

UAE: FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH

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ABSTRACT

Within last three decades both financial sector and UAE economy as a whole experienced a remarkable growth. Based on extended (1973-2003) time series data, this research attempts to find the relationship between financial and economic development of the UAE. For this purpose first, we check and try to match the trends in major indicators of national economy and its financial sector. Second, we use conventional model with amended inputs to investigate possible relationship. According to the results, although estimated regressions confirm importance of the traditional growth factors (labor, capital), they show no positive and/or significant relationship between the financial variables and the GDP. In addition, significant evidence is obtained on still heavy dependence of the UAE economy on the world oil market prices. Oil price factor, as well as still ongoing process of the financial sector expansion (recent introduction of securities market) are apparent reasons that preclude obtaining clear evidence of the UAE financial sector impact on national economic development.

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INTRODUCTION

Last decade, or so, was marked with a surge of discussions regarding the role of financial sector in economic development of countries. Polarity of theories and mixed evidence did not prevent rising recognition of the matter and its importance.

The UAE economy accomplished an extraordinary leap within one generation life-span and it is still growing at impressive rates. Moving away from reliance on the oil revenues apparently increases importance of alternative growth factors. If the financial sector is one of these factors, it has direct strategic connotations for policy-makers.

The main objective of this paper is to check if international evidence on the significant role of finance in economic expansion is applicable to the UAE. Analysis is based on extensive data base of thirty years (1973-2003) observations. Extended literature review assisted in choice of methodology, techniques, and indices. For the sake of compatibility with other studies commonly applied indicators were estimated over a conventional model, although amended to match local specifics.

The UAE economy's particulars – heavy influence of the oil sector and immaturity of stock market, as well as continuing in scale and scope expansion of other segments of financial sector – impose certain amendments to general practices. Due to still substantial weight of the oil sector international oil prices volatility should be included into any analysis of economic development.

ROLE OF FINANCE IN ECONOMY: THEORY AND EVIDENCE

An extensive literature on the relationships between economy's financial markets and its economic growth has developed in recent years. Levine and Zingales (*Levine & Zingales, 2003*) illustrate polarity of opinions on this topic by comparing remarks of two Nobel Prize winners in economics: from "that financial markets contribute to economic growth is a proposition almost too obvious for serious discussion" (*Merton Miller, 1998*) to "the role of finance in economic growth has been "over-stressed" by the growth literature" (*Robert Lucas, 1988*).

And yet, after decades of theoretical disputes and empirical investigations most of researchers consent on importance of the role of finance in economic development both at the national, and international levels (*Asli Demirguc-Kunt & Ross Levine, 2004; Love, 2003*). Main debates lay rather along two major lines of arguments. First, and the most important, whether financial development causes economic growth by mobilizing savings, facilitating exchange of goods and services, increasing diversification, or, the other way round, higher growth stimulates development of the financial system (*Driffill, 2003*)? In this paper we will presume that money, banking, and financial structures influence overall development, which we should be able to show on the UAE example.

Second, what determines the level of financial sector development and how to capture its impact on economic growth? Most commonly used quantitative indicators of the level of a country's financial development are:

- broad money (M2) – to capture overall size of the formal financial sector;
- domestic assets of resident banks - to measure the size of financial intermediaries (financial depth)
- credits to the private sector - to total domestic credit
- stock markets' turnover and capitalization – to incorporate effects of stock markets' size and liquidity

It is argued, though, that these basic measurements should be augmented by more detailed quantitative and qualitative indicators in order to provide a richer description of a country's financial development.

In the Middle East related research authors suggest to incorporate such measurements, as market structure, financial products, financial liberalization, institutional environment, financial openness, and some others (*Creane et al, 2003*). Creane and co-authors constructed a comprehensive index capturing monetary policy, banking and non-bank financial sectors, regulation and supervision, financial openness, institutional environment. This allowed to rank MENA (Middle East and North Africa) countries according to their level of financial development. Results of the mentioned research bear two conclusions important for the current topic:

- UAE ranked high among the most financially developed countries of the MENA region and the rest of the world.
- Comprehensive index produced rankings similar to conventional indices developed elsewhere in the literature.

Apparently, national finance would not thrive without proper backing from monetary policy, government regulation, financial openness, and institutional environment. Hence, at this initial stage the role of financial sector in the UAE economy can be analyzed with conventional methodology and set of tools.

FINANCIAL SECTOR IN THE UAE ECONOMY

Without any exaggerations, the UAE economy is by all means an obvious success story. According to the Global Virtual University, UAE GDP per capita ranks twenty second, following France (19), Singapore (20), Cyprus (21) and ahead of Spain (23), Israel (25), New Zealand (27) (*Globalis, 2001*).

The UAE early development was jump-started by oil revenues in 60-ies and 70-ies. Share of the oil sector in UAE GDP was around 60 percent throughout 70-ies. Later though, the economy started shifting towards diversified sustainable formation with decreasing dependence on oil revenues. Contribution of oil sector to the national economy dropped to 40 percent in late 80-ties, and to almost 20 percent by the beginning of this century (*Al Sadik, 2001*).

Decades-long consistent economic strategy has oriented the UAE economy towards development of trade, manufacturing, construction, tourism, and other sectors in which this country already had, or could have gained comparative advantage (*Shihab, 2001*). Political and social stability, competent planning and regulations, private sector involvement, free trade zones – these and other elements contributed to steady diversified economic growth (*IMF, 1998*).

In general, major details of the UAE economic evolution are well documented. Rather detailed statistics is available both from national (*Trade & Economic Statistics, 2002; The Central Bank of the UAE Annual Reports, 1980-2003*), and international (*UN, IFC, IMF, World Bank, OECD*) sources. All the above mentioned data bases were used as statistical sources for this paper.

Within the last thirty years UAE financial system was pacing up with the general economic trends. Sheer visual observation of Figures 1, 2, and 3 produces strong impression of linkage between development of economy and elements of its financial sector. Within thirty years (1974-2003) annual growth averaged at 17.4 percent for the nominal GDP and 14.0 percent for the real GDP (of course, these rates are heavily influenced by early years oil boom – recent years' rates are in 5-7 percent range). Within same period, private credits and bank assets were growing at a matching rate of 10-11 percent annually, while money supply increased at a rather prudent rate of 6 percent a year. As a result financial depth of the UAE credit and banking system increased to the scale compatible to the size of the country's GDP.

Banking sector is a most developed segment of the UAE financial sector. Last three decades of its growth are illustrated in Table 1.

According to Table 1 figures total number of banks and their branches in the UAE increased from 316 in 1977 to 525 in 2003 mostly on account of expansion of local banks. Number of local banks and branches increased almost five-fold raising share of national banks from 20 percent to 70 in their total number in the country. Rapid growth of the banking sector was accompanied by its improvement due to regulatory measures (licensing and restrictions) by the Central Bank which raised this sector's level up to high international standards.

Increasing number of banks is accompanied by even greater expansion of their services, as shown in the Table 2.

Within same twenty five years total size of credits increased ten times servicing sectors of priority in national economic development (trade, construction, utilities, manufacturing), as well as needs of resident population.

One element relatively new within the general structure of the national financial sector is a securities market. Informal trade in stock emerged as an unofficial market about ten years ago. Rapid growth of trades led to official securities market institutionalization. In 2000 the Federal Government announced a decree establishing public regulatory Securities and Commodities Authority (SCA) with a purpose of improving efficiency of national financial market and protecting investors from unfair and inappropriate practices.

Currently, national securities are traded in two official markets: Abu Dhabi Securities Market and Dubai Financial Market. Their combined characteristics are presented in Table 3.

These indicators demonstrate rather mature, but yet an emergent market. Although securities markets were initiated just few years ago, they are still growing at a quite remarkable speed. Trade volume at the Dubai Financial Market alone in four years (2000-2004) increased from 437 Mln.AED to 51,056 Mln.AED with market capitalization change from 21,564 Mln.AED to 131,927 Mln.AED.

In addition, national financial market still adds new segments. Dubai International Financial Center (DIFC) was recently founded as a free financial zone segregated from (but interlinked with) the UAE financial sector. By allowing 100% ownership in wholesale banking to recognized international financial institutions DIFC has already attracted a number of major internationals and their number is growing.

One important inference follows from our brief review of the UAE financial sector. National finance are experiencing period of intensive growth both in banking and in securities segments, the latter showing extraordinary rates of expansion. This indicates that financial resources in the country are still in search of better means of application both in scale, and in efficiency. Rapid growth of the financial sector is definitely a positive development, although it might turn out to be an obstacle for the research purposes. While both banking, and securities markets are still at the stage of high initial growth up to the level matching the specific needs of national economy, its indicators are hardly useful in any attempt to correlate them with overall economic performance.

Fig 1. Nominal GDP vs. Money Supply Growth

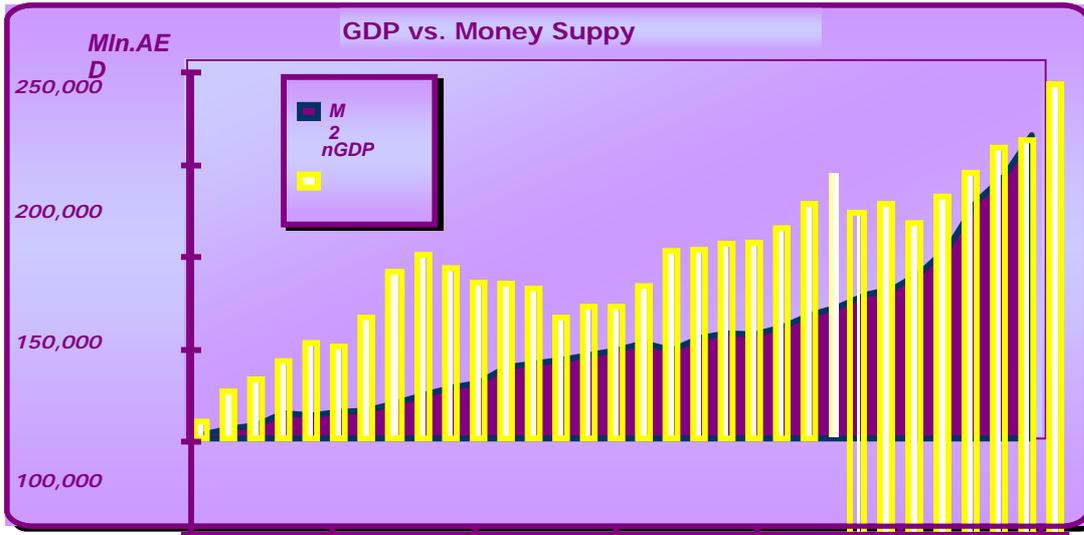


Fig 2. Nominal GDP vs. Private Sector Credits' Growth

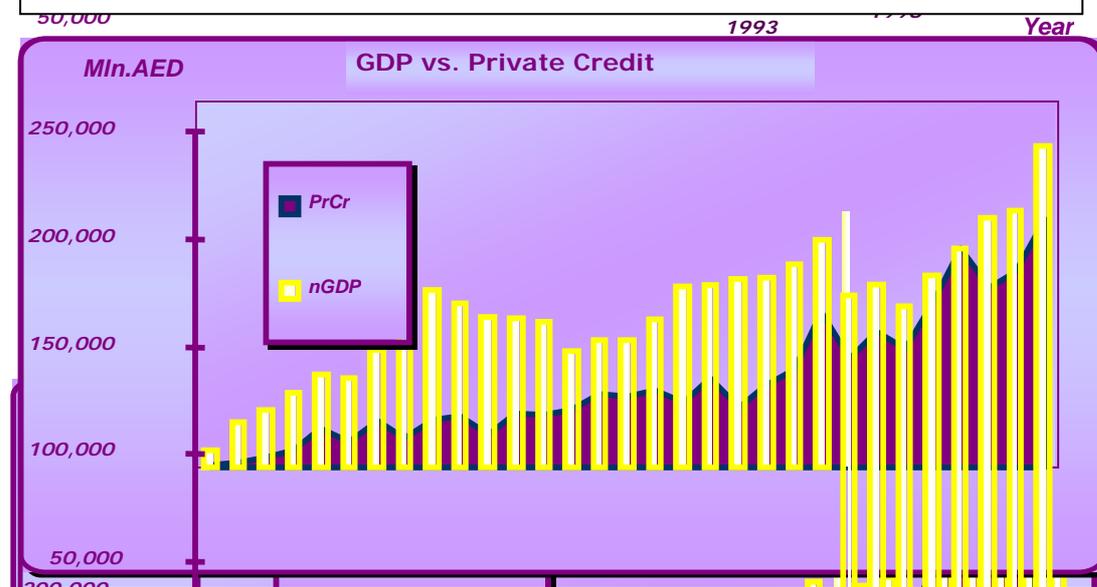
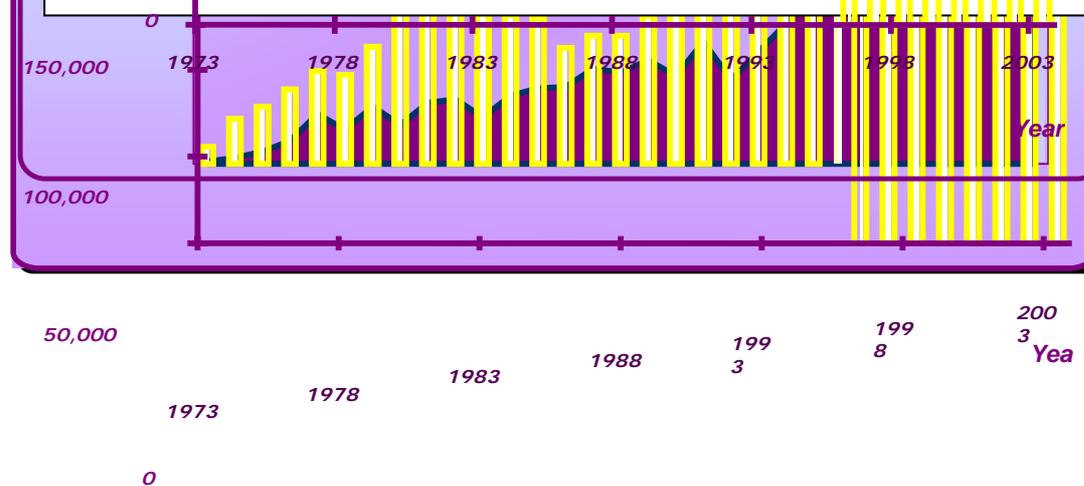


Fig 3. Nominal GDP vs. Banks' Domestic Assets Growth



ANALYSIS: METHODOLOGY AND RESULTS

Following the previous discussion, standard estimation model was accepted for this analysis. Most of researchers follow Odedokun's model based on the standard neoclassical one-sector aggregate production function in which financial development is represented as one of inputs (Odedokun, 1998).

$$\dot{Y}_t = \beta_0 + \beta_1 \dot{L}_t + \beta_2 \frac{I_t}{Y_t} + \beta_3 \dot{F}_t + \beta_4 \dot{Z}_t + u_t \quad (1)$$

where

$$\dot{Y}_t, \dot{L}_t, \frac{I_t}{Y_t}, \dot{F}_t, \dot{Z}_t, u_t$$

are the economic (GDP) growth rate, the rate of labor force growth, the investment per GDP ratio, financial development indicator(s), other factors, and the error term, correspondingly.

Financial variables included ratios: broad money per GDP (M2), credits to the private sector per GDP (PSC), and domestic assets of resident banks per GDP (BDA). In addition to that separate regressions were tried with a suggested composite index of financial development measuring average rates of changes in M2, PSC, and BDA. The rationale behind the composite index was an attempt to check, if it shows better performance due to aggregation of individual variables.

Following the literature in our regressions economic growth was represented by the real GDP growth rate, while the ratios were calculated over the nominal GDP. Due to lack of labor statistics, population growth was used as a proxy for the labor force growth. Investment per GDP ratio is readily available from national account statistics.

Current estimation had several differences from standard approaches. First, stock market indicators were not included in the model for the above discussed reason – it is too early to use them as explanatory variables. Second, financial openness indicators (capital inflows/outflows) are missing in all statistical data bases. Instead of traditional indicators of macro-stability (inflation, CPI) oil prices impact was considered influential. Oil sector still stands for about 20 percent of UAE economy, international oil price fluctuations should strongly affect UAE economic development.

Results of four regressions are presented in Table 4. Although overall regression stats are quite good (high R^2 and F-stats) not a single financial sector indicator exhibits explanatory power in GDP growth rate at any reasonable level of significance (t-stats). To the contrary, both population (labor force) growth and investment share in GDP under all regressions show high significance. As expected, oil prices display even higher match as a factor of the UAE economic growth.

Other than oil revenue influence, several factors might have contributed to these results. Quite mature on the monetary and banking side, UAE financial sector is still in the process of developing of its stock market. New financial initiatives in Abu-Dhabi and Dubai indicate that there are other financial segments in the country still in search of appropriate application. Steps towards greater financial openness should also contribute to increasing role of finance in the UAE economy.

On the methodological side, it would be beneficial to separate non-oil sector of the UAE economy from its oil segment in order to check if the former exhibits more solid correlation with the country's finances.

CONCLUSIONS AND RECOMMENDATIONS

Within last three decades both financial sector and UAE economy as a whole experienced a remarkable growth. Trends match in major indicators describing financial (broad money M2, domestic assets of resident banks, credits to the private sector, securities market turnover and capitalization) and economic (GDP) development. But national financial sector is still on the rise both in scale, and in scope. Formal securities markets have only four years of history and are expanding at outstanding rates. New financial initiatives emerge even in more or less settled banking sector.

In this first attempt to reveal influence of the UAE financial sector on the national economy no positive evidence was obtained, although the estimated regressions confirm importance of the traditional growth factors (labor, capital). Application of traditional tools showed no certain and/or significant relationship between the financial variables and economic growth of the country represented by the real GDP. Such results are quite common, especially for the developed and developing countries of Asia and Africa (Dipendra Sinha & Joseph Macri, 1999; Meshach Aziakpono, 2004).

Among possible factors depressing attempt to reveal role of the UAE financial sector are: still substantial dependence on oil revenues, as well as emergent state of stock market and expansions of other financial segments. Financial innovations pick up immediate rapid growth, which indicates that there are still plenty of opportunities for the free financial resources to find their way towards size and efficiency of their application. Advance of these factors should increase influence of the financial sector and its capacity to positively support economic growth of the country. Stronger influence of the finance on the economy will have direct policy implications.

In the meantime, it is still important to find ways to relate and measure role of financial sector in UAE economic development. With this respect, further effort in fine-tuning of existent methods, as well as development of new methodologies is required. UAE finance is clearly pacing up with its economic growth. Finding exact interlinks under this country specifics is a matter of designing suitable indicators and techniques. This task is important in analysis of the future trends in financial and economic development of the nation.

Table 1. Banks in the UAE (1973-2003)

	1977	1981	1986	1991	1998	2003
National Banks						
Head Offices	20	21	19	19	20	21
Branches*	61	111	138	160	284	367
Foreign Banks						
Head Offices	34	28	29	28	21	25
Branches*	201	187	93	91	111	112
TOTAL	316	347	279	298	442	525

* Total of branches and pay offices.

Source: Reports by the Central Bank of the UAE (1980-2003)

Table 2. Banks' Credits by Economic Activity (Mln.AED)

ECONOMIC ACTIVITY	1978	1984	1990	1995	2000	2003
Agriculture	67	171	192	380	1,636	830
Mining & Quarrying	405	455.9	361	4,396	2,950	2,077
Manufacturing	1,068	1,976	2,786	5,648	9,676	11,082
Electricity, Gas & Water	845	5	2	2	482	11,110
Construction	7,365	10,486	11,352	15,208	21,646	26,845
Trade	8,059	14,026	19,208	30,398	42,008	57,053
Transport & Communications	433	1,002	1,622	1,993	4,211	6,325
Financial (non-bank) Institutions	153	1,896	2,118	1,560	1,983	2,272
Government	1,907	4,330	8,251	12,787	12,581	19,650
Personal Loans	N/A	N/A	N/A	N/A	31,831	45,408
All Others	1,680	5,868	12,446	19,140	9,221	14,254
TOTAL	21,980	40,215	58,338	91,512	138,225	196,906

* Before 1996 **Personal Loans** were counted in **All Others**.

Source: Reports by the UAE Currency Board (1974-79) and the Central Bank of the UAE (1980-2003)

Table 3. Trade in Abu Dhabi Securities and Dubai Financial Markets in 2004

Sector	Number of companies	Trade value, Mln.AED	Trade volume, Mln.AED	Number of Trades
SHARES				
Banking	14	13,992.9	463.5	52,275
Services	11	46,585.0	4,835.9	204,830
Insurance	14	1,144.3	34.7	4,060
Industrial	2	291.0	2.1	709
Investment	10	1,699.9	416.5	17,854
TOTAL SHARES	53	66,797.3	6,069.2	299,279
BONDS	3	602.2	.01	20
TOTAL MARKET	56	67,400	6,069	299,299

Sources: Abu Dhabi Securities Market (ADSM) Annual Report (2004)
Dubai Financial Market (DFM) Annual Report (2004)

Table 4. Regressions' Results

	Regression 1: w/o oil prices	Regression 2: with oil prices	Regression 3: composite finance, w/o oil prices	Regression 4: composite finance, with oil prices
Population	2.868** (4.820)	1.759* (2.737)	2.914** (4.610)	1.581* (2.480)
Investment share in GDP	1.151** (7.486)	1.405** (8.800)	1.104** (6.762)	1.428** (8.864)
Oil Prices	-	.191** (2.927)	-	.228** (3.638)
M2	-.573* (-2.704)	-.369 (-1.865)	-	-
PSC	-.336 (0.623)	-.245 (-.540)	-	-
BDA	.327 (.525)	.245 (.450)	-	-
Composite Index	-	-	-.208 (-1.307)	-.133 (-1.005)
R²/F-stat	.899 / 20.3	.928 / 23.7	.892 / 27.6	.918 / 33.7

Notes: Numbers in parentheses are t-stats. All regressions have intercepts which are not reported.

** - Significant at the 1% level. * - Significant at the 5% level.

REFERENCES

1. Alan Heston, Robert Summers and Bettina Aten. Penn World Table Version 6.1. Center for International Comparisons at the University of Pennsylvania (CICUP), 2002. Available from: <<http://datacenter.chass.utoronto.ca/pwt/>>
2. Al Sadik, Ali Tawfik. Evolution and Performance of the UAE Economy 1972–1998. In United Arab Emirates: A New Perspective (Edited by Ibrahim Al Abed, Peter Hellyer). London: Trident Publishing, 2001, pp. 202-230. Available from: <http://www.uaeinteract.com/uaeint_misc/pdf/perspectives/10.pdf>
3. Chen-Min Hsu, Wan-Chun Liu (2003). The Role of Financial Development in Economic Growth: The Experiences of Taiwan, Korea, and Singapore. National Policy Foundation Research Report. 30p. Available from: <<http://www.npf.org.tw/english/main-eng.htm>>
4. Creane, Susan; Goyal, Rishi; Mobarak, Mushfiq A.; Sab, Randa. Financial Development and Economic Growth in the Middle East and North Africa. In Economic Research Forum For The Arab Countries Newsletter, Vol. 10, No. 2, Summer 2003, pp.12-14. Available from: <http://www.erf.org.eg/nletter/NewsletterVol10_Sum03/PP12-14.pdf>
5. Dipendra Sinha and Joseph Macri (1999). Financial Development and Economic Growth: The Case of Eight Asian Countries. Macquarie Economics Research Papers, Number 7, 32p. Available from: <http://www.econ.mq.edu.au/research/1999/7-1999Sinha_Macri.PDF>
6. Driffill, John (2003). Growth and Finance. The Manchester School. Manchester: .Vol.71, Iss. 4; pp.363-381
7. Financial Structure and Economic Growth. A Cross-Country Comparison of Banks, Markets, and Development. (Edited by Asli Demirguc-Kunt and Ross Levine). Boston: The MIT Press, 2004, 446 p
8. Globalis. Interactive World Atlas, 2001. Available from: <<http://globalis.gvu.unu.edu/indicator.cfm?IndicatorID=19>>
9. IFS: International Financial Statistics Online. Available from: <<http://www.imfstatistics.org/imf/logon.aspx>>
10. IMF: The World Economic Outlook (WEO) Database. Available from: <<http://www.imf.org/external/pubs/ft/weo/2003/01/data/index.htm>>
11. Levine, Ross, Zingales, Luigi (2003). More on finance and growth: More finance, more growth? Review - Federal Reserve Bank of St. Louis. St. Louis: Jul/Aug 2003. Vol.85, Iss.4; p. 31-46
12. Love, Inessa (2003). Financial Development and Financing Constraints: International Evidence from the Structural Investment Model. The Review of Financial Studies. New York: Autumn 2003. Vol. 16, Iss. 3; pp. 765-791
13. Meshach Aziakpono (2004). Financial Intermediation and Economic Growth in Economic and Monetary Union: The case of SACU and CMA. In Growth, poverty reduction and human development in Africa, Centre for the Study of African Economies (CSAE) Conference 2004. Available from:

<<http://www.csae.ox.ac.uk/conferences/2004-GPRaHDiA/papers/3m-Aziakpono-CSAE2004.pdf>>

14. Odedokun, M.O. (1998). Financial intermediation and economic growth in developing countries. *Journal of Economic Studies*. Glasgow: Vol.25, Iss. 3; p.203
15. Shihab, Mohamed. Economic Development in the UAE. In *United Arab Emirates: A New Perspective* (Edited by Ibrahim Al Abed, Peter Hellyer). London: Trident Publishing, 2001, pp. 249-259. Available from: <http://www.uaeinteract.com/uaeint_misc/pdf/perspectives/12.pdf>
16. Trade and Economic Statistics, 1996 - 2002. Abu Dhabi Chamber of Commerce & Industry. Available from: <http://www.adcci.gov.ae:90/public/abudhabi_economy/index.htm>
17. OECD: Statistics Portal. Available from: <<http://www.oecd.org/statsportal/>>
18. UN: National Accounts Main Aggregates Database. Available from: <<http://unstats.un.org/unsd/snaama/introduction.asp>>
19. United Arab Emirates - Recent Economic Developments. Series: IMF Staff Country Report No. 98/134. Available from: <<http://www.imf.org/external/pubs/ft/scr/1998/cr98134.pdf>>
20. World Bank: World Development Indicators 2004. Available from: <<http://www.worldbank.org/data/wdi2004/>>