EFFECTS OF SIZE, OWNERSHIP AND MARKET POWER ON BANKING SECTOR EFFICIENCY AND PERFORMANCE IN PERSIAN GULF COUNTRIES

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By

ALI KASHMARI

Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirements for the Degree of Doctor of Philosophy

November 2013

Dedication

To

My Beloved Family

For their forever unconditional love, support,

encouragement and patience through all these years of

my life, no matter how huge I have made mistakes.

Mom! Dad! I am always proud to be your son.

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

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Chairman : Associate Prof. Law Siong Hook, PhD

Faculty : Economics and Management

For decades, the Persian Gulf countries (PGC) (Emirates, Saudi, Iran, Qatar, Oman, Kuwait and Bahrain) have been an important financial center among Middle East countries, with the oil industry playing a critical role. The banking sector, thus, has played an important role in influencing the growth of the region for a long time. Recent years have witnessed a growth in the size of the region's banking industry while more than 80% of the PGC banks involve greater assets (more than 1 billion dollars in yearly). In terms of bank ownership, the PGC government owned 47% of the banks in the region, and the size (assets) of PGC banking has increased during recent years. Despite the public ownerships might improve the undeveloped financial systems, the question now is whether government ownership has positive effect on the PGC banking sector.

Therefore, this study (i) evaluates the technical efficiency in banking system using data from 103 PGC banks, where the technical efficiency is computed by using the Data Envelopment Analysis (DEA) (ii) investigates the effects of bank size and ownership on efficiency of PGC banks. The efficiency is estimated using panel least square, random and fixed effects, bootstrap and censored truncated Tobit models, and (iii) examines the impacts of market power and efficiency on the performance of PGC banks, using the generalized method of the moments (GMM), white and white-robust tests. The PGC countries include Emirates, Saudi, Iran, Qatar, Oman, Kuwait and Oman, and the sample period is covering from 1996-2010.

The empirical results show that the technical efficiency of PGC banks has decreased from 1996 to 2010. With respect to the effects of bank size and ownership on

efficiency, the findings indicate that bank size is negatively associated with efficiency, but ownership in terms of private and public ownerships are positively associated with efficiency. Lastly, the market power has positive and statistically significant determinant of banking performance. The findings also demonstrate that bank size is positively associated with banking performance, where the performance indicator is proxied by banking income. However, the effect of bank size is negative and statistically significant determinant of banking performance where return of assets is employed as a proxy for performance.

Banking sectors in this region need to improve their efficiencies by strengthening distribution and using effective allocation of inputs in the financial process. Despite public ownerships being supported by their political influence in banking, governments need to expect the banking sector to perform well. On the other hand, private bank ownerships need to develop regulatory units in the banking system. The important role of PGC government is to ensure the investments in the region are productive and complement with the efficient banking system, which is in line with the greater size of banks. The banks should follow farsighted decisions when they increase the assets in the financial sector, especially when the oil prices increase and when liquidity is high in the country.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

KESAN SAIZ, HAKMILIK DAN KUASA PASARAN KE ATAS KECEKAPAN DAN PRESTASI SEKTOR PERBANKAN DI NEGARA PERSIAN GULF NEGARA

Oleh

ALI KASHMARI

November 2013

Pengerusi : Prof Madya. Law Siong Hook, PhD

Fakulti : Ekonomi Dan Pengurusan

Selama beberapa dekad, negara-negara Teluk Parsi (PGC) telah menjadi pusat kewangan yang penting di kalangan negara-negara Timur Tengah, di mana industri minyak memainkan peranan penting. Oleh itu, sektor perbankan telah memainkan peranan penting dalam mempengaruhi pertumbuhan di rantau ini untuk masa yang lama. Tahun kebelakangan ini telah menyaksikan pertumbuhan dalam saiz industri perbankan di rantau ini manakala lebih daripada 80% daripada bank-bank PGC melibatkan aset yang lebih besar (lebih daripada 1 bilion dolar dalam setahun). Dari segi pemilikan bank, kerajaan PGC memiliki 47% daripada bank-bank di rantau ini, dan saiz (aset) perbankan PGC juga telah meningkat sejak tahun kebelakangan ini. Walaupun pemilikan awam mungkin memperbaiki sistem kewangan yang kurang maju, persoalannya g ialah sama ada pemilikan kerajaan mempunyai kesan positif ke atas sektor perbankan PGC.

Oleh itu, kajian ini (i) menilai kecekapan teknikal dalam sistem perbankan dengan menggunakan data daripada 103 buah bank PGC, di mana kecekapan teknikal diukur dengan menggunakan "data envelope analysis", (ii) menyiasat kesan saiz bank dan hakmilik bank terhadap kecekapan bank-bank PGC. Kecekapan dianggarkan dengan menggunakan panel kuasa dua terkecil, kesan rawak dan kesan tetap, Bootstrap dan model "censored truncated Tobit". (iii) mengkaji kesan kuasa pasaran dan kecekapan terhadap prestasi bank-bank PGC, dengan menggunakan kaedah "generalized method of moments" (GMM), ujian "White" dan "White-robust". Negara-negara PGC termasuk Emirates, Arab, Iran, Qatar, Oman, Kuwait dan Oman, dan tempoh masa kajian adalah dari tahun 1996-2010.

Keputusan empirik menunjukkan bahawa kecekapan teknikal bank PGC telah menurun dari 1996-2010. Berkenaan dengan kesan saiz bank dan hakmilik ke atas kecekapan, hasil dapatan menunjukkan saiz bank berhubungan negatif dengan kecekapan, tetapi hank milik dari segi swasta dan awam berhubungan positif dengan kecekapan. Akhir sekali, kuasa pasaran adalah positif dan signifikan mempengaruhi prestasi perbankan. Hasil dapatan juga menunjukkan saiz bank adalah berhubungan positif dengan prestasi perbankan, di mana petunjuk prestasi adalah pendapatan perbankan. Bagaimanapun, kesan saiz bank adalah negative dan signifikan mempengaruhi prestasi perbankan di mana pulangan aset digunakan sebagai petunjuk untuk prestasi perbankan.

Sektor perbankan di rantau ini perlu meningkatkan kecekapan dengan memperkukuhkan pengedaran dan menggunakan peruntukan input yang berkesan dalam proses kewangan. Walaupun hak milik awam disokong oleh pengaruh politik dalam perbankan, kerajaan perlu mengharapkan bank-bank mempunyai prestasi yang baik. Peranan penting kerajaan PGC adalah untuk memastikan pelaburan di rantau ini adalah produktif dan dilengkapi dengan kecekapan bank, selaras dengan peningkatan bank saiz. Bank-bank harus mengikuti keputusan yang berpandangan jauh apabila mereka meningkatkan aset dalam sektor kewangan, terutamanya apabila harga minyak meningkat dan kecairan adalah tinggi di negara ini.

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CHAPTER 1

INTRODUCTION

1.1 Back ground of study

A large amount of literature in economics supports the premise that, besides other important causes, the performance and economic growth in the long run of the welfare of a country are related to the degree of financial development. Financial development is measured by causes, such as: depth, access, size, efficiency and stability of a monetary system, which includes its intermediaries, markets, range of assets, institutions, and controls. The higher the degree of financial development, the wider the financial services that allow diversifying risks. This increases the long run growth trajectory of a country and finally improves the success and welfare of consumers and producers that have access to financial services. The link between economic growth and financial development can be traced back to the work of Schumpeter (1912), McKinnon (1973) and Shaw (1973). As well as several other studies which evaluate financial development in countries (Cheung *et al.* 2005; Ahlin & Pang 2008; Alfaro *et al.* 2009; Fafchamps & Schündeln 2011; Kar *et al.* 2011).

To measure the degree of financial development, one must consider all the different factors that, together, contribute to the degree of efficiency of the facility of financial services. In thinking about to measure the degree of financial development, the various aspects of development are placed into the three categories of: policymakers, financial intermediaries, and financial access. The growth of banking industries as financial intermediaries plays an important role in financial development. Accord exists on the relationship between the size and depth in the financial system, and robustness and the supply of financial services are essential contributors to economic development. This occurs since the size of financial markets is viewed as an important part of savings and investment. The size (assets) of the financial system also matters since the larger it is, the bigger its capacity to benefit from the economies of scale, given the significant fixed costs prevailing in financial intermediaries. A greater financial system inclines to relieve existing credit limits. This makes it easy for firms to borrow and further improves the savings and channeling of savings to investors. Given that a big financial system must allocate resources efficiently and improve the monitoring of the use of funds, better accessibility to financing will strengthen the resiliency of an economy to shocks.

Banks are seen as key players in wiping out liquidity risk, which causes them to increase investments, illiquid assets and speed up the process of economic growth. One of the key measures of the banking efficiency is its size. The larger it is, the more capital can be channeled from savers to investors. This raises financial development, which in turn leads to greater economic growth. These measures of size span deposit bank money assets to gross domestic production (GDP), money supply (M2) to GDP, and private credit to GDP. Another key of the banking system is its efficiency. Direct measures of efficiency are aggregate operating ratios, such as the bank operating cost to assets, and the ratio of nonperforming loans to total loans, or the ratio of the output to the input of the banking sector. Efficiency is the capacity of producing or acting effectively with the lowest amount expense possible.

An indirect measure of efficiency is public ownership. Government owned banks tend to be less efficient, impeding the processes of channeling capital and credit allocation, which slows the process of financial intermediation. Conversely, such ownership is particularly significant in countries which are interventionist, underdeveloped financial, inefficient regimes, with low levels of income per capita and lowly protections of property rights (La Porta *et al.* 2000; Djankov *et al.* 2002; La Porta *et al.* 2002).

Measures of operating efficiency might make an incomplete picture of the efficacy of the banking system if it is not profitable. Conversely, if banks are profitable while performing poorly in the operating measures, then this indicate a lack of competition along with undue and a high level of inefficiency. Hence, a considerable amount of literature has been published on the factors affecting bank performance (Smirlock & Kaufold 1987; Molyneux *et al.* 1994; Molyneux & Forbes 1995; Choi & Hasan 2005; Peni & Vähämaa 2012). A significant relationship is found in the literature between bank performance and market power. The traditional collusion hypothesis proposes that market concentration lowers the cost of collusion between firms and results in higher than normal profits. On the other hand, the productive structure hypothesis postulates that the most efficient firms obtain greater profitability and market shares, and, as a consequence, the market becomes more concentrated.

1.1.1 Financial sector and banking in Persian Gulf Countries

Rapid economic growth in the Gulf Council countries (GCC) has led to large and variant financial needs, which, in turn, meet an underdeveloped financial system. It is considered by a lack of bond and derivative markets, a dominance of international banks in the project finance market, difficult access of small and middle enterprises (SMEs) to credit, and heavily concentrated equity markets in terms of sectors and ownerships (Woertz & Al-Shanfari 2010).

Despite the global turmoil, GCC economic growth remained strong in 2008, pushing the GCC's combined nominal GDP up to 1 trillion dollars. The region's economy continued to expand vigorously, especially in the first half of 2008 (about 7%), before it began to decelerate in the latter half due to the secondary effect of the global economic crisis, and averaged 5.7% (Baabood 2009).

High oil prices with a higher volume of exports between 2002 and the autumn of 2008 strengthened the key macroeconomic indicators in the six GCC countries, and the region achieved record budget surpluses over the seven years, before the global financial crisis caused prices to collapse and economic growth to stall (Baabood 2009).

Average oil prices being 45% higher in 2008 than in 2007, coupled with incremental additions to export volumes, gave another boost to the GCC's cumulative export earnings, which reached about 2.2 trillion dollars over the period. The ascent of oil prices was such that the current account surplus swelled dramatically from around 50 billion dollars in 2003-04 (year ending in June) to almost 400 billion dollars in 2007-

08, equivalent to over 30% of the GDP. In aggregate, the current account registered a cumulative surplus of 912 billion dollars over the period.

1.1.1.1 Economic Development and Finance

Based on more diversified economies and high oil prices, the Persian Gulf countries (PGC) (Saudi Arabia, UAE, Kuwait, Qatar, Bahrain, Oman and Iran) are currently witnessing one of the highest GDP growth rates worldwide, with a related development of domestic financial markets. A population growth has caused a boom in consumer markets; local real estate and multibillion investments are needed. From oil up and downstream projects to heavy industries, power plants, transport, water desalination and waste treatment, there is hardly a sector that does not need an increase of financial services, financing, and insurance. (International Monetary Fund (IMF), 2008)

1.1.1.2 Underdeveloped Gulf Cooperation Council Capital Markets

The increased need for finance meets underdeveloped capital market in the Gulf Cooperation Council (GCC). World capital market shows, on average, a balanced capital structure of 38% bank assets, 36% debt securities, and 26% stock market capitalization, the North Africa (MENA) and Middle East balance is heavily skewed towards bank assets (57%) with a strong stock market component (37%). Debt securities still play a slight role with only 6% (see Figure 1-1).

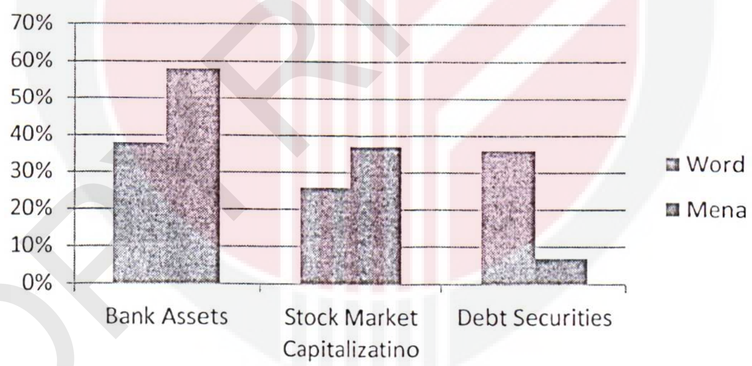

Figure 1-1: Capital market structure in Word and Mena

(Source: IMF Global Financial Stability Report 2008)

In the GCC, the percentage of corporate bonds issued in comparison to the GDP equalled 3.2% in 2007. In the China, the ratio was 10% and in the US it was 12%. An increase of the relative importance of bond markets in the overall capital structure of the GCC is certainly warranted. It could lead to efficiency gains, better capital access, risk assessment and improved price discovery. Though derivatives have fallen from grace in the wake of the global financial crisis, the nearly complete lack of derivative markets in the GCC could still be a weakness, and needs to be carefully assessed (IMF, 2008).

The economies of the country members of the PGC share several commonalities. All PGC countries are large oil exporters with fixed exchange rate regimes, which expose them to the vagaries of international oil prices. However, the PGC banking had some vulnerabilities that were revealed by the recent global crisis and the impact it had on the economies of the PGC countries. Among those are the increased reliance on external financing, and high exposure to the real estate and construction sectors, and equity prices. During the years of 2003–2008, pro cyclical government spending, oil price booms, plentiful banking liquidity, bullish consumers and investor sentiments spurred the non-oil real sector and rapid credit growth with an associated build-up of domestic imbalances (for example, asset price bubbles). However, credit growth was essentially funded by a stable domestic deposit base, and more volatile external funding became increasingly important. Figure 1-2 shows assets increase dramatically from 2003 to 2008 in Saudi, Emirates and Iran. Overall, the total asset has increased in PGC countries from 1998 to 2008, except in 2001, as shown in Figure 1-3.

The moderate impact of the global financial crisis on the PGC banking has generally showed the soundness of these banks. Banking in the PGC countries continues to be correctly capitalized across-the-board, with capital adequacy ratios well above minimum standards and at comfortable leverage ratios by international comparisons. There are, however, risks of a possible worsening of asset quality as the fallout from the crisis continues to materialize on banks' balance sheets. This risk is increased in countries with the highest credit growth rates before the crisis, and in systems that have a significant concentration in construction and real estate, as these have been hit hard throughout the PGC. The rise in available bank liquidity, and the consequent increase in lending rates, has been indirectly related with higher oil prices. This relation presents risks and introduces significant liquidity volatility for banks. International experience indicates that rapid credit growth in periods of high real economic growth is likely to result in high levels of asset injury once economic conditions reverse.

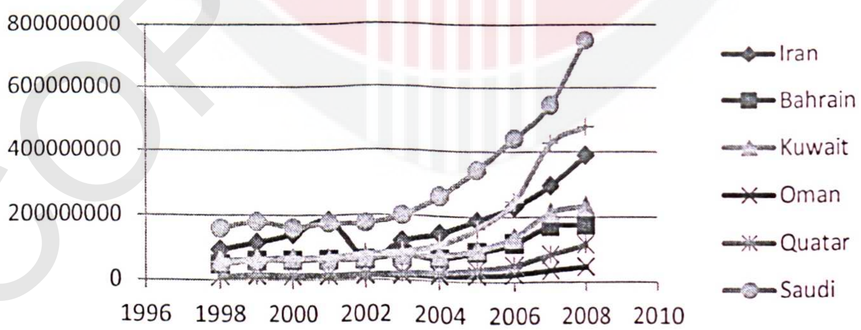

Figure 1-2: Banking assets in PGC in Million USD, 1998-2008

(Data Source: Bankscope, 2011)

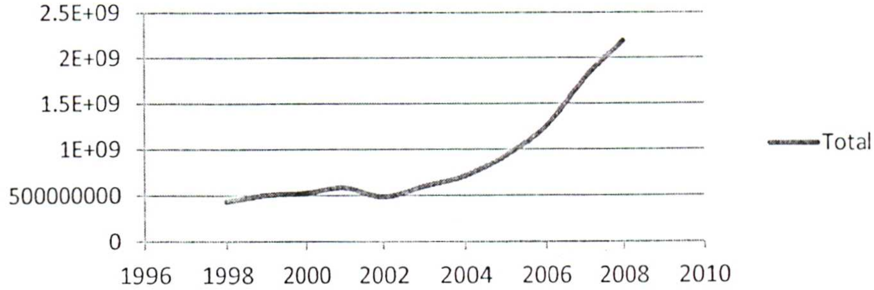

Figure 1-3: Total banking assets in PGC in Million USD, 1998-2008

(Data Source: Bankscope, 2011)

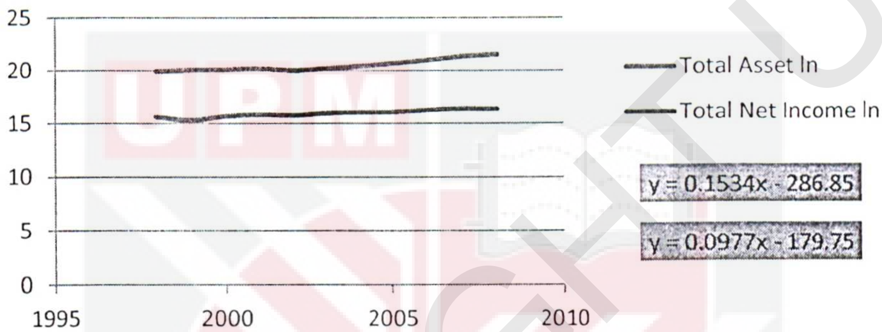

Figure 1-4: Total assets and net income growth, 1998-2008

(Data Source: Bankscope, 2011)

1.1.1.3 Reaction to the Global Financial Crisis

The PGC's (Persian Gulf Countries) stock market crash in 2006 and the current impact of the financial crisis in global have pointed attention to necessary areas of reform and regulation, ranging from corporate governance to monetary policy and credit bureaus. The worry of monetary authorities in the PGCs about high inflation rates has given way to an appropriate situation in the second half of 2008, as the global credit crunch has raised the potential threat of a deflationary contraction. Therefore, assessing central bank policies and possibilities of a coordinated reaction of the GCC countries to the global financial crisis, might help a reformulation of policy alternatives.

The most effects of the financial crisis, thus far, have not been caused by direct exposure to disturbed subprime assets, but, in the indirect form, as the PGCs countries and their expanding project finance markets have been affected by declining availability of large credit facilities and the rising costs of borrowing. While central banks in PGC had been preoccupied with inflation and runaway credit growth during the first half of 2008, now they have started to react to the liquidity crunch by monetary easing and other stabilizing efforts (guarantees on bank deposits). However, they have acted one-sidedly thus have not found a common policy like the European Union. If interbanking rates start to differ considerably because of their differing reception and different policies in each country, the more successful one country is in bringing down rates, the more likely it is to attract borrowers from neighboring countries. Authorities will need to address this, otherwise they may be tempted to impose some capital controls to make sure the accommodative measures they are undertaking will benefit their own economies and do not evaporate by open capital markets.

1.1.1.4 Wealth Funds and Foreign Investments

The domestic investment has been unable to absorb all of the oil produced revenues, which has led to a large current account surplus rivaling the one of China. This has caused an increasing demand of management services for steeply rising foreign assets. The appetite of the GCC's companies for foreign investors has also grown. All GCC countries are now members of the WTO, and, with a string of expected free trade agreements over the years, GCC companies act increasingly in a competitive and globalized environment, with a matching need to restructure businesses and focus on core activities. Companies like Emaar and Sabic have stated their goal to become global leaders in their respective fields clearly and have already undertaken corresponding gains (for example: Huntsman Petrochemicals, GE Plastics, DSM, John Laing Homes). The recent merger of National Bank of Dubai, Emirates Bank and the current interest of GCC investors in Dow Chemical also bear witness to this trend. In the wake of the crisis, the GCC faced multiple challenges as they have started supporting local markets and have been called on to provide extra capital to the IMF simultaneously.

1.2 Problem statement

The financial market in the PGC is generally dominated by banking, which is rather concentrated, with a few domestic players dominating the market. Banks have grown during recent years, to become a prominent source of financial intermediation in the Gulf countries. In all PGC countries, the largest five banks are domestic and account for 50–80% of the total banking assets.

For the last two decades, the pace of financial market capitalization and liberalization has increased in developing countries, including Middle Eastern countries. GCC market capitalization changed from $117 billion in 2003 to $1.1 trillion in 2005, but fell back to $650 billion by mid-2009. The PGC markets lack institutional investors, whose long-term horizons help dampen volatility.

Especially over the last decade, the number of established banks in the Persian Gulf area (PGCs), developing countries, has been increasing. Moreover, banking development in the banking industry has resulted in large universal banks in terms of total assets, geographical diversification and product. However, the banking is largely domestically owned. This reflects entry barriers and licensing controls on foreign banks, including PGC banks. Except for Bahrain, all PGC countries have limits on foreign ownerships. Therefore, the domestic banking sector in the GCC continues to have significant public and quasi-public sector ownership, though the majority of this is attributed to quasi-government ownership.

The economic system consists of two sectors: financial and real sectors. Both of these sectors act complementarily, have their own particular structure and can bring economic enhancement when interacting together. Also, the bank, as an important sector of financial market, can have a basic effect on the economy. The problems, for which this research attempts to find a solution, are:

First problem: A main aspect of banking is its efficiency. Measures of efficiency are aggregate operating ratios, such as the ratio of output to input in banking. Indeed, efficiency measurement determines how banks provide an optimal combination of banking operation with a set of inputs. On the one hand, one is asking oneself bank capability to efficiently and technically produce banking services for economic agents. Also, banks as financial companies look for profitability. Therefore, they are constrained from achieving maximum profit, due to regulatory restrictions (minimum reserve, capital adequacy requirements, etc). Their management has substantial control on inputs whereas the output side is beyond their control. So this study aims at assessing technical efficiency, in order to identify the suitable policies for increasing banks efficiency, so that they will be able to fully play their role of financial intermediary in the PGC region.

Second problem: What is the relationship between bank size and efficiency in the PGC banking sector? Nowadays, in Arabic countries, especially in the Persian Gulf area, the growing financial system, through banking development, is one of the main policies in financial systems. Consensus exists between the size and depth of the financial market and the supply and improves financial services that are important funders of economic development. This relationship occurs because the asset (size) of financial markets is viewed as a main determining factor of investment and savings. The total assets of the financial markets also matter because the larger they are, the greater their capacity to benefit from economies of scale given the significant fixed costs prevailing in banking industries.

A larger banking system tends to relieve credit constraints. Borrowing by firms further develops the process of savings and the linking of savings to investors. Given that a large banking system should assign capital efficiently and better survey the use of funds, improved accessibility to financing will enlarge the resilience of an economy to shocks. On the other hand, "Too big to fail" is a technical term in regulation and public policy that refers to businesses dealing with market complications related to macroeconomics, moral hazards, monetary theory and economic specialization. Due to the bank being too big, monitoring and banking activity may not operate well, which is defined by comparing banking efficiency and the total assets of banks. The relation of bank size and efficiency is an interesting topic of study because the two types of banking growth, promotion in bank's branches and inaugurating new banks, have both increased assets in the banking sector.

The ownership of banking has an important and strategic role in banking industries, especially in Middle East. Therefore, this study investigates bank ownership and efficiency in PGC banking. Investigating bank ownership and efficiency in PGC countries is important because large banks in this area have government ownership and investors (31% of banks have government ownership), which has put it in a position where the structure and base of the financial market in these countries is made, controlled and managed by government subcategories. The direct and indirect interference of the government can be shown through investigating banking efficiency in the private, foreign and government banking industries in PGC countries.

Although the economy markets in the Middle East and Persian Gulf area are going to change from government ownership to the private sector in this decade, the base of banking ownership in PGC countries such as Iran is under government influence. This is despite the banking industries being invested by private sector or foreign investors in most of these countries.

PGC countries indeed have more government ownership of banks and more interventionist governments, and it makes them common in some measures. These include measures of government intervention in economic life (regulation, price controls, black market premium, political rights, and government spending); measures of the efficiency of the government (tax compliance, corruption and bureaucratic quality); measures of the security of property rights, and investor protection; measures of the importance of state-owned firms in the overall economy in contrast to just in banking; measures of the first levels of financial development; and, finally, measures of the incidence of governmental and financial crises in the economy. This view of government ownership is buttressed by a large amount of evidence documenting the inefficiency of government enterprises, the political motives behind a public provision of services, and the benefits of privatization. A government can engage in financing firms in various ways: it can provide subsidies directly, it can encourage private banks, through rule and suasion, to lend to politically desirable projects, or it can own financial institutions, or partially itself.

The advantage of owning banks, contrary to regulating banks or owning all projects outright, is that ownership allows the government wide control over the choice of projects being financed while leaving the perform of these projects to the private sector. Ownership of banks, thus, promotes the government's goals in both the political and development theories. In the former, ownership of banks enables the government both to collect savings and direct them toward strategic long-term projects, finally leading to more efficiency in banking.

On the other hand, according to government performance in the financial sector, it seems that government bank ownership in developing PGC countries tends to have inefficient banking, lower profitability, lower margins, and higher overhead costs than comparable private and foreign banks. Hence, it can be important to know how banking ownership influences banking efficiency and compare what the difference is between private, public and foreign ownership in banking systems in the Persian Gulf area.

Third problem: The financial sector in Persian Gulf countries is currently experiencing serious reforms. It expects financial deepening, consolidation and more liberalization. Recent reforms are supported by successful sectorial diversification, which has resulted in a competitive market and double-digit economic growth.

How to study the effects of efficiency and market power on banking profit is the third problem of this study. In PGC countries, the influence of efficiency and market power is an advantageous subject to study. Although these countries have similar features regarding liberalization policies, foreign investment inflow, world trade organization, liberalizing trade, privatization, oil export, output growth and financial market structure, their banking performances are so different from each other that their efficiency depends on several specific features. On the other hand, the financial market policy in PGC countries is becoming more competitive. In reality, however, these changes occurred in the smaller banks while the larger banks became even bigger monopolies. The problem, according to the aforementioned, is the effect of efficiency and market power on banking performance in PGC countries.

During the last decade, the PGC financial system has been the focus of a series of transformations aiming at modernizing, liberalizing and improving financial institutions and market performance. Today, this system can be characterized by a high concentration of a few banks and increased size of assets. Therefore, more sophisticated performance evaluation measures are needed to better understand the function of banks and their overall performance.

The major banks in some PGC countries were also considerably weakened in performance and were unable to return deposits, which lead to government intervention. Especially in Iran, the government rehabilitation policies to resolve this problem in banking led to bank nationalization. This will lead to the banks that use governmental support becoming monopolies in this market. However, these banks may have lower efficiency than the banks that the government does not support. Therefore, turning major banks with low efficiency probabilities into monopolies results in low performance.

There are four types of banking market power in the area the study were conducted: competitive, monopoly, monopolistic competition and oligopoly; with higher monopoly intensity in banks supported by the government. However, each of the cases mentioned has different efficiency and performance levels in banking. Market power and efficiency certainly have a specific effect on banking performance; now the question is how both efficiency and market power impact banking profit.

1.3 Objectives of the study

The general objective of this study is to evaluate and review the banking system in Persian Gulf countries (Bahrain, Kuwait, Qatar, Oman, Saudi Arabia, and The United Arab Emirates and Iran). Hence, this thesis studies efficiency, ownership, size, market power and performance of the banking sector in the mentioned area.

The specific objectives are:

1) To measure the technical efficiency in PGC banks.

2) To investigate the roles of size and ownership on efficiency in PGC banks.

3) To examine the impacts of market power and efficiency on the performance of PGC banks.

1.4 Significance of the study

PGCs are developing countries, which are defined as middle-income countries according to the World Bank country classification. With this in mind, the development of all of the economic sectors is crucial for achieving a higher national income, GNP and economic growth as well, showing that the financial sector plays a very important role.

It is also possible that financial market growth will not help economic growth in developing countries. And, over the last decade, the number of established banks in PGCs developing countries has been increasing.

Therefore, leaders of the Gulf Cooperation Council (GCC) countries (Bahrain, Kuwait, Qatar, Oman, Saudi Arabia, and The United Arab Emirates), and Iran, have been promoting and adopting free trade policies during the past decade. These seven countries of the PGCs have carried out various measures to free their economies. These measures include opening their markets for liberalizing trade, foreign direct investment (FDI) and progressively moving toward market-based economies. Thus, the combined FDI inflows in the GCC member countries increased from 18.159 billion in U.S. dollars in 1996 to 247.550 billion in U.S. dollars in 2005 (UNCTAD, 2006). As a result, the size of foreign bank subsidiaries in GCC countries reached 229 units in 2005.

How the greater competitive pressure will affect local banks in PGCs depends, in part, on their ability to act and adapt efficiently in the new location. Banks that fail to do so will be driven off the market by more efficient ones. Therefore, information on bank size and efficiency is important, as it will enable policy-makers to plan proper and sound policies to direct their banking industry.

Historically, governments often undertake economic activity in the Persian Gulf states. However, in recent decades, the government has encouraged privatization in the financial markets. It happens through attracting foreign investment and domestic private investors. Of course, how this change occurs, and how quickly it occurs is different from one regional country to another.

Also, in some countries, including Iran, government ownership is growing along with the expansion of private and foreign ownership in the banking sector. Thus, this study focuses on banking finding out how the different types of ownership affect the operation of banks according to efficiency in the banking sector.

During the last decade, the banking industry in the Middle East has experienced a transitional period because of the deregulation of financial services and the development in the globalization of the industry. The impacts of these consequent changes were observable in areas such as the number of bank branches, the scope of banking operations, the quality of human resources and the technologies used in the banking as well as institutional structure of the banking industry. In the process, the competition conditions in the banking sector have changed; some banking becoming more competitive and some becoming bigger monopolies.

In such cases, the study of market power and market structure can identify and increase predictions in the regional banking market. In particular, the study of market power's impact on bank performance can also be examined and can produce comparable results for each of the banks with their region. This study examines how the banks' market power and efficiency have influenced the performance of the banking firms in Persian Gulf Countries.

Despite these facts, not many comparative studies of the effects on efficiency of bank size, banking ownership, market power and banking performance in developing countries appear in the literature, especially in the Middle East in recent years. Banking studies are important for banking industry planning in the Persian Gulf region. Therefore, this study aims to evaluate the relationship between bank size and efficiency, bank ownership and efficiency, market power and banking performance across PGCs. Clearly, this issue has deep policy implications because a result of this study could support the notion that allowing external or internal growth through mergers and gains is a proper policy. It would also aid the politicians and economists of the area to promote growth and economic prosperity in the region.

1.5 Scope of the study

This thesis will study on banking industries in Bahrain, Kuwait, Qatar, Oman, Saudi Arabia, and The United Arab Emirates and Iran from 1996 to 2010.

Table 1-1: List of 103 Banking Industries in Persian Gulf Countries (PGCs)

No.	Emirate	Bahrain	Iran	Kuwait	Oman	Qatar	Saudi
1	Abu Dhabi Commercial	Arab Corporation	Bank Keshavarzi	National Bank	Muscat SAOG	National Bank	Al Amoudi
2	Abu Dhabi Investment	United Bank	Bank Mellat	United Bank KSC	Ahli Bank SAOG	Ahli Bank QSC	National Bank
3	Abu Dhabi Islamic	Albaraka Group	Bank Melli Iran	Al Massaleh	Dhofar SAOG	Commercial Bank	Petroleum Investments
4	Al Masraf	Arab Financial	Sanato Madanm	Bank of Kuwait	Bank of Oman	Doha Bank	Al-Jazira
5	Emirates Investment	Arcapita Bank	Bank Refah	Commercial Bank	Dhofar	International Bank.	Banque Fransi
6	Bank of Sharjah	Develop Bank	Saderat Iran	Global Investment	National Bank	Development Bank	Islamic Development
7	United Arab Emirates	Financing Company	Bank Sepah	Gulf Bank KSC	Oman Arab Bank SAOG	International Islamic Bank	National Commercial
8	Commercial International	Bahraini Saudi Bank	Bank Tejarat	Gulf Investment	Oman Develop	Qatar Islamic Bank	Riyad Bank
9	Commercial Bank	BBK	Export	Gulf Investment	Housing Bank		Samba Financial
10	Dubai Islamic	Bahrain Bank BSC	Parsian Bank	Industrial Bank	International Bank		Saudi British Bank
11	Emirates International	Gulf Finance	Saman Bank	International Investor	International Investment		Saudi Hollandi
12	Emirates Industrial	Gulf Bank	Karafarin bank	KIPCO Asset	United Finance		Saudi Investment

No.	Emirate	Bahrain	Iran	Kuwait	Oman	Qatar	Saudi
13	First Gulf Bank	Investcorp Bank		Kuwait Finance			
14	Mashreq	Kuwait Finance		Kuwait Financial			
15	National Abu Dhabi	National Bank		Fund for Arab			
16	National Dubai	Shamil Bank		Kuwait Investment			
17	National Fujairah	TAIB Bank		Kuwait Projects			
18	Ras Al-Khaimah	United Gulf Bank		National Investments			
19	Umm Al-Qaiwain			Oman Exc			
20	SHUAA Capital						
21	Union National						
22	United Arab Bank						

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