

تحليل مؤشرات اقتصاد الإمارات العربية المتحدة (دراسة تطبيقية للفترة من 2004 حتى 2012)

الأستاذ المساعد د. محمد سلمان محمد
قسم الاقتصاد
كلية الإدارة والاقتصاد
جامعة صلاح الدين- أربيل
أربيل- العراق
mohamed.mohamed@su.edu.krd
00964 750 449 30 89

المدرس المساعد أمير سليم محمد
قسم الاقتصاد
كلية الإدارة والاقتصاد
جامعة صلاح الدين- أربيل
أربيل- العراق
ameer.muhammed@su.edu.krd
00964 750 449 24 13

الخلاصة

تهدف الدراسة إلى تحليل مؤشرات الاقتصاد الإماراتي للفترة (2004-2012) لتحديد أثر الأزمة المالية لعام 2008 على هذا الاقتصاد. واستخدمت الدراسة بعض مؤشرات الاقتصاد الكلي (المؤشرات الاقتصادية والنقدية والمالية والتجارية وميزان المدفوعات) المتعلقة بالاقتصاد الإماراتي من 2004-2012 وذلك لتفسير ظروف اقتصاد الإمارات العربية المتحدة، بعد تقسيم فترة الدراسة إلى ثلاث مرحلة؛ قبل الأزمة (2004-2006)، خلال الأزمة (2007-2009) وبعدها (2010-2012). وجدت الدراسة بأن معظم المؤشرات قد تغيرت بشكل كبير في سنوات الأزمة المالية (2007-2009) مقارنة بالفترتين الأخريين. على سبيل المثال، كل من نمو الناتج المحلي الإجمالي، ومؤشر الإنفاق الاستهلاكي الشخصي، ومؤشر الإنتاج الصناعي، ورصيد الموازنة كنسبة من الناتج المحلي الإجمالي، ونسبة الدين العام إلى الناتج المحلي الإجمالي، ورصيد الحساب الجاري، والاستثمار الأجنبي المباشر، قد انخفض بشكل ملحوظ في (2007-2009) مقارنة بقيمتها في فترتين أخريين للدراسة. ولمواجهة هذه الأزمات المالية، تقترح الدراسة مراجعة هيكل اقتصاد الإمارات والاستمرار في تنويع مصادر إيرادات الدولة. بالإضافة إلى تصميم وصياغة السياسات الاقتصادية المناسبة، لا سيما السياسات التجارية والمالية والنقدية.

Analysis of Indicators of the United Arab Emirates (UAE) Economy (An empirical study 2004- 2012)

Ass. Lec. Ameer Saleem Muhammed
Department of Economics,
college of Administration and Economic,
Salahaddin University- Erbil.
Erbil- Iraq
ameer.muhammed@su.edu.krd
00964 750 449 24 13

Ass. Prof. Dr. Mohamed Salman Mohamed
Department of Economics
college of Administration and Economic
Salahaddin University- Erbil
Erbil- Iraq
mohamed.mohamed@su.edu.krd
00964 750 449 30 89

ABSTRACT

The study aimed to analyzing the indicators of the UAE economy for the period of (2004- 2012) to determine the effect of financial crisis of 2008 on this economy. The study used some macroeconomic indicators (economic, monetary, financial, foreign trade and balance of payments indicators) related to UAE economy from 2004-2012 to interpret condition of UAE economy after dividing the study period to three phase (stage); before crisis (2004-2006), during crisis (2007-2009) and after crisis (2010-2012).

The study found that most of indicators have changed significantly in the years of the financial crisis (2007-2009) compared to other two periods. For instants, GDP growth, personal consumption expenditure index, industrial production index, budget balance as share to GDP, public debt ratio to GDP, current account balance and foreign direct investment were decreased significantly in (2007-2009) compare to their values in other two period stages of the study. To face these financial crises, the study submits to review the structure of the UAE economy and continue diversify the sources of state revenues. In addition to design and formulate appropriate economic policies, especially trade, financial and monetary policies.

1. INTRODUCTION

The financial crisis that took place in the United States in 2008 was not affected American economy alone, but the effects of this crisis spread to the economies of other countries because of their association with the American economy. The UAE is one of these countries that have been significantly affected by this crisis due to its open economy and its integration with the global economy through some channels such as financial markets, foreign investments and others.

The problem of the study can be assembled in the following questions:

1. Is the financial crisis of 2008 have an impact on the economy of UAE?
2. Which sector, or indicator is mostly affected by this crisis?

This paper aimed to analyzing the indicators of the UAE economy before, during and after the 2008's financial crisis to determine the effect of this crisis on UAE economy. The indicators used in this paper are macroeconomic (economic, financial, monetary, and foreign trade and balance of payments) indicators for the period (2004-2012).

In the light of the study problem, it offers the following assumptions:

1. Economy of the UAE affected by the global financial crisis of 2008.
2. Macroeconomic indicators in general, and especially foreign direct investment, balance budget and current account balance are among indicators which affected significantly by this crisis?

This study is organized as follows; Section 1 as an introduction. Section 2 dedicated for conceptual framework of the study, which contain the financial crisis as a whole and financial crisis of 2008. Section 3 analyzes the methodology of the study, which contain the study area, type and source of the study data, defining and measuring the indicators used in the study. Section 4 is devoted to present the findings and empirical results (analyzing the indicators of the UAE economy for the period (2004- 2012). Section 5 summarizes the conclusion and recommendations of the study.

2. CONCEPTUAL FRAMEWORK

2.1 Financial crisis:

Based on [Tucker \(2010: 7-23\)](#) financial crisis is a situation when the demand for money quickly increases relative to the supply of money. This lead to a loss of confidence in a country's currency or other financial assets causing international investors to withdraw their funds from the country. According to [Portes \(1998: 2\)](#). the financial crisis often to denote either a banking crisis, or a debt crisis, or a foreign exchange market crisis, these triple crisis, in which the interactions are the key to causality, depth, and persistence.

On the other hand, [Kindleberger and Aliber \(2005: 35\)](#) show that, the financial crisis involves a number of critical elements: speculation, monetary expansion, and an increase in the prices of securities or real estate or commodities followed by a sharp fall and a rush into money. [Nik et al., \(2016: 25-40\)](#) indicate that, financial crisis is the efficiency loss and disrupt in financial markets and, also imbalance in the financial sector due to occurring sudden and strong changes in price and quantity of financial instruments such as foreign exchanges, stocks, promissory notes. [Percic et al., \(2013: 77-88\)](#) point out that, financial crisis is a situation in which institutions or financial assets suddenly lose a significant part of their value, which

lead to the lack of confidence in the financial system, a reduction of the volume of stock exchange, a dysfunction of market mechanisms.

2.2 The financial crisis of 2008:

According to [Wright \(2012: 278\)](#) the financial crisis of 2008 began in 2007 as a non-systemic crisis in subprime mortgages, or risky loans to homeowners in the United States. Then the crisis turned it into the most severe systemic crisis in 2008. Precisely, as showed by [Hadj \(2009: 2\)](#), the crisis started, when home prices rose at unprecedented rates until 2006 and then declined sharply, with the rising of the interest rate, the dropping of the stock market, and the movement in oil prices. In spite of all these said, [Jickling \(2010: 4\)](#) assert that the volume and variety of negative financial news, and the weakness of policy responses, has triggered a number questions about the origins of this crises.

Conversely, [Abreu et al., \(2009: 2\)](#) state that the origins of the financial crisis of 2008 are now well known, they include; the bursting of the housing and oil price bubbles, extremely low interest rate policies, huge trade surpluses in some countries and trade deficits in others and savings rates that are too low in some economies and high in other. Moreover, [Essers \(2013: 61-83\)](#) indicate that in the years preceding the crisis, housing prices were rapidly rise in the US, this led to rapid vastness of lending to subprime borrowers, regardless of their sources of income. Then risky subprime mortgage loans pooled into packages (such as collateralized debt obligations or CDOs) by new mortgage brokers and associated banking institutions and then selling securities backed by those packages to interested financial investors.

2.3 UAE economy:

The UAE, which consist of seven emirates comprise the third largest economy in the Middle East. It is an important producer of natural gas and oil, ranking seventh globally in total proven reserves of both ([Ilham and Almas, 2014: 3](#)). Furthermore, it has an open economy with a high per capita income and a sizable annual trade surplus ([Heritage Foundation, 2018: 422-423](#)). Otherwise, the UAE is considered the 25th largest export economy in the world. its export was \$174B in 2016, while its import was \$196B in the same year ([OEC, 2017c: 1](#)). On the other hand, the UAE is one of the countries that provides other countries with material and financial assistance annually and charitable contributions to more than 140 countries worldwide through its foreign assistance programs and 25 foreign assistance organizations ([UAENBS, 2010: 8](#)).

If previously reliance on oil alongside to reliance on the free market system, reliance on incoming labor force, narrow domestic market and geographical location were the features of the UAE economy ([Omaira, 2001: 1-22](#)). Today, the UAE has the most diversified economy. The non-oil sector currently accounts for around 70% of the GDP, expected to expand to 80% by 2021 ([UAEME, 2018: 11](#)).

Overall, UAE economy now is one of the most globally integrated with the world as well as to its important participation in global capital markets through several investment institutions, such as the Abu Dhabi Investment Council, the Dubai Ports and Free Zone World, Dubai Holding and the Abu Dhabi International Petroleum Investment Company. In addition, UAE financial market like the Dubai Financial

Market, Abu Dhabi Securities Exchange and Nasdaq Dubai considered an integral part of global financial markets (Sharma, 2010: 38-52).

3. METHODOLOGY

3.1 Study's sample, data type and its sources:

The sample of the study focus on economy of UAE, which influenced easily and more effectively by the financial crisis of 2008 due to its openness to the world economy. In addition to availability and easy access to the data required to the study. The study examines the indicators of the UAE economy. To reach what mentioned above, the study uses time series data on the indicators of UAE economy for the period (2004-2012) obtained from official UAE and international websites.

3.2 Definition of the indicators of the study:

To determine the impact of the financial crisis of 2008 on UAE economy, the study will use some indicators related to various sectors of this economy, which consist of the macroeconomic indicators (especially economic, monetary, financial, foreign trade and balance of payments indicators). We identified 14 indicators in this study and summarized their definition in following tables:

Table 3.1: Economic indicators

Indicator	Description
GDP Growth (%)	Annual percentage growth rate of GDP at market prices based on constant price 2010.
Unemployment Rate (%)	Unemployment Rate is the percent of the labor force that is without jobs.
Industrial Production Index Change (%)	Industrial production index change is annual percentage increase in industrial production.
Household Final Consumption Expenditure Per Capita Growth (%)	Annual percentage growth of household final consumption expenditure per capita.

Source: Researcher, depending on the data taken from the sources of the study.

Table 3.2: Monetary and Financial indicators

Indicator	Description
Budget Surplus or Deficit (%GDP)	Government budget balance (public revenue –public expenditure) as a share to GDP.
Public Debt (%GDP)	Total outstanding debt (bonds and other securities) of a country's federal government as a share of GDP
Inflation Rate (%)	Annual percentage change in prices average for different goods (consumer price index)
Money Supply-M1 (B AED)	Consists of currency in circulation plus monetary deposits.

General Share Price Index	Benchmark stock market index of stocks listed on the stock Market.
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Source: Researcher, depending on the data taken from the sources of the study.

Table 3.3: Foreign trade and balance of payments indicators

Indicator	Description
Current Account Balance (B\$)	The sum of net exports of goods and services, net primary income, and net secondary income.
International Reserves (includes gold, B\$)	Consist of monetary gold, special drawing rights, reserves of IMF members and holdings of foreign exchange of monetary authorities.
Foreign Direct Investment, Net Inflows (B\$)	Net inflows of investment to acquire a lasting management interest in an enterprise operating in an economy other than that of the investor.
AED per US\$	Official exchange rate determined by UAE central bank.

Source: Researcher, depending on the data taken from the sources of the study.

4. FINDINGS AND EMPIRICAL RESULTS

Based on the data obtained from the different sources related to UAE economy, we will present and analyses some macroeconomic indicators related to this economy for the period (2004- 2012) to determine the effect of financial crisis of 2008 on UAE economy. We divided the study period into three stages: (2004-2006), (2007-2009), and (2010-2012).

4.1 Economic indicators: Here, a set of economic indicators of the UAE economy have been shown in table 4.1 and figure 1:

Table 4.1: Economic indicators of UAE economy for the period (2004-2012)

Indicator	2004-2006	2007-2009	2010-2012
GDP Growth (%)	8.09	0.38	4.37
Unemployment Rate (%)	3.11	3.84	3.32
Industrial Production Index Change (%)	4.1	1.8	3.53
Household Final Consumption Expenditure Per Capita Growth (%)	-1.89	-13.26	-3.48

Source: Researcher' work based on data of Appendix 7:

Figure 1: Economic indicators of UAE economy for the period (2004-2012)



Sources: Researcher' work based on table 4.1.

Table 4.1 and figure 1 show five of economic indicators of the UAE economy include; GDP growth, unemployment rate, industrial production index change and household final consumption expenditure per capita growth for the period (2004-2012) distributed to three stages (2004-2006), (2007-2009) and (2010-2012). All of these indicators changed seriously in the period (2007-2009) in which the financial crisis of 2008 took place compare to before and after this stage.

Let's start with the growth rate of GDP, we see that this rate decreased significantly in the period in which the financial crisis in 2008 that happened, compared to what is in the pre- and post of this crisis. For example, the growth rate of GDP declined from 8.09% in the period (2004-2006) to 0.38% in (2007-2009), then rose this rate to 4.38 in the period (2010-2012 (Figure 1.a). This is implying that the GDP of UAE has been clearly affected by the financial crisis due to the openness of the UAE economy towards the global economy and its linkage to the US economy.

Concern to another indicator which is the rate of unemployment, with the decline in GDP growth rate in the UAE, the unemployment rate increased to 3.84% in (2007-2009), while this rate was 3.11% in (2004-2006). However, this rate fell to 3.32% in (2010-2012) (Figure 1.b). This is in consistent with reality as well as economic theory.

On the other hand, the industrial production in the UAE was markedly affected by the financial crisis. For example, the industrial production index fell from 4.1% in (2004-2006) to 1.8% in (2007-2009) as a result of lower economic growth and consumption. In spite of rising to 1.55 in (2010-2012) (Figure 1.c).

Related to the last macroeconomic index, which is the household final consumption expenditure per capita growth, it changed significantly during the period of the financial crisis, the index decreased from -1.89% in the (2004-2006) to -13.26% in (2007-2009), while the index rose slightly to -3.48% in (2010-2012) (Figure 1.d). This is normal, especially with rising unemployment and low economic growth.

On the contrary, domestic investment has been positively influenced by the financial crisis. The share of domestic investment to GDP increased obviously from 7.36% to 14.44% and then to 21.03% during the study period (Figure 1.e). This may be due to the efforts of the government and the private sector in the UAE to cover the shortage of foreign investment in the country as shown in Table 4.3.

4.2 Monetary and financial indicators: Through the table 4.2 and figure 2, most important indicators related to the financial and monetary aspects of the UAE economy have been listed during (2004-2012):

Table 4.2: Monetary and Financial indicators of UAE economy for the period (2004-2012)

Indicator	2004-2006	2007-2009	2010-2012
Budget Surplus or Deficit (%GDP)	2.52	0.33	-3.61
Public Debt (%GDP)	6.37	14.82	18.78
Inflation Rate (%)	6.83	8.33	0.83
Money Supply-M1 (Billion AED)	1927.97	2180.78	1646.27
General Share Price Index	3583.97	4029.02	2553.19

Source: Researcher' work based on data of Appendix 2:

Figure 2: Monetary and Financial indicators of UAE economy for the period (2004-2012)



Sources: Researcher' work based on table 4.2.

Through table 4.2 and figure 2 we presented some of monetary and financial indicators of the UAE economy which consist of; budget surplus or deficit to GDP, public debt to GDP, inflation rate, money supply and general share price index during study period which divided to three stage (2004-2006), (2007-2009) and (2010-2012). As shown in above table and figure, all of monetary and financial indicators changed clearly in (2007-2009) compare with before and after of this stage.

Firstly, the budget balance of UAE during the period of the study had changed decreasingly. For example, budget balance as a surplus decrease from 2.52% in (2004-

2006) to 0.33% in (2007- 2009) then to -3.61% as a deficit in (2010-2012) (Figure 2.a). The biggest and most important reason perhaps behind this drop of the public budget is the increase in public expenditures compared to revenues as a precautionary measure to avoid the effects of the financial crisis on the UAE economy.

Accordingly, we see that the public debt as a ratio of GDP in the UAE increased during the period of the financial crisis, reaching to 14.82% in (2007-2009) from 6.37% in the years before the crisis (2004-2006), then increased to 18.78% in the period (2010-2012) (Figure 2.b). This coincides with the increase in public expenditure and the reduction of the budget balance ratio of GDP.

The rate of inflation as another indicator influenced by financial crisis, which rose from 6.83% in (2004-2006) to 8.33% in the (2007-2009), then this index (inflation) fell again to 0.83% in the (2010-2012) (Figure 2.c). This is in line with the reality of the UAE economy, which witnessed a significant increase in the size of its money supply and public expenditure, especially in the period of crisis years.

Contrarily, during the period of the financial crisis, we see that the volume of money supply (M1) increased to 2180.78 billion AED (\$ 8003.46 billion), while it was 1927.97 billion AED (\$ 7075.65 billion) in the pre-crisis (2004-2006). But in (2010-2012) money supply declined again to 1646.27 billion AED (\$ 6041.81 billion) (Figure 2.d).

On the other hand, the UAE stock market index as average rose from 3583.97 points in the (2004-2006) to 4029.02 points in the (2007-2009). However, this indicator dropped from 4,753.12 points in 2008 to 2,781.93 points in 2009 as shown in appendix 2. This index declined again in (2010-2012) to 2553.19 points (Figure 2.e). This reflects the reality of the UAE economy which influenced by the effects of the financial crisis through the channels that we mentioned earlier and which we will refer to them later.

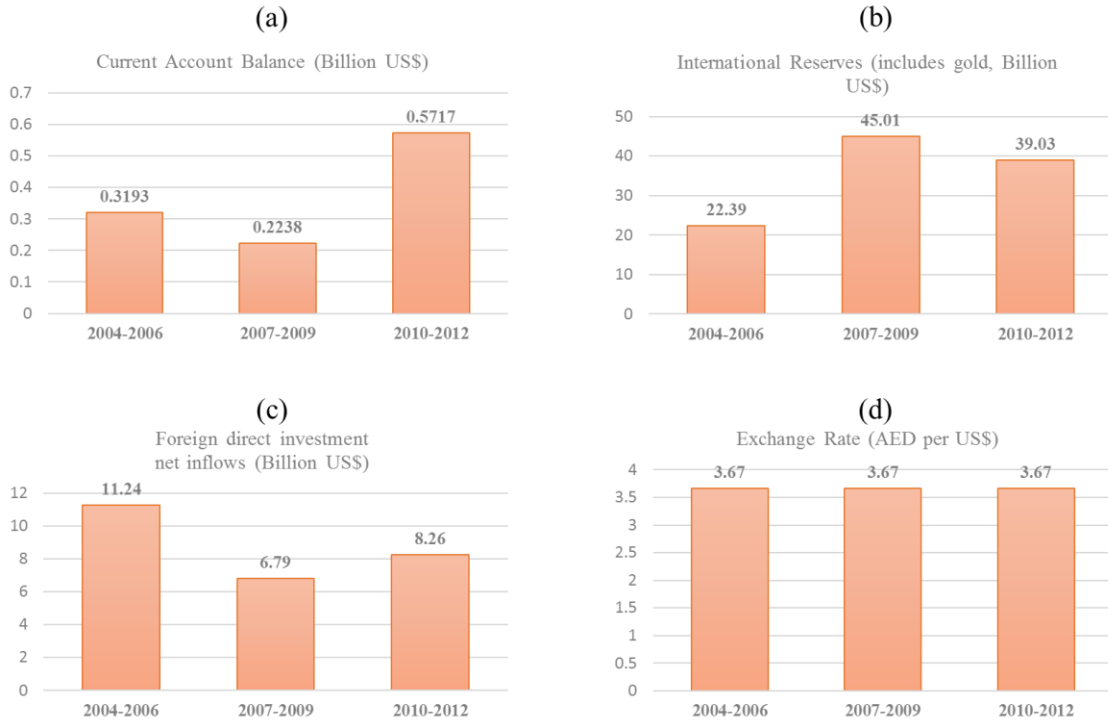
4.3 Foreign trade and balance of payments: Following are some of the indicators concern to foreign trade and balance of payments of UAE in the period (2004-2012), as stated in the table 4.3 and figure 3:

Table 4.3: Foreign trade and balance of payments indicators of UAE economy for the period (2004-2012)

Indicator	2004-2006	2007-2009	2010-2012
Current Account Balance (Billion US\$)	0.3193	0.2238	0.5717
International Reserves (includes gold, Billion US\$)	22.39	45.01	39.03
Foreign Direct investment, Net inflows (Billion US\$)	11.24	6.79	8.26
Exchange Rate (AED per US\$)	3.67	3.67	3.67

Source: Researcher' work based on data of Appendix 1:

Figure 3: Foreign trade and balance of payments indicators of UAE economy for the period (2004-2012)



Sources: Researcher' work based on table 4.3.

Table 4.3 and figure 3 show four of foreign trade and balance of payments indicators of UAE economy including; current account balance, international reserves (includes gold), foreign direct investment net flow and the exchange rate of the AED (AED per US\$) in three stages (2004-2006), (2007-2009) and (2010-2012). The first three indicators value influenced seriously by financial crisis when we compared to their values pre and post this crisis.

With regard to current account balance, it decreased from \$ 0.3193 billion in (2004-2006) to \$ 0.2238 billion. This balance rose again to \$ 0.5717 billion in (2010-2012) (Figure 3.a). This is consistent with the reality that the world's countries have suffered to deflation and reduced their demand on exports from developing countries, including UAE exports.

On the other hand, international reserves (including gold) of the UAE have changed considerably during the study period, although these reserves increased from an average of \$ 22.39 billion in (2004-2006) to \$ 45.01 billion in the period (2007-2009), But we see that these reserves were reduced from \$ 77.24 billion in 2007 to \$ 31.69 billion dollars in 2008 and then to \$ 26.1 billion in 2009. In the last period of the study (2010-2012), international reserves fell again as compared to prior periods (Figure 3.b). The decline in the UAE's international reserves is a sign of a low in revenues, as

well as the use of these precautions by the UAE government to cope with the effects of the financial crisis.

The most influential indicator of the financial crisis was foreign investment. For example, foreign direct investment as net flows declined from \$ 11.24 billion in (2004-2006) to \$ 6.79 billion in the (2007-2009), and then increased again to \$ 8.26 billion in the (2010-2012) (Figure 3.c). This is evidence that the UAE economy was affected by the financial crisis in 2008 through the withdrawal of foreign capital and the exposure of western countries to the contraction caused by this by this crisis. Regard the exchange rate the table shows that it's not been changed or devalued through the whole period (Figure 9.d).

CONCLUSION AND RECOMMENDATIONS

The paper analyzed the indicators of the UAE economy during (2004-2012) to determine the effects of financial crisis of 2008 on UAE economy. To measuring these effects, the study used some indicators related to UAE economy including; macroeconomic (economic, financial, monetary, foreign trade and balance of payments) indicators during the study period by dividing this period to three stages; before the crisis (2004-2012), during crisis (2007-2009) and after crisis (2010-2012). Then we compared the value of used indicators in years of financial crisis (2007-2009) with their values before and after the crisis.

The study concluded that all the indicators used in the study have changed significantly in the years of the financial crisis of 2008 compared to the previous and after. For example, GDP growth, household final consumption expenditure per capita growth and industrial production index were decreased significantly in (2007-2009) compare to their value in to (2004-2006). While unemployment rate increased in years of crisis compare to its value in (2007-2009).

On the other hand, the study found that, budget balance as share to GDP and public debt ratio to GDP were among most indicators which influenced by financial crisis, these two indicators decreased markedly in years of the crisis. In addition, the current account balance and foreign direct investment fell during (2007-2009).

Ultimately, to stand against such these financial crises, the study submits to review the structure of the UAE economy and continue to diversify the sources of state revenues not to rely on a specific source to provide revenues or attract capital. On the other hand, it is necessary to work on designing and formulating appropriate economic policies, especially trade, financial and monetary policies.

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ABBREVIATIONS

CBUAE	Central Bank of United Arab Emirates
CDO	Collateralized Debt Obligation
CIA	Commerce Clearing House
UAEME	United Arab Emirates Ministry of Economy
UAENBS	United Arab Emirates National Bureau of Statistics

Appendixes

Appendix 1

Economic indicators of UAE economy for the period (2004-2012)

Indicator	Before financial crisis of 2008				During financial crisis of 2008				After financial crisis of 2008			
	2004	2005	2006	Average	2007	2008	2009	Average	2010	2011	2012	Average
GDP Growth (%)	9.57	4.86	9.84	8.09	3.18	3.19	-5.24	0.38	1.64	6.36	5.1	4.37
Unemployment Rate (%)	2.98	3.12	3.23	3.11	3.34	4.01	4.17	3.84	3.7	3.3	2.97	3.32
Industrial Production Index Change (%)	4	4.1	4.2	4.1	4.3	6.7	-5.6	1.8	3.2	3.2	4.2	3.53
Household Final Consumption Expenditure Per Capita Growth (%)	1.99	-8.35	0.68	-1.89	-2.6	-1.89	-35.3	-13.26	2.46	-5.85	-7.05	-3.48

Source: **Researcher' work based on data taken from following sources:**

1. World bank (2018), World development indicators, data.worldbank.org
2. CIA (2015), The World Factbook, www.cia.gov.

Appendix 2
Monetary and Financial indicators of UAE economy for the period (2004-2012)

Indicator	Before financial crisis of 2008				During financial crisis of 2008				After financial crisis of 2008			
	2004	2005	2006	Average	2007	2008	2009	Average	2010	2011	2012	Average
Budget Surplus or Deficit (%GDP)	-0.12	2.86	4.81	2.52	4.16	6.21	-9.38	0.33	-3.62	-3.87	-3.35	-3.61
Public Debt (%GDP)	5.64	6.63	6.84	6.37	7.85	12.53	24.08	14.82	21.94	17.43	16.98	18.78
Inflation Rate (%)	5	6.2	9.3	6.83	11.1	12.3	1.6	8.33	0.9	0.9	0.7	0.83
Money Supply-M1 (Billion AED)	1702.77	2313.63	1767.52	1928.97	2334.71	2476.21	1731.45	2180.78	1686.21	1625.51	1627.1	1646.27
General Share Price Index	3070.9	4681	3000	3584.97	4552	4753.12	2781.93	4029.02	2660.78	2498.1	2500.68	2553.19

Source: **Researcher' work based on data taken from following sources:**

1. IMF (2018), World Economic Outlook Database, April 2018, www.imf.org.
2. CBUAE (2004), Annual Reports from 2004-2012, www.cbuae.gov.ae.

Appendix 3
Foreign trade and balance of payments indicators of UAE economy for the period (2004-2012)

Indicator	Before financial crisis of 2008				During financial crisis of 2008				After financial crisis of 2008			
	2004	2005	2006	Average	2007	2008	2009	Average	2010	2011	2012	Average
Current Account Balance (Billion US\$)	0.1429	0.3287	0.4862	0.3193	0.2649	0.3005	0.1059	0.2238	0.0977	0.6872	0.9301	0.5717
International Reserves (includes gold, Billion US\$)	18.53	21.01	27.62	22.39	77.24	31.69	26.1	45.01	32.79	37.27	47.04	39.033
Foreign direct investment, net inflows (Billion US\$)	10	10.9	12.81	11.24	14.19	5.06	1.13	6.7933	8.8	7.15	8.83	8.26
AED per US\$	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67

Source: **Researcher' work based on data taken from following sources:**

1. CBUAE (2004), Annual Reports from 2004-2012, www.cbuae.gov.ae.
2. World bank (2018), World development indicators, data.worldbank.org.