

Thesis of Doctoral (Ph.D.) Dissertation

DEVELOPMENT AND PROSPECT: AN ECONOMIC GROWTH ACCOUNTING OF THE UAE

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Background of Dissertation

Economic growth has always been a goal and a concern for all countries to pursue. Nevertheless, economic growth is a measure of increasing of a country's production in various goods and services over time. It is also one of the most important indicators of the country's economic activity; which is reflected in production capacity, per capita income and well-being (Acemoglu, 2008). Achieving high and sustainable economic growth rates is thus a key objective in the economic development plans of various countries, particularly developing countries.

The importance of economic growth and its influence on the respective country and people can be determined by the following points (Helpman, 2009):

- Increased individual income and thus improved lives of citizens (increased welfare of citizens).
- Meeting citizens' need of goods produced by the state and covering the needs of citizens as much as possible (access to self-sufficiency)
- Increased State's income in terms of surplus goods. There is achieved state security and safety due to availability of jobs, good income and coverage of citizens' requirements.
- Attempts of reconciliation of the layers of the society so that the poor can work and improve the standard of living and thereafter provide opportunities for entrepreneurs to set up businesses.

The Studies have shown an integrative relationship between economic growth, economic development and individual well-being. Well-being is achieved only through sustainable development and sustainable economic growth. Continued economic growth is an integral part of the comprehensive development program, which increases national income and increases the average per capita income. There are, therefore, factors conducive to well-being, such as services, justice in income distribution, social indicators (individual freedom, level of health care, social protection and education),

and a clean environment. According to Amartya Sen (1983) economic growth is as part of the economic development process.

Economic development involves a change in the structure of income distribution, a modification production organization, and also a change in the value of services and goods delivered to people; which can have a definition of being the procedure whereby there is occurrence of a continuous and comprehensive adjustment, accompanied by a growth in the actual income and a progress in distribution of the income among the poor (Nafziger, 2006). Thus, sustainable economic development is a strategic goal of any country to achieve prosperity (Burke, 2011).

Human development is considered as means of investing in the capacities of human beings, whether in education, health, or skills to work productively and creatively. Studies have indicated a link between human development and economic growth: increasing incomes increases the capacity and choices of households and governments (Anand – Sen, 2000). Economic development is consistent with economic growth in terms of positive direction towards progress and development, both focuses on the individual and society. There is study of the level of human development, whereby the human development index represents a global standard for measuring the level of development in any country.

The case study of this study is United Arab Emirates (UAE). The UAE is located in the middle east and is a member of Gulf Council Countries (GCC). Its economy has shifted from a low income based economy of fishing and pearling together with some agriculture to an oil-based high income economy within the last four decades. At present the country is a major financial hub in the region, and a center of international trade representing the second largest economy after Saudi Arabia in the Arab world.

Figure 1 demonstrates the moving trends of total production (GDP), non-oil production, capital input, and labour input from year 1990 to 2015. Inputs in labour and capital were characterizing this rising between 1990-2015. Due to the decline in the world oil price, however, the country's total production shows a downward trend from the year 2015. Nevertheless, the descent of the total production, the

production of the non-oil sector has improved towards the upside indicating the success of the strategy in the UAE to reduce dependence on oil revenues.

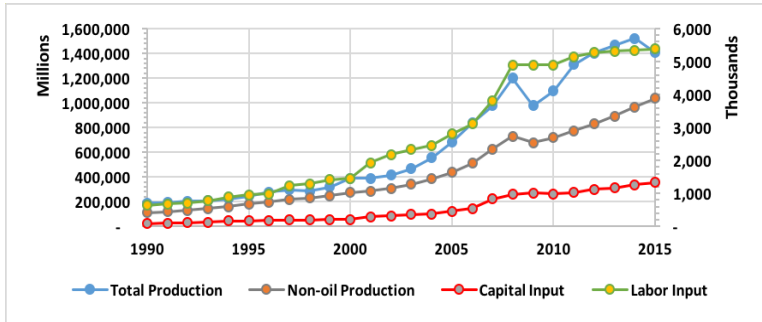


Figure 1. Production factors trend (1990-2015)
Source: FCSA (2016)

The motive behind this study is that the UAE is a modern state that has managed to occupy an important economic position in the world, and that has been accomplished at the international and local levels of achievements in a short period since its establishment. Where the citizen was the focus of attention, the State was able to gain the confidence of the global community through its excellence in global indicators such as the Human Development Index. Therefore, the researcher felt the importance of studying the economic growth of the UAE in depth, through its economic structure and important economic sectors, which played an important role between 1990 and 2015.

This study has provided a significant scientific contribution for the review period where economic sectors showed the importance of economic growth. On the other hand, industries that had a role in driving growth were shown. The study also did not ignore the role of development, its situation and how it links with the results of economic growth. Of course, the study came out with recommendations and suggestions to the decision maker.

Aims and Objectives

The thesis focuses on the economic and development growth and prospect outcomes of the United Arab Emirates (UAE). Thus, the main purpose of this dissertation was to analyze the source of growth from 1990 to 2015 for the UAE through the methodology of growth accounting.

Therefore, the outline objectives were as follow:

- Analyze the reality of human development.
- Analyze the source of growth through breakdown the economy in three major sectors.
- Analyze the source of growth through economic industries.
- Analyze the productivity and per capita productivity by comparing UAE and its neighboring countries (GCC) between 2001-2014.
- Draw conclusions and recommendations for policy makers.

Structure, and hypotheses of the research

The study used four approaches to implement the study objectives as shown below:

- Capability approach: Assess the status of human development (HD) and examined with productivity.
- Sectoral approach: decompose growth into three components of major economic sectors. Through, analyze the main contributor to economic growth.
- Industrial approach: decompose growth into three components of economic industries secondary sector and tertiary industries, through analyze the main contributor to sector's output.
- Country approach: comparing productivity and per capita productivity for UAE among Gulf Nations. Also, decompose the into three components of production inputs and production per capita for the UAE and neighbouring countries.

The dissertation examines research hypotheses in each of the four approaches used in this study.

These hypotheses formed such as in the capability approach, where

according to Mustafa (2013), that high level of development corresponded positively with the total factor productivity (TFP) based on the Rostow's (1960) stage of development hypothesis.

- *H₁: High level of development in the UAE corresponded positively with TFP.*

In the sectoral approach, and according to Rostow (1990), Matsuyama (1992), and Nurkse (1991), that agricultural sector is the fundamental stage for economic growth, whereby hypothesis formed in this study that agricultural sector was an essential stage for the successful economic growth within the examined period. Also, in regards to capital accumulation that important factor for economic growth (Sharipov, 2015; Mankiw et al., 1992). and whether the secondary sector considered as an engine for economic growth (Fagerberg & Verspagen, 1999), also the tertiary sector considers the more productive than secondary sector because it helps to increase the productivity in terms of economic demand and supply (Young, 1928; Kaldor, 1966; Kaldor, 1967). The hypothesis formed that the secondary, and tertiary sectors increased due to capital accumulation.

- *H₂: The agriculture sector was an essential factor of economic growth within the examined period.*
- *H₃: The secondary, and tertiary sectors increased due to capital accumulation, were the main source of growth in the UAE.*

In the industry approach, the study examined whether the diversification strategy in the case study was successful in reducing dependence on oil results. Also, hypothesis formed in regards the tertiary industries that financial corporations industry increased due to the labour factor whereby had the highest contribution rate to the sector's output.

- *H₄: The mining and quarrying industry had a significant contribution on the growth of the secondary sector from 1990 to 2015*
- *H₅: The financial corporations service industry increased due to labour which had a high contribution on the growth of the tertiary sector.*

In country approach, research hypothesis formed, whether the UAE was more productive than the GCC nations measured in terms of average growth rate of TFP from 2001 to 2014.

- H_6 : The UAE is more productive among GCC nations in terms of average growth rate of TFP from 2001 to 2014.

Data and methodology

The methodology applied in this study is quantitative and descriptive based on secondary data. The data used have been obtained from the HDI reports published by the UN. Furthermore, some national resources were also used such as the Ministry of Education, the Ministry of Economy, and The Federal Competitiveness and Statistics Authority (FCSA) of the UAE. Three sets of data were collected: GDP, capital accumulation, and number of workers classified by sector and industry. Data for GCC countries were collected mainly by the country data bank (World Bank) and the Statistical Center of the GCC (GCC-Stat.)

The Neoclassical Solow model, growth accounting framework was used to analyse the share of the contribution in long-run growth (Wolff, 1994). The benefit of Solow’s model allows us to decompose growth into three components and can be explained by:

- Labour growth.
- Capital growth.
- Total factor productivity (TFP) growth.

The framework takes form with respect of time as below:

$$Y_t = A_t K_t^\alpha L_t^{1-\alpha}$$

$$\ln \frac{\Delta Y}{Y_t} = \alpha \ln \frac{\Delta K}{K_t} + (1 - \alpha) \ln \frac{\Delta L}{L_t} + \ln \frac{\Delta A}{A_t}$$

Where $[Y_t]$: is noted as the output, $[K_t]$: represents the capital, $[L_t]$: represents the number of workers, $[A_t]$: is the total factor productivity (TFP), $[\alpha]$: represents the capital’s share, $[\alpha - 1]$: is labour’s share, and assuming diminishing return to scale that capital’s share is 0.3 and

labour’s share equals 0.7 (Piketty, 2014). Also, assuming a constant return to scale (Solow, 1956).

Scientific Findings

In capability approach, HDI is a measurement of human capabilities or in other words it is a social welfare approach, where the human can be functioning and has a free opportunity.

The approach for investigating this part according to Figure 2, can take two different routes: (a) nationally over time and (b) internationally comparing figures with other countries, human development groups, and regions as well. The first level enables to explore the picture of human development in the UAE, and the other one enables to analyze the degree of human development compared with other parties.

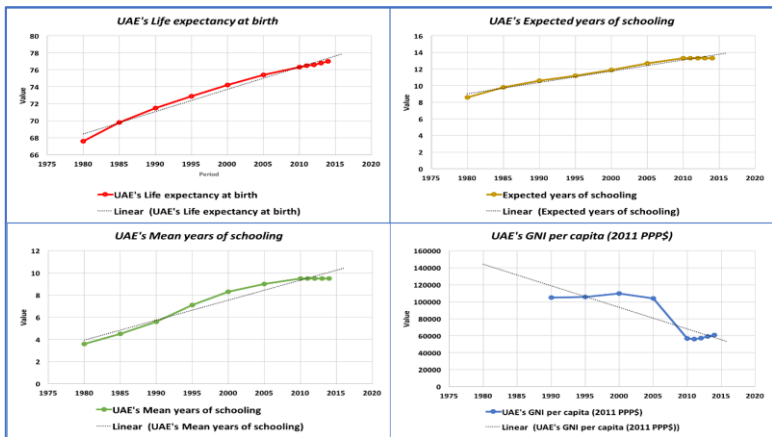


Figure 2. UAE HD’s Dimensions Trend (1980 - 2014)

Source: UNDP (2015) and data selected by author

The national level showed that the UAE improved four HDI dimensions (1980-2014):

- Average life expectancy at birth increased from 67.6 to 77 years.
- Mean years of schooling, increased from 3.6 to 9.5 years.

- Expected years for schooling raised from 8.6 years to 13.3 years.
- GNI per capita decreased by 42.0% from year 1990 to 2014.

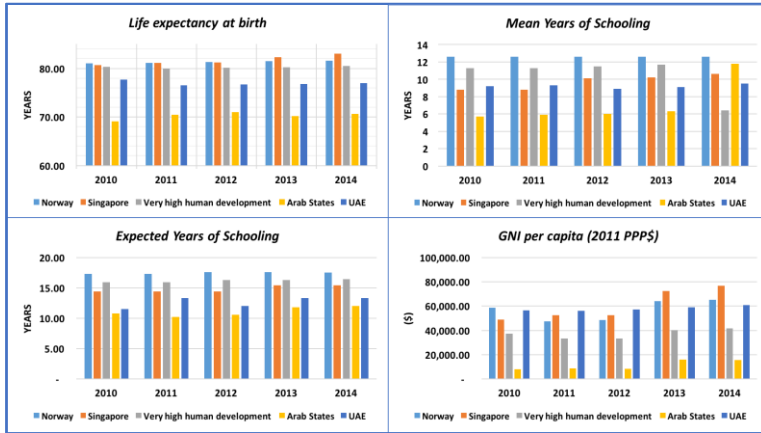


Figure 3. A comparison of HD components from (2010 - 2014)
 Source: UNDP (2015) and data selected by author

From perspective of international comparison results as described in Figure 3:

- UAE recorded better figures than the Arab State.
- Singapore had the highest number among the comparison group in the average life expectancy at birth.
- Norway has been classified No1 among all countries in the category mean years of schooling and expected years of schooling
- UAE tops the comparison group in GNI per capita.
- Mean years of schooling in 2010 and 2011 was higher in the UAE than Singapore.

The UAE has a high level of development compared to high-income countries. The hypothesis testing (H_1), says, that if a country has a high level of development, it corresponds to a higher trend of productivity. In fact, due to the country's economic growth it is considered to be a high-income country and has seen remarkable

growth in various areas. However, the total factor productivity, was found to be poor in the UAE. Therefore, a high level of development did not match the high level of TFP in the UAE in the period 1990-2015. Thus, the hypothesis was rejected.

The sectoral approach, the analysis was carried out with the panel-data approach (longitudinal data) for three major sectors and their industries from 1990 to 2015. The primary sector is agriculture, the secondary sector includes four industries such as mining and quarrying (MQ), manufacturing industries (MFG), electricity, gas and water (EGW), and construction (CN). And, the tertiary sector includes seven industries such as wholesale, retail trade and repairing services symbolized by (WRTRS), restaurants and hotels (RH), transport, storage and communication (TSC), real estate and business services (REBS), social and personal services (SPS), the financial corporations sector (FCS), and government services (GS).

Figure 4 and Table 1, describe the calculation for each economic sector (primary, secondary, and tertiary) as classified in long panel-data from 1990-2015 and in group of period of time from 1990-2000, 2000-2010, and 2010-2015. In comparing the sectors by average annual growth rate, from 1990 to 2015 the tertiary sector grew faster in GDP output compared to the primary and the secondary sectors with 8.37% in the tertiary sector and 6.7% and 6.88% for the primary and the secondary sector, respectively.

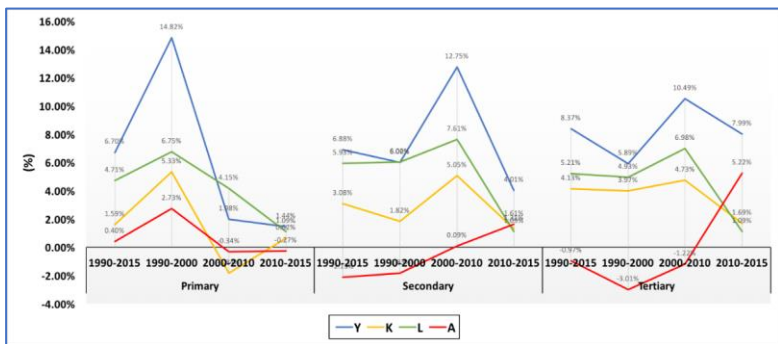


Figure 4. UAE's average annual growth (%) by major economic sectors

Source: own calculations or based on data from FCSEA

According to *Figure 4*, the period of 1990-2000 the average growth rate grew faster in the primary sector by 14.82% compared to the secondary and the tertiary sectors with 6.0% and 5.89%, respectively. Between 2000-2010 the secondary sector grew by 12.75%, followed by the tertiary sector with 10.49%. From 2010 to 2015 the tertiary sector grew by 7.99%, followed by the secondary sector with 4.01% and the primary sector with 1.4%. The development of average annual growth rate was mainly generated from the primary sector in 1990-2000, then from the secondary sector in 2000-2010, and finally from the tertiary sector in 2010-2015. In general, tertiary sector followed by the secondary sector grew faster from 1990 to 2015.

In terms of capital accumulation, the tertiary sector had the highest annual average growth between 1990-2015 with 4.13%, followed by the secondary sector with 3.08% and by the primary sector with 1.59%. On the other hand, from 1990 to 2000 this rate was the highest with 5.33% in the primary sector. Furthermore, from 2000 to 2010 the secondary sector showed the highest rate with 5.05%. The average annual growth rate for labour grew between 1.09% and 7.61% in all sectors, however, the labour input was higher compared to the capital accumulation. Thus, the secondary sector demonstrated the highest figure of almost 6% compared to 5.21% and 4.71% in the tertiary and the secondary sector, respectively. From 2010 to 2015 the technology factor was mostly given negative figures unlike the tertiary sector with a growth rate of 5.22%. The annual average growth in labour was the highest in all sectors at different periods of times. In addition, TFP grew between 2010-2015 in the tertiary sector.

Table 1. Growth Accounting calculation for economic sectors from (1990-2015)

| Share of growth due to: | | | |
|-------------------------|-----|-----|-----|
| Primary sector | K | L | A |
| 1990-2015 | 24% | 70% | 6% |
| 1990-2000 | 36% | 46% | 18% |

| | | | |
|------------------|----------|----------|----------|
| 2000-2010 | -93% | 210% | -17% |
| 2010-2015 | 43% | 75% | -19% |
| Secondary sector | K | L | A |
| 1990-2015 | 45% | 86% | -31% |
| 1990-2000 | 30% | 100% | -31% |
| 2000-2010 | 40% | 60% | 1% |
| 2010-2015 | 33% | 27% | 40% |
| Tertiary Sector | K | L | A |
| 1990-2015 | 49% | 62% | -12% |
| 1990-2000 | 67% | 84% | -51% |
| 2000-2010 | 45% | 66% | -12% |
| 2010-2015 | 21% | 14% | 65% |

Source: own calculations based on data from FCSA

It can be concluded from *Table 1*, that from 1990 to 2015 the contribution to output growth share was driven by labour in all sectors and periods of time. In the examined period the share of growth due to labour was 70%, 86%, and 62% as compared to the share of growth due to capital in the same period with 24%, 45%, and 49% for the primary, the secondary, and the tertiary sectors, respectively. The share of growth due to capital declined in the tertiary sector and the secondary sector unlike in the primary sector, where it increased. TFP showed negative figures with the exception of the primary sector. In addition, the TFP share of growth factors, from 2010 to 2015, was positive in the secondary and tertiary sectors. Another fact is that the share of growth due to TFP was higher compared to capital and labour where the rates were 65% and 40% in the tertiary and the secondary sectors, respectively, from 2010-2015.

Therefore, the hypothesis testing H_2 , indicates that the primary sector had a significant impact on economic growth from the beginning of the examined period, specifically from 1990 to 2000. Thus, the

hypothesis was accepted. H_3 was rejected because the source of growth that had a higher growth rate was labour in both secondary and tertiary sectors. In comparison the contribution rate of labour and capital was 70%, 86%, and 62% and 24%, 45%, and 49% respectively for the primary, secondary, and tertiary sectors from 1990 to 2015. Thus, the economic sectors of the UAE were a labour-intensive.

In conclusion, the path of development of three sectors started with the primary sector from the period 1990-2000, then continued with the secondary sector between 2000-2010, and lastly with the tertiary sector in the period 2010-2015. In general, the tertiary sector was the leader in terms of contribution to growth, followed by the secondary sector between 1990-2015.

The industry approach, according to *Figure 5*, the study witnessed clearly that the MQ is not the main player such the MFG and CN. The average annual growth rate for MFG showed the highest contribution to the secondary sector’s output, even at other period of time. Furthermore, the average annual growth rate for capital, labor, and TFP were between maximum and minimum as follow: (3.85% - 2.55%), (6.28% - 2.99%), and (-0.31 – (-2.17%)).

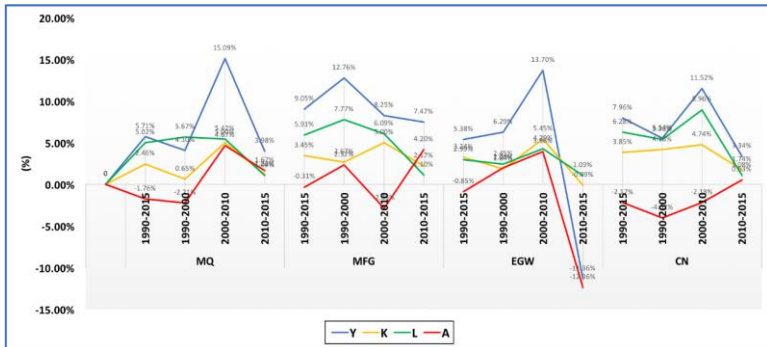


Figure 5. UAE's average annual growth (%) for secondary industries

Source: own calculations based on data from FCSA

As illustrated in *Table 2*, the contribution growth shares due to the labor had a higher impact in comparing to capital and TFP, where in general in MFG, MQ, and CN. The study deserved that there was a vice versa relationship between the size of labor to TFP performance. If the number of workers decreased, the performance of TFP improved. This observation was presented in the calculation results from 2010-2015.

Table 2. Growth accounting results of the secondary sectors

| Share of Growth Due to: | | | |
|--------------------------------|----------|----------|----------|
| MQ Industry | K | L | A |
| 1990-2015 | 43% | 88% | -31% |
| 1990-2000 | 16% | 138% | -54% |
| 2000-2010 | 33% | 36% | 31% |
| 2010-2015 | 31% | 27% | 42% |
| MFG Industry | K | L | A |
| 1990-2015 | 38% | 65% | -3% |
| 1990-2000 | 21% | 61% | 18% |
| 2000-2010 | 61% | 74% | -35% |
| 2010-2015 | 29% | 15% | 56% |
| EGW Industry | K | L | A |
| 1990-2015 | 60% | 56% | -16% |
| 1990-2000 | 29% | 39% | 32% |
| 2000-2010 | 40% | 31% | 29% |
| 2010-2015 | 1% | -10% | 109% |
| CN Industry | K | L | A |
| 1990-2015 | 48% | 79% | -27% |
| 1990-2000 | 75% | 97% | -73% |
| 2000-2010 | 41% | 78% | -19% |
| 2010-2015 | 52% | 32% | 16% |

Source: own calculations based on (FCSA, 2016).

In conclusion, the study illustrated that the MFG industry was the main contributor to the secondary sector’s output followed by CN. In addition, the oil industry contributed less to the secondary sector’s output, where it can be said that the diversification strategy by UAE gained its benefits. The TFP performance was positive specifically from 2010-2015. The hypothesis (H_4) test was rejected because the MFG sector had a significant impact on the growth rate of the secondary sector.

Second, the tertiary sector included seven industries that were analyzed. The results of growth accounting of industries of the tertiary sector from 1990 to 2015 are divided into groups of periods of times (Figure 6 and Figure 7).

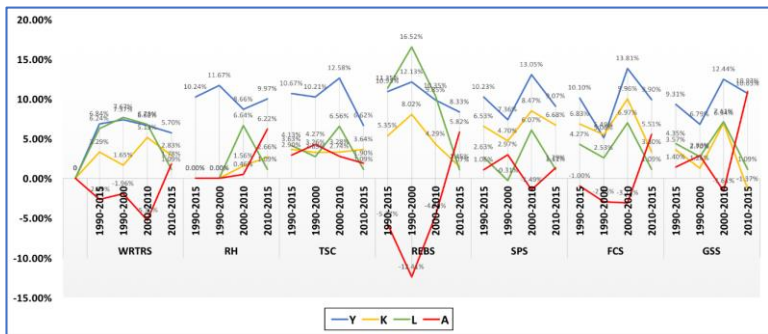


Figure 6. average annual growth (%) for tertiary industries

Source: own calculations based on FCSA (2016)

Based on the results, all industries in the tertiary sector contributed significantly to the GDP growth. The financial industry symbolized by the FCS showed the highest growth due to capital, REBS indicated the highest employment share, and TFP moved in a negative direction specifically in the following industries: WRTRS, REBS and FCS. However, in TSC, SPS and GS TFP was positive. In addition, the TFP showed positive figures specifically from 2010 to 2015 in all industries due to a decline in the growth share contributed by labour.

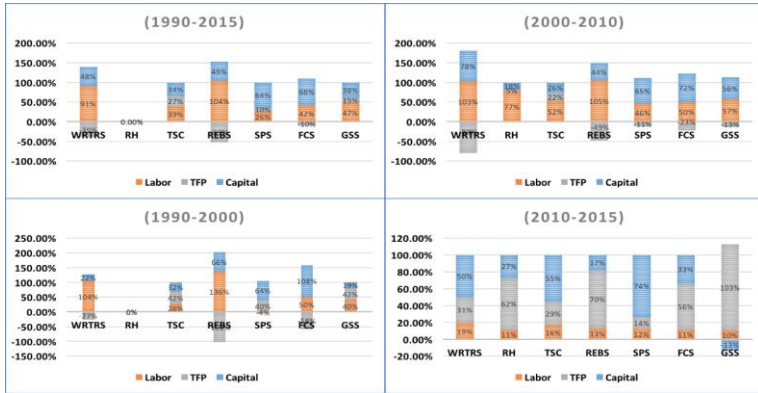


Figure 7. Source of growth of the tertiary industries.

Source: own calculations based on FCSA (2016)

Therefore, the tertiary sector has had a significantly contribution on economic growth in terms of value added and employment share. The results of this analysis show that the contribution of factors of production varied among all industries in the tertiary sector, however, there was a visa versa relationship between the performance of TFP and the share of labour.

Based on the testing of the research hypotheses, hypotheses (H_5) was rejected when testing whether the FCS increased due to the labor was the main contributor to the growth rate for the tertiary sector from 1990 to 2015, as it turned out REBS was the main contributor to growth.

The country approach, GCC countries include Saudi Arabia (SAU), United Arab Emirates (UAE), Qatar (QTR), Bahrain (BHN), Kuwait (KWT) and Oman (OMN), only from 2001 to 2014, due to limited data. The economic diversification strategies and abundance of natural resources, undoubtedly contributed to the economic development in the GCC, but in general have not achieved optimal productivity at the aggregate production level, or even at the level of labour productivity.

Figure 8 shows the output and TFP movement tendency for GCC’s countries from 2001 to 2014 indicating the similarities between these

countries in terms of the movement of those two variables. In general, the TFP movement trend fluctuated mostly in the negative range specifically between 2002 and 2010. On the other hand, the output trends explained by real GDP showed mostly heavy fluctuations but in a positive range with the exception of 2009 due to the world financial crisis. It is worth mentioning here, that Saudi Arabia was still in the positive range even in 2009, although the growth rate declined from 8% in 2008 to only 2% in 2009. In conclusion, these countries need to focus on improvements in technology, creativity and innovations. Moreover, oil prices had a higher impact on the turnout of these nations suggesting the need to diversify their incomes and re-evaluate the diversification strategies because their productivity indicated poor performance.

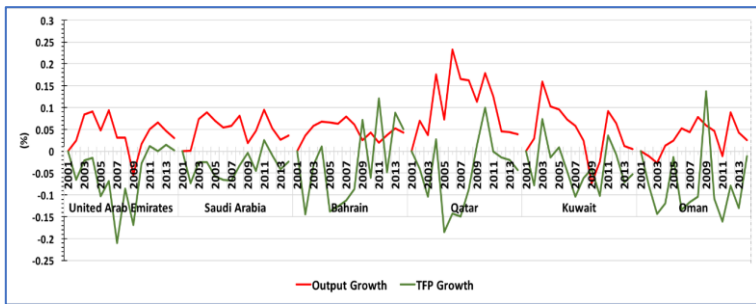


Figure 8. TFP growth for members of GCC region from 2001-2014

Source: own calculations based on World (2017)

The annual growth rate (12.8%) was higher in Qatar compared to other member countries. The productivity performance showed a negative trend in all members from 2001 to 2014. Conversely, in the period of 2010-2014 only share of labour dominated, unlike the situation in the SAU, where it was the gross capital formation. Labour productivity per capita in the UAE was positive from 2001 to 2014 with BHN, while in the UAE, BHN and KWT it was positive in the period of 2010-2014. The figures recorded for the UAE for the period 2010 to 2014 were more positive compared to the whole examined period. In

addition, BHN and KWT recorded positive results in labour productivity between the period of 2010 to 2014 (*Figure 9*).

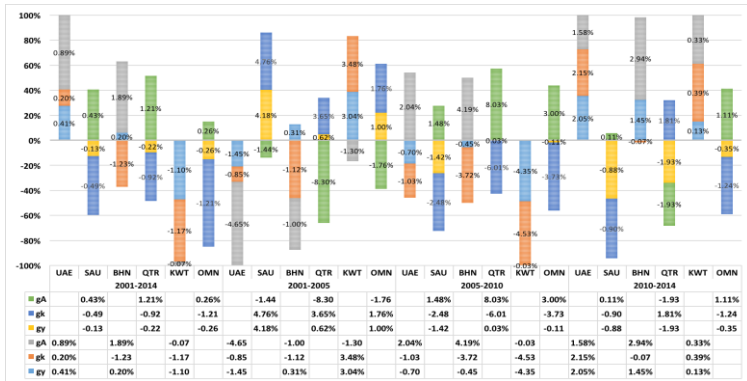


Figure 9. Labour productivity from (2001-2014)
Own calculations based on World Bank database

H_6 that examined whether the UAE was more productive among GCC countries in terms of average growth rate of TFP was rejected because according to findings SAU was more productive from 2001 to 2014. Regardless, in the period of 2010-2014 a 0.3% growth rate of productivity was observed in the UAE. In terms of development of gross capital formation and labour for the period 2001-2014 all countries observed a higher average increase rates in gross capital formation, except in the UAE where labour dominated the growth rate.

New findings

- The share of growth due to capital and labour declined in the tertiary sector and the secondary sector unlike in the primary sector, where it increased. The reason behind this is directed investment in a costly and unproductive sector or it is a new trend of the country to give more attention to the primary sector.
- Secondary industries, the average annual growth rate for labour in MFG industry noticed declined, where recorded 7.8% between 1990-2000, 6.1% between 2000-2010, and

1.1% in 2011-2015. The reason could be replacing human labour with automated technology.

- Average capital growth rate, the downward trend was observed in all secondary industries specifically after 2010.
- The output average annual growth rate of tertiary industries was observed to be particularly downward after the period 2000-2010, with the exception of the RH industry.
- No other research study has ever used the approaches and period examined used here.
- The development level has not been analysed with the economic growth by any study, at least with regards to the UAE.

Future Research and Recommendations

The theoretical basis of the link between human development, economic growth and sectoral economic development or economic industries in terms of contribution and productivity remains in the development phase, and so this study can provide some insight into these topics. Thus, future research – both theoretically and experimentally – is important. In terms of good allocation and management of human resources some recommendations for policy makers are presented here. The number of workers, specifically unskilled workers, will not help to increase productivity. Thus, the investigation of the good management of this essential resource is recommended.

To achieve sustainable development and economic growth, the author makes his recommendations. The two dimensions of human development are educational system and health care. The education system is very important for policy makers in the UAE. The educational system has a significant impact on human resources according to most scientific studies. Therefore, the author of the improvement of the educational system by studying the model used by Scandinavian countries (Denmark, Norway, Sweden and Finland). According to the World Bank, these countries have allocated a good

proportion of their gross domestic product income to the education system. These countries also rank higher ahead of the Asian countries such as Japan, Singapore and South Korea. With regards to health care, the model used in New Zealand and Singapore can be recommended. According to the index of prosperity, these nations rank first. Thus, the health care system is very important to be considered more and more.

TFP is considered a major element to achieve a sustained economic growth in the long term. TFP includes not only the technology but essential organization practices, skills, training, knowledge, innovations, and creations as well. Therefore, to achieve sustainable long term economic growth, the saving rate has to be improved leading to high investment in the infrastructure and improvement of the TFP trend. The major factor that leads to achieve this main objective is human resource. Thus, the author recommends to benchmark to highest ranked countries in the Global Innovation Index (GII) in 2017 where the most innovative countries were Switzerland, Sweden, Netherlands, USA, and UK. Another recommendation is to take advantage of India because it is an emerging innovative center in Asia. Therefore, a good education and health care will lead to better workforce practices, creations, and innovations.

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2. Yahya Z AL Shehhi – József Popp (2017): Sectoral Analysis: Growth accounting of Tertiary Industries. **SEA: PRACTICAL APPLICATION OF SCIENCE** 5:(14) pp. 221-230. (2017)
3. Yahya AL Shehhi – Judit Oláh (2017): Sectoral Analysis: Growth Accounting of Secondary's Industries. **NETWORK INTELLIGENCE STUDIES** 5:(9) pp. 39-45. (2017)
4. Yahya AL Shehhi (2017): Productivity Prosopopoeial in GCC's Countries: A Growth Accounting Perspective. **ANNALS OF THE UNIVERSITY OF ORADEA ECONOMIC SCIENCE** 26:(1) pp. 541-554. (2017)
5. Yahya AL Shehhi (2017): Achievements in Terms of Human Development Dimensions: Case Study. **SEA: PRACTICAL APPLICATION OF SCIENCE** 5:(13) pp. 109-125. (2017)
6. Yahya AL Shehhi (2016): Is Training a Sunken Cost? **ANNALS OF THE UNIVERSITY OF ORADEA ECONOMIC SCIENCE** 25:(2) pp. 287-294. (2016)
7. Yahya AL Shehhi (2016): Demand and supply of Labour Market: A Case of UAE. **APSTRACT – APPLIED STUDIES IN AGRIBUSINESS AND COMMERCE** 10:(4-5) pp. 145-154. (2016)
8. Sahar Zulfiqar – Hossam Haddad – Yahya AlShehhi – Domicián Máté (2016): Financial performance of Islamic Bank in the United Arab Emirates, Pakistan and Jordan: a case comparative study with dupont approach. **ANNALS OF THE UNIVERSITY OF ORADEA ECONOMIC SCIENCE** 25:(2) pp. 403-410. (2016)



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List of publications related to the dissertation

Articles, studies (7)

- Alshehhi, Y. Z. H.:** Accounting For Growth: Comparing Economic Sectors In The UAE.
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8. Zulfıqar, S., Haddad, H., **Alshehhi, Y. Z. H.**, Máté, D.: Financial performance of Islamic banks in the United Arab Emirates, Pakistan and Jordan: a case comparative study in a dupont approach.

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