economy in the Emirate of Abh Dhabi*", Abu Dhabi. P. 6.

[14] Calculated from: Stork, Joe. 1982."State Power and Economic Structure: Class Determination and State Formation in Contemporary Iraq". In Tim Niblock (ed). '*Iraq: The Contemporary State'*. Centre for Arab Gulf Studies. Exeter. P. 32.

[15] Al Jundi, Salem. 1995. "*The Private Sector in Iraq: A Development Outlook*". Ph.D. Thesis submitted to the College of Administration and Economics. University of Basrah. Basrah. P. 49.

[16] Al Eyd, Kadhim A. 1979. "*Oil Revenues and Accelerated Growth: Absorptive Capacity in Iraq*". Praeger Publisers. New York. PP. 94-95.

[17] Al Jundi, Salem. 1984. "*Evolution of Capital Formation and Its Effectiveness in Iraqi Economy 1970-1980*". Master Thesis submitted to the College of Administration and Economics. University of Basrah. Basrah. PP. 64-66.

[18] Hilal, Batea Khalifa. 1987. "Economic Consequences of Iraq-Iran War". Paper submitted to the 6th Scientific Conference entitled '*The Management of Iraqi Economy under War Conditions'*. Iraqi Economists Association. Baghdad. 26 – 28 October 1987. PP. 13 – 43.

[19] The Government sold 20 factories from the public sector in 1987 and 1988. It announced a list of 36 factories for sale at the end of 1988. See : Al Khafaji, Hannah Ibrahim. 1988 "Industrial Private Sector in The Period After the War. Horizons and Future Trends". Paper submitted to the 7th Scientific Conference entitled '*Basic Trends of Economic Policy in Iraq after the War'*. Iraqi Economists Association. Baghdad. 17–19 December 1988. PP. 20 – 22.

[20] Al Jundi, Salem. 1987. "*Structural Change Pattern of Production in the Iraqi Economy*". Ministry of Planning. Economic Planning Authority. Study # 445. Baghdad. PP. 38 – 39.

[21] Ministry of Planning. Economic Planning Authority.1992, "*A Report about Economic Blockade. Consequences and Solutions*". Baghdad. PP. 19 – 20.

[22] Ministry of Planning. Economic Planning Authority. 1993. "*Costs of Enterprises Reconstruction. Reality and Evaluation*". Study # 999. Baghdad. PP. 6 – 20.

[23] Al Jundi, Salem. 1995, *Op. cit*. P. 55.

[24] Imported intermediate goods account for 45% of the total intermediate goods in the manufacturing industry in 1985. See: Ministry of Planning. Economic Planning Authority. 1989, "*Interrelations for Manufacturing Industries in Iraq*", Statistical Appendix, Study # 563. Baghdad. P. 2.

[25] Al Jundi, Salem. 1998, "Iraqi Economy and Adjustment to External Shocks". *Al Khaleej*. Vol # 6961. Sharjah. 10 June 1998.

[26] United Nations. Economic and Social Commission for Western Asia. 2001, *Op. cit*. PP. 39 – 40.

[27] Department of Economic Development, 2009, "*Supporting methods for small and medium businesses in the emirate of Abu Dhabi*", Abu Dhabi, PP. 31-40

[28] Pradhan, Samir. 2010, "The UAE's Economic Policy and the Current Global Meltdown: An Appraisal", *Economic Horizons*, Vol. 31. No. 117. P. 27.

[29] Department of Economic Development. 2009, *Op. cit*. PP. 5 – 6.

[30] UAE Ministry of Planning. 1987, "*Economic and Social Development in UAE 1975 – 1985*". Abu Dhabi. PP. 73 – 76.

[31] Rosen, H. & Gayer, T., 2008, "*Public Finance*", 8/d, McGraw-Hill. New York. PP 353-365.

[32] *IBID*, P. 89.

[33] UAE Ministry of Foreign Trade, 2009, "*UAE and International Trade Organization*", Abu Dhabi, P. 62

[34] See: *UAE National Bureau of Statistics* website, Retrieved March 26, 2012 from http://www.uaestatistics.gov.ae/ReportDetailsEnglish/tabid/121/Default.aspx?ItemId=1923&PTID=104&MenuId=1

[35] Calculated from: Department of Finance. Customs Administration. 2009, "*Statistics of Customs Administrations, Abu Dhabi*". Abu Dhabi. P 4

[36] Statistics Center, Abu Dhabi. 2012, "*Non-oil Merchandise Trade Through the Ports of Abu Dhabi*". Abu Dhabi, P. 3

[37] *IBID*. P.6.