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Foreign Banking, Financial Development and Economic Growth: Recent Evidence from MENA Region

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Foreign Banking, Financial Development and Economic Growth: Recent Evidence from MENA Region

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To my parents, family

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The nexus between financial sector, banking system, and economic growth has been one of the most heavily researched areas for many years. The access to finance and the successful functioning of financial sector have been recognized as a crucial matter for economic growth and development, especially in developing countries. In particular, financial and banking sectors' development has been found to play an important role in economic growth, but in the meantime domestic banking inefficiency has been reported to slow down that growth.

Equally important is the role of foreign banks in mitigating banking and financial inefficiencies. The foreign banks' expansion abroad is an important issue for both bankers and policy makers. The reason why foreign banks are looking for the optimal location is that they want to benefit from various competitive advantages available in the hosting markets. However, their primary goal is to attain a high level of profit with a reasonable risk profile. The policy makers and government are interested in formulating and/or adopting the relevant polices required to attract more investments, aiming to improve their own financial system' efficacy and consequently spur economic growth.

Considerable evidence in the academic literature investigates the motives and spillover of foreign banks' entry on the domestic banking system. For example, Haiss et al (2005) showed that foreign banks have the incentive, the know-how and expertise to spur financial sector development, while Claessens et al. (2001) and Bayraktar et al (2006) found that foreign banks are expected to contribute positively to economic growth by improving domestic banks' competitiveness. A recent study by Claessens et al (2009) argued that developed countries that have well structured regulatory systems and safe networks are expected to assist banks to

undertake projects with higher risk and higher return, including overseas investment. Others have investigated single country cases such as Miani and Sagan (2006), who investigated the motivations of foreign banks in Poland and their role in the Polish banking sector, with emphasis on the resulting changes in competitiveness, efficiency, and stability in the local financial system. They concluded that "only very efficient and profitable banks have a chance to survive". See Goldberg (2007) and Claessens et al (2008) for recent surveys on the motives and trends behind foreign banks' expansion.

Empirical research in this area is typically based on a broad cross section of countries, but comparatively little work has been done related to the MENA region which adopts modernized regulation and supervising systems, in addition to its financial openness and the consequent entry of foreign banks. The comprehensive studies of economic growth and finance in the MENA region are few and tend to focus on individual countries rather than on the region as a whole. A recent study by Bhattacharya and Wolde (2010) investigated the growth constraints in MENA region, found evidence that one of the key constraints in growth in the MENA region is the difficulty in accessing to finance. Makdisi et al. (2007) reported that the overall growth performance of the MENA region over the period 1960-2000 has produced mixed results and is characterized by a higher degree of volatility relative to other regions of the world. Nabli and Varoudakis (2004) showed that economic growth in MENA has generally developed more slowly than those of the major emerging market economies in Asia, Latin America and Central and Eastern Europe.

The aim of this thesis is to combine and investigate the interests of both foreign banks and policy makers. For the former it provides a better understanding of what factors have more effect on profitability; and for the latter our findings will help to enhance the functioning of their

countries' financial systems and thereby the economic growth. Hence, this research work is mainly divided into two parts:

The first part examines the profitability of foreign banks in nine MENA economies covering the period from 2002 to 2007. Using a panel dataset of 71 foreign banks, this part investigates two primary research subjects. First, the impact of selected macroeconomic performance, financial market and bank specific determinants on foreign banks profitability in MENA is investigated. Second; the effect of provision of Islamic Financial Services (IFS) in explaining profitability of foreign banks operating in the region is analyzed.

The second part investigates the nexus between financial development and economic growth in MENA region. The lack of clear and direct evidence of foreign banks' spillovers on economic growth necessitated shedding some light on this relationship through examining the role of foreign banks in enhancing the financial development and consequently economic growth. This part is attempting to contribute to current literature of finance, banking and growth in the context of MENA region by providing recent evidence on this nexus for the period between the years 2000 to 2007.

First Part

MENA Peculiarities and Profitability of Foreign Banks

MENA Peculiarities and Profitability of Foreign Banks

Abstract

This work examines the profitability of foreign banks in nine MENA (Middle East and Northern Africa) economies from 2002 to 2007. Using a panel dataset of 71 foreign banks, the paper investigates two primary research subjects: the impact of selected macroeconomic, financial market and bank specific determinants on foreign banks profitability and the effect of provision of Islamic Financial Services (IFS). The results show that the most significant factors affecting foreign banks' profitability in MENA are capital, total assets and liquidity ratios at bank level, and stock market capitalization, trade volume, bilateral trade and level of income per capita growth on macro and banking industry level. Surprisingly, FDI (Foreign Direct Investment) implies a negative relation between the bank profitability and foreign capital flows, which could be due to the unspecified nature of FDI flows, and/or implicit governmental entry barriers. Furthermore, this paper reports an adverse influence of the provision of IFS which could be a result of one of the following; (I) the slowing development of the new IFS intermediary market in MENA; (II) the lack of awareness of Islamic banking tools and services compared to its conventional counterparts. Finally, factors such as concentration ratio, stock market trading volumes and turn over ratios have been investigated but appear to be insignificant factors.

JEL Classification Code : G21, G15 ,C23, F21
Key words: Banks, Profitability, Foreign Direct Investment, MENA

1. Introduction

Foreign bank expansion abroad is a topic of interest for both foreign banks and policy makers. On the one side, foreign banks are looking for optimal location decision, aiming to attain higher levels of profitability with a reasonable risk profile and benefitting from different competitive advantages available in the host market they target. Conversely, policy makers and regulators are interested in formulating policies to attract more investments and emphasize those economical and legislative tools that are expected to foster or control the penetration of foreign banks in their countries.

While many studies have focused their attention on the determinants behind foreign bank expansion in other host countries, few empirical works are directed at developing countries and still less of these studies considered the Middle East and North African region (MENA) despite its potentiality and importance as an emerging financial market. This paper explores a set of macroeconomic, financial market and bank specific variables, examining their effect on foreign banks profitability in context of selected MENA economies using an unbalanced panel dataset of 71 foreign banks operating in the region covering the period from 2002 to 2007.

The study proposes a new way of thinking about foreign banks entry decisions and profitability that goes beyond traditional ways of analyzing costs and benefits to factors that may reverse those calculations. The added value of this work is that it takes into account a new set of determinants that seem to be adequate for studying foreign banks profitability. Furthermore develops a model that relates profitability not only with foreign banks expansion but also to their adoption to Islamic financial services. Moreover, all variables are jointly considered, while in previous literature each factor was taken per se.

Two primary research questions will be investigated throughout the paper. Firstly, the impact of selected macroeconomic and banks specific determinants (FDI, Bilateral trade, stock market development, nonresident banks loans, bank size, liquidity, capital strength, and credit risk) on foreign banks profitability in MENA will be explored. Secondly, the paper will investigates the effect of the provision of Islamic Financial Services in enhancing or explaining profitability of foreign banks operating in MENA.

The remainder of the paper is organized as follows. In Section 2 a brief literature review is presented. Methodology, data sources and variables definitions are discussed in Section 3 and the econometric framework and model estimation follow in Section 4. Finally, the results of the empirical tests are presented in Section 5 and a conclusion follows in Section 6.

2. Literature Review

This section reviews and presents the main literature which investigated several topics related to foreign bank entry and profitability. Section 2.1 studied the motives for foreign banks to operate abroad and how profitability plays the critical role in bank's decision. In Section 2.2 we shed some light on the role of Islamic banks that have grown rapidly in recent years as a prominent source of financial intermediation in the most of MENA countries and how the demand for Islamic financial tools affects banks performance. Finally, Section 2.3 discusses in brief the entry barriers and licensing restrictions that have taken place in the MENA region, and the role of governments to relax and/or remove these barriers.

2.1 *Profitability and Foreign Banks Entry*

Foreign banks expand abroad to further pursue profits by increasing their customer base, seeking new market opportunities, following their clients, diversifying their risk, and benefitting from the favorable regulations and incentive offered by the host countries. Very clearly all these objectives are driven by the banks' overall goal of achieving a higher profitability with a reasonable risk level.

Claessens et al. (2008) studied banks entry in developing countries. They reported a positive relationship between foreign bank entry and common language, colonial links, FDI and bilateral trade, but a negative relationship for entry restrictions, inflation and tax regimes. Catalysts like FDI and trade are often seen as contributing considerably to sustainable growth in developing countries. While FDI is seen as the major source of new technologies, advanced organization and management methods, trade reforms are found to be more effective when they are combined with the maintenance of macroeconomic stability and sound institutions.

Empirical research has shown that FDI in banking is indeed correlated with the amount of bilateral trade between home and host countries (Grosse and Goldberg 1991). Yamori (1998) developed a model revealing the positive correlation between the level of bilateral trade, FDI and bank entry in the United States. However, an important study by Williams (2003) investigating foreign banks' profitability in the Australian market, found that bilateral investments and trade between home and host countries have no statistically significant effect on measuring profitability of foreign banks. Van Horne (2006) indicated that the dominance of intraregional foreign banking reflects the importance of interregional trade and FDI flows, and the priority

given to regional cooperation and integration. In addition, they found an important correlation of geographic linkages, language and ethnic ties and the decision to operate abroad.

Bank entry decision could be realized through different modes, such as *de novo* investment, M&A, opening of subsidiaries and/or branches. Following Goldberg and Saunders (1981), Haselman (2006) showed that banks that move abroad due to bad economic conditions in their home countries considered as one of the "push factors" were found to be more likely to return to their home countries once economic situation improved. Laabas et al. (2009) investigated the determinants of interregional Arab FDI and showed that FDI is very erratic and unevenly distributed among Arab countries. Furthermore, they demonstrated that investment freedom encourages FDI inflows. Clarke et al. (2003, 2006) showed that foreign banks are guided not only by their desire to follow their domestic clients abroad, but also to pursue general market opportunities. They argued that "the motivation of following clients" is less relevant in developing countries, suggesting that foreign banks penetrating developing countries are mainly interested in pursuing profit opportunities. Literature on foreign banking suggests that long-term profit interests is the main driver that most investors in the emerging markets are looking for, as these markets offer the potential for strong business growth across the various client groups.

We will have a brief review of the research on banking profitability that were either conducted at country or cross-country levels for developing countries. In the meantime, it should be noted that until recently far less study and research has been conducted in MENA region.

For the studies of country level, an early study by Hasan and Marton (2000) investigated the Hungarian banking sector during the transitional process to the market oriented system. They suggested more liberal policies towards foreign banks' involvement with the domestic institutions, which can help to build a relatively strong and increasingly efficient banking system.

Samad Abdus (2008) investigated the Bangladeshi banking sector and showed that bank specific factors are more consistent in explaining bank performance in Bangladesh banking industry, however he suggested policy makers to encourage more liberalization, reduce government control and enhance regulations. A more recent study by Sufian et al (2009) examined also the Bangladeshi banks' profitability between 1997 and 2004, they reported that bank specific characteristics such as credit risk and cost have significantly positive impacts on profitability. However, the non-interest income showed a negative relationship. For the macro level variables their results didn't show any significant impact on banks profitability, except for inflation. Ben Naceur and Goaied (2008) investigated the Tunisian banking sector between 1980 and 2000: they showed that high net interest margin and profitability tend to be associated with banks that hold a relatively high amount of capital, and large overheads. In examination of the Australian banking sector Williams (2002) studied the impact of defensive expansion approach on profitability: on one hand, he found that it has an effect on multinational bank size increase, however, little impact upon the multinational bank's profits has been reported.

The performance of Chinese banking sector during the post-reform period from 2000 to 2005 has been investigated in a separate study by Sufian and Habibullah (2009). They argued that the continued success of the China banking sector depends on its efficiency, profitability, and competitiveness, and those who are able to offer more new products and services are more profitable. An examination of motivations of foreign bank expansion in Poland and their role in Polish banking sector has been introduced by Miani and Sagan (2006). They concluded that "only very efficient and profitable banks have a chance to survive".

Regarding panel studies, Pasiouras et al. (2007) examined factors influencing the profitability of domestic and foreign commercial banks in the European Union and was one of first studies

that distinguished between foreign and domestic banks profitability. Molyneux and Thornton (1992) is one of the early cross-border researches that firstly analyzed profitability determinants in 18 European countries. A recent study by Ben Naceur and Omran (2008) investigated the impact of bank regulations, concentration, financial and institutional development on commercial banks profitability in MENA region. They recommended that enhancing competition through easing entry of foreign banks should be accommodated since it could reduce interest margins by intensifying competition. Section 3.2 shed more light on determinates of foreign banks profitability.

The MENA banking sector presents unique characteristics in terms of its ownership, structure and growth potential. Many financial institutions including financial intermediaries were established following the western model[1]. Over the last two decades the region witnessed a wave of liberalization in its financial sectors like many other developing countries. Lee (2002) investigated financial liberalization in MENA, showing that foreign banks have a beneficial impact on the domestic financial system and that financial sector development is positively related to foreign bank presence.

Turk-Ariss (2008) examined 12 highly concentrated MENA banking markets for the period from 2000 to 2006 and showed that, except for countries of North Africa where monopolistic conditions were present, the market structure in MENA banking system can best be described as monopolistically competitive. Other studies such as Al-Muharrami (2009) examined competitiveness, concentration and market structure of Qatar's financial market between 1993 to 2002; he found that this financial market is very concentrated and its banking sector operate under monopolistic competition, he pointed out the importance to grant mergers among banks .

[1] Many countries in MENA were colonized by western countries until the middle of the 20th century where the models implied in these western countries shaped the financial systems of most MENA economies.

The financial sector in the GCC is generally dominated by the domestic banking sector, and foreign banks are mostly taken the form of branches, in many cases as single branches. As such, foreign bank presence in Bahrain and the U.A.E. represented 57 and 21 percent of total assets, respectively; for a recent review on the GCC[2] banking sector, see Al-Hassan et al (2010).

Poghosyan et al. (2009), investigated the effects of oil price shocks on banks profitability in 11 MENA economies between 1994 and 2008, and found indirect effects of oil shocks on banks' profitability, on the one hand they claimed that macroeconomic, institutional and country specific factors are the main determinants affected by these shocks rather than bank specific factors; in meantime, these shocks show more significant effects on banking type, for the investment banks rather than commercial or Islamic banks are more effected.

The recent global crisis revealed some effects on different MENA countries, especially the GCC banking systems, among those are increased reliance on external financing, and high exposures to the real estate, construction sectors and equity prices. In a recent study, Al-Hassan et al. (2010) analyzed the development of banking sector in six GCC countries. They showed that the witnessed rapid credit growth in the oil boom period preceding the financial crisis caused an increase in lending rates that have been indirectly associated with higher oil prices; they suggested the policy makers in GCC, from one hand to evaluate policy measures that could dampen the impact of oil prices on economic activity and the financial sector. On the other hand, to re-evaluate the liquidity management practices that generally relies on stable deposits as the main source of funds.

[2] GCC (Gulf Cooperation Council) member countries include Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (U.A.E.).

Given the previous studies, the relation between FDI, trade and foreign bank expansion decision, and consequently their expected impact on profitability will be analyzed. This paper addresses these relations in the context of MENA countries, where the following propositions will be tested:

Hypothesis # 1: Profitability of foreign banks operating in MENA is expected to be positively related to FDI and/or interregional investment flows.

Hypothesis # 2: Profitability of foreign banks operating in MENA is expected to be positively related to bilateral trade in MENA region.

2.2 *Islamic Financial Services*

When demonstrating the trends of foreign banks in MENA, we should not forget or neglect the growing demand for Islamic financial services[3]. While having been extensively liberalized in the recent decade, allowing the entry of foreign Islamic financial institutions that offer both domestic and international banking business, MENA markets see many large international banks (e.g., BNP, HSBC, Commerzbank, Paribus, and Citicorp) introducing Islamic financial services (IFS) divisions that offer separate Islamic or Sharia-compliant products within its conventional banking structure.

In the present time IFS are receiving a great deal of attention; thus, identifying and/or measuring them has become recently a fertile research area. Meanwhile, this attention has increased the pressure on foreign banks, making the capability to provide the Islamic financial services an entry barrier and giving a competitive advantage to those banks that best perform in

[3] Islamic banks' finance products include Murabaha, Ijara, Istisnaa, Mudaraba, Musharaka, and other Islamic banking products.

this field. Iqbal and Molyneux (2005) showed that Islamic banks posted a higher "ROA"[4] than the average achieved by other banks, while in terms of "ROE" they were slightly lower than world average.

The Islamic banking model operates under different principles than its conventional counterpart; while Islamic banks use an interest-free banking, risk sharing model, the conventional banking uses traditional interest-based banking model. While the first model depends basically on equity financing and customer deposit accounts. On the contrary, conventional banks use both debt and equity to finance their investments. Hassan and Bashir (2003) studied the determinants of Islamic banks profitability worldwide from 1994 to 2001 and found a positive relation between capital and loan-to-asset ratios and banks' profitability. Other studies as Bashir (2000) noted that foreign Islamic banks are more profitable than its Islamic and conventional counterparts in the host country. A recent study by Ben Khediri (2009) investigated the determinants of Islamic bank profitability in the MENA region from 1999 to 2006. They found evidence that capitalization and management efficiency enhance bank profitability, and Islamic bank profitability is higher in countries with better socio-economic conditions and better legal systems. Moreover, they reported a positive relationship between economic growth and banking profitability. Sufian et al (2008) investigate the performance of Islamic banks in 16 MENA and Asian countries between 2001 and 2006. Their results show that the MENA Islamic banks have exhibited higher technical efficiency compared to their Asian Islamic banks counterparts. Given the previous studies and expected relation between Islamic financial services and foreign banks profitability, the following propositions will be tested:

Hypothesis # 3: Islamic financial services "IFS" are expected to have a positive effect on the profitability of foreign banks operating in MENA.

[4] *(ROA) is the return on assets , (ROE) is the return on equity.*

2.3 *Entry Restrictions*

Restrictions imposed by governmental entities are seen to be necessary for the prevention of ruinous competition, unsafe and unsound banking practices, and bank failures. Berger (2007) differentiated between two types of governmental barriers, explicit and implicit. On the one side, he showed that the major explicit governmental barriers are rules and regulations that limit foreign entry and/or restrict the activities and expansion of foreign banks. On the other side, he argued three types of implicit governmental barriers: Firstly, differences and weaknesses in regulations and legal, judicial, and/or information systems. Secondly, are the actions of government officials to delay and/or deny foreign entry. Finally, barriers that may occur due to subsidizing a state bank ownership by the government. Barth et al. (2008) showed that restrictions on banking activities (entry) increases bank fragility, and hence the probability of banking crises. Buch et al (2003) developed a model of foreign bank's entry and found an empirical evidence supporting the hypothesis that large information barriers discourage entry of foreign banks.

Many authors argued that restricting banks from engaging in non-lending activities such as securities market, insurance, real estate and owning of non-financial firms would reduce risk taking and therefore increase banking system stability.

One of the most difficult barriers of firms operations and growth is accessing to credit which can be measured through two indicators: Credit registries and legal rights of borrowers and lenders. The first indicator declares the well functioning of the credit market. The depth of credit information[5] introduced by Doing Business[6] report "World Bank". shows the following statistics

[5] *Depth of credit information index, which measures the extent to which the rules of a credit information system*

in context of MENA region, indicating the availability of more credit information from either a public registry or a private bureau to facilitate lending decisions. The index ranges from 0 to 6 with higher values. Firstly, the highest value reported for credit information index is "five" for (Egypt, Emirates, Tunisia).and "four" for Bahrain, while for the rest of the countries (Jordan, Morocco, Qatar), the reported value is "two" out of six.

The legal right index is another measure on the degree to which collateral and bankruptcy [7] laws protect the rights of borrowers and lenders. The index ranges from 0 to 10, with higher scores indicating that collateral and bankruptcy laws are better designed to expand access to credit. In context of MENA, the index reported low levels equaled to "three" for the following countries (Algeria, Egypt, Morocco, Qatar, Tunisia) and "four" for the rest of the countries (Bahrain, Jordan Emirates).

3. Methodology and Data

3.1. Data sources and sample selection

The aim of constructing this dataset is to document and investigate the main determinants affecting profitability of foreign banks in selected MENA economies. This section describes data sources and sample selection methodology. The main source for bank specific variables[8] was the Bankscope Database. Data on banks providing Islamic services are not reported in Bankscope, this necessitated going within each bank website individually and/or its annual reports to see

facilitate lending based on the scope of information distributed, the ease of access to information and the quality of information.

[6] *Project by the World Bank on measures of business regulations.*

[7] *The two indexes (credit and legal rights indexes) introduced by doing business 2009.*

[8] *Bank specific variables used in the dataset are in US $ and recorded according the international accepted accounting principles, as reported in bank scope.*

whether the bank provides Islamic Sharia compliant services or not. Regarding macroeconomic variables, the World Bank, IMF (International Monterey Fund), UN Comtrade, DOT database (Directions of Trade), Arab Investment & Export Credit Guarantee Corp. and Heritage Foundation were among the main sources.

We used the common literature definition of foreign banks, which considers a bank as foreign-owned if at least 50 percent of its shares are owned by a nationality other than the host country in a given year. The source country is defined as the country of nationality of the largest foreign shareholder and the ownership of shares is that of "direct ownership".

Research to date leaves the question of whether the financial ratios can be used to meaningfully distinguish between Islamic and conventional banks unresolved. This issue was recently addressed by Olson and Zoubi (2008) who investigated measures affecting banks profitability in the GCC region (Gulf Cooperation Council), and found that profitability ratios are good discriminators between Islamic and conventional banks operating in this area. Both commercial and investment banks, in addition to Islamic banks operating in Algeria, Bahrain, Egypt, Jordan, Kuwait, Morocco, Qatar, Tunisia and Emirates are investigated in this paper.

The dataset extracted from Bankscope Database (2008 version) includes foreign banks active between 2002 to 2007 for at least one year other than the year of establishment. Only countries that have at least four foreign banks have been included.

Two main issues were raised during sample selection phase. The first problem occurred since Bank Scope gives only the last year status on the bank structure (foreign or domestic). Hence the problem of changing foreign ownership structure and/or merger and acquisitions may take place during the same foreign bank operating life. This problem necessitated a year by year

investigation of the ownership[9] status of the banks across the time series analysis; i.e. we can find bank "x" active in 2007 as a foreign owned bank while the same bank is not considered to be foreign in other years . According to Table (A.1) in the appendix, a yearly development of foreign banks across different countries, classified by the bank type, was reported.

Although banks reported to provide IFS, the initial date of these banks to provide these services, over the six years is not given, in either Bank Scope or banks' websites. In other words, as for data limitations purposes on the actual initial date when the bank started offering these services; a bank was considered to provide IFS if one or more IFS services were offered by the foreign bank, regardless of the initial date of providing these services; within that six years time period.

The final dataset is unbalanced panel dataset of 71 foreign banks from nine MENA countries namely Algeria, Bahrain, Egypt, Jordan, Kuwait, Morocco, Qatar, Tunisia and Emirates with total of 249 observations. The original sample covered 14 countries, with 123 foreign banks. However after applying the above mentioned filtering rules, some countries were excluded from the sample, due to unavailability of data on some variables or data that didn't meet sample selection criteria. Finally, we can notice that the sample is dominated by commercial banks with 70% of banks (49), followed by Islamic banks with 19% of banks (14), and finally investment banks with 11% (8), are included in the dataset. Noteworthiness, the selected sample is dominated by foreign banks from within the MENA region with 70% of total banks.

Research on the determinants of banks profitability was generally devoted to the US and European banking markets and had focused on both the returns on bank assets and equity that

[9] *Included banks are those that been foreign owned for at least three years in our period of investigation (2002-2007).*

traditionally explored the impact of banks performance. In this study ROAA "Return on Average Assets" has been used as a key proxy for bank profitability. Golin (2001) showed that ROAA is a key measurement of bank' profitability that shows how effectively the bank's assets are used to generate revenues. ROAA is chosen as the key proxy for bank profitability instead of the alternative return on equity (ROE) for a few reasons, among which, the analysis of ROE disregards financial leverage and the risks associated with ROA, (see Athanasoglou et al. 2008).

3.2. Determinants of foreign banks profitability (Variable Definition)

Determinants of foreign banks profitability can be classified into three main categories: macroeconomic, financial market (banking sector), and bank specific determinants. Within the macroeconomic category, there are three main determinants that are totally external of bank control: FDI, bilateral trade and country level of growth that is captured by GDP per capita growth. The financial market determinants such as stock market capitalization, nonresident bank loans, and offshore deposits directly affect the sector where the bank operates. Finally, the factors with most direct impact on bank profitability are bank specific variables. In literature these determinants show a high significance relation as they are under the full control of the bank, and show if the bank has a strong base (capital, total assets). Moreover, they demonstrate how the bank can respond to financial and other macroeconomic factors.

Internal factors are mainly influenced by a bank's management decisions and policy objectives. While the external determinants are those variables that reflect the overall macroeconomic environment where the foreign banks operate, Flamini et al. (2009) showed that bank-specific and macroeconomic factors are the most important explanations for high returns. Furthermore, bank profitability is associated with larger bank size, activity diversification and

private ownership; they reported that macroeconomic policies that promote low inflation and stable output growth boost credit expansion. A recent study by Athanasoglou et al. (2008) investigated the effect of bank-specific, industry-specific and macroeconomic determinants on the profitability of Greek banks.

Previous literature which investigated profitability in banks can be seen from a wide perspective in three broad categories. The first includes studies that focus on determinants of banks profitability. The second consists of those studies comparing domestic and foreign banks. The third consists of studies examining the profit and cost efficiency of the banks.

Studies that investigated internal and external profitability determinants in a single country include, Berger, (1995); Guru et al., (1999); Ben Naceur, (2003); Mamatzakis and Remoundos, (2003); Kosmidou et al. (2006), Samad, Abdus (2007), Kosmidou and Zopounidis (2008), and Athanasoglou et al. (2008). In contrast, examples of the panel studies include, Pasiouras et al. (2007), Molyneux and Thornton (1992) and a recent study by Flamini et al. (2009).

3.2.1. Bank specific determinants

Five bank specific variables are used in our analysis, total assets, capital , liquidity and credit risk ratios and IFS**.** Total assets (TA) is used to capture the possible relationship between foreign bank size and profitability. Banking Capital (EA) is the ratio of equity to total assets, used as a proxy of capital strength. Goddard et al. (2004) studied profitability of some European banking markets between (1992 and 1998). They reported a positive relationship between capital–assets ratio and profitability. In contrast, they found a weak relationship between bank size and commercial banks profitability. Athanasoglou et al. (2008) indicated that banks with a sound capital position are able to pursue business opportunities more effectively and have more time

and flexibility to deal with problems arising from unexpected losses, thus achieving increased profitability.

Liquidity ratio (LA) is the ratio of loans to total assets and serve as proxy for bank liquidity and the ability of the bank to meets its obligation, especially in the short run. Another alternative liquidity ratio can be the ratio of loans to deposits, but one major disadvantage of this determinate, as pointed by Athanasoglou et al. (2006**),** is that it doesn't include indicators on banks remaining assets or nature of other liabilities. A positive impact on profitability, interest margin and liquidity was reported by Abreu and Mendes (2001) in their examination of some European banking markets (France, Spain, Germany and Portugal). Other studies, such as Pasiouras et al. (2007), used the ratio of loans to deposits and short term funding as a proxy for banking liquidity management and found a negative relationship with profitability. While Flamini et al. (2009) used it as proxy for bank risk. The ratio of loans to deposits and short term funding is used to capture the Credit risk (LD), This proxy is used for measuring bank exposure to default and asset quality deterioration and is expected to have a positive relationship with profitability of foreign banks[10]. A recent survey examined the banking sector reforms that have taken place in MENA region introduced by Ben Naceur and Omran (2008). They used bank level data from 10 MENA countries to assess the impact of financial development, bank regulations, market structure and institutional factors on bank efficiency and profitability between 1989 and 2005. Their finding showed that bank specific characteristics such as bank capitalization and credit risk have positive and significant impacts on banks' net interest margin, cost efficiency and profitability. However, for the macroeconomic and financial level data with the exception of inflation, no significant impact on net interest margin has been reported. Moreover, the stock

[10] *Other measurement for credit risk is loan loss provisions , this paper will follow the first measure (loans to deposits)as the second one is more likely to be used to realize loss than risk, in addition to loan to loss provisions is part of the accounting of the revenue itself.*

market development proxy reported a positive and significant coefficient, suggesting that banks that operate in a well-developed stock market environment tend to have greater profit opportunities.

The level to which the bank is adapting for the Islamic Financial Service (IFS) is being represented in our model using a dummy variable that equals to one if the bank is Islamic or has an Islamic window that provides IFS and zero otherwise[11]. This variable tries to quantify to which level the bank is providing IFS.

To isolate the effect of bank characteristics it was necessary to control for other macroeconomic and financial market indicators. Some of these indicators were presented in previous literature. Others, such as offshore bank deposits and nonresident bank loans, to the best of our knowledge, are firstly introduced by this study, either as a proxy for profitability of foreign banks or in context of the MENA region.

3.2.2. Macroeconomic determinants

The macroeconomic variables are classified into two main subgroups: First, nonfinancial indicators, such as GDP per capita growth, FDI, bilateral trade and trade volume. And second, financial structure and banking sector indicators like stock market capitalization, nonresident banking loans, and offshore deposits.

Most empirical research work on FDI in MENA region was carried out on total countries' FDI inflows. Bilateral investment flows within or outside the region was highly neglected, probably

[11] *a general assumption set to consider the foreign bank provides IFS if one or more IFS served by this bank regardless the initial date of providing these services. Since no available data on the actual initial date of providing these services either bank scope database or in most banks websites.*

due to lack of accessible and consistent series data. This paper will investigate the effect of inter-MENA investment flows and bilateral trade on profitability[12].

The potential gains and benefits from trade facilitation (i.e removing obstacles, time and cost required for imports and exports process) may be greater than those arising from only quota reductions and tariff. Bilateral Trade is investigated in this study. This indicator is calculated as a summation of lag of bilateral imports plus bilateral exports of products and services between the home and host countries.

A remarkable lack of empirical evidence on direct links between banking sector, openness and economic growth has been reported; most empirical evidence emphasized indirect links which found foreign banks play a statistically and economically significant role in enhancing and improving the efficiency and competitiveness of domestic banks. Bayraktar et al (2006) investigated links between foreign banks and economic growth, and showed that foreign banks are expected to contribute positively in increasing economic growth by improving domestic banks' competitiveness. They indicated that direct effects of foreign banks on the domestic financial markets can take forms of new and better management techniques, technology, and services. Moreover, they may also improve access to international markets, and help the development of institutions by improving the flow of information about borrowers[13].

Regarding financial market structure indicators, stock market capitalization (Stmktcap) accounts for the value of listed shares to GDP and measures the overall level of development of stock and financial markets, its size and their importance in financing the economy. In addition

[12] *Data on inter-investment and exports between MENA countries, provided by Arab investment & exports guarantee corporation , while data on FDI flows is from UNCTAD. finally, data on bilateral trade are extracted from DOT (Directions of Trade database) .*

[13] *Second part of this study shed more light on the relation between foreign banks and economic growth.*

to the relationship between bank and market financing, Beck et al. (1999) pointed out that across income groups there is a significant variation in size, activity and efficiency of stock markets. The countries with a higher level of GDP per capita have more active and efficient stock markets and the small but active stock markets have a higher turnover ratio, whereas a large and less liquid stock market is expected to have a low turnover ratio. Finally, the ratios of loans from non-resident banks to GDP and offshore bank deposits to domestic bank deposits, are used as proxies for the banking sector credibility to promote foreign capitals.

It was important to control for the time dimension in our model to see the existence of significant shocks that may create a trend on profitability. According to Chung-ki Min (2008), the unobservable time-specific effects included in the error term are correlated with the explanatory variables and thus could violate the orthogonality condition required by the random-effects models.

Table (1) Variables definition and notations

Variable	Description	Source	Hypotheses Direction
ROAA	Ratio of return on average total assets	Bank scope	Dep. variable
First : Macroeconomic variables			
	A. Non financial market indicators		
ln_GDP_capita	Logarithm of GDP per Capita growth.	World Development indicators 2009	+Ve
ln_fdi	Log of Foreign Direct Investment Flows into the host country	UNCTAD-WIR	+Ve
ln_bil_trade	Log of bilateral imports plus exports of products and services between host and home country in a given fiscal year	Directions Of Trade (DOT) database	+Ve
bil_imp	Bilateral imports	(DOT) database	--
bil_exp	Bilateral exports	(DOT) database	--
ln_trade_vol	Total imports plus exports of products and services	UN Com.Trade	+Ve
	B. Financial market and banking sector indicators		
Stmktcap	Stock market capitalization ratio is calculated as the value of listed shares divided by GDP. It measures the overall level of development of stock and financial market in the host country.	Financial Structure dataset.	+Ve
nrbloan	Ratio of loans from non-resident banks to GDP	Financial Structure dataset	+Ve
offdep	Ratio of offshore bank deposits to domestic bank deposits	Financial Structure dataset	-Ve
Second : Bank specific variables			
tot_ass	Total assets is used to capture the relationship between foreign bank size and profitability.	Bank scope	+Ve
liquidity	Ratio of loans to total assets serves as a proxy for bank liquidity	Bank scope	- Ve
Credit risk	Ratio of loans to deposits and short term funding	Bank scope	+Ve
Capital	Equity to total assets is a proxy of capital strength.	Bank scope	+Ve
IFS	Dummy variable equals to one if the bank is an Islamic or have an Islamic window that provides IFS & zero otherwise.	Bank scope & banks websites	+Ve

4. Model estimation

The nature of the relationship addressed in the hypotheses necessitated the use of panel data or longitudinal data, where our dataset contains foreign banks in different MENA countries across a six year time period. Some benefits[14] of using panel data over the conventional cross-sectional or time series datasets analyses are that it gives a large number of data points, provides more informative data and increases the degrees of freedom; in addition, using panel data to reduces the co-linearity among explanatory variables and controls for individual heterogeneity, hence improving the efficiency of the econometric estimates.[15] See Cheng Hsiao (2003) and Baltagi (2005.)

The estimates of a random effect model are being used in the regression due to data typology and the nature of variables that are bank specific and country specific. A fixed effect model is not appropriate for this type of data due to the following:

- The inclusion of cross-section variation in most variables (e.g. random bank individual effect).

- The data does not satisfy the basic condition of fixed effect models, mainly that the bank inferences (bank specific variables) should be restricted to the behavior of these sets of banks for all variables. The case of our model is different, since we have banks that not only relate to its bank inferences but also to common country inference. see Baltagi (2005) for the differences

[14] *As mentioned by Cheng Hsiao (2003) panel data become increasingly used in developing countries analysis, where these countries may not have a long tradition of statistical collection.*

[15] *For more information on the advantages of using panel data see Cheng Hsiao (2003) analysis of panel data, Cambridge university press, 2nd Edition. and Badi H. Baltagi (2005), Econometrics analysis of panel data, 3rd edition.*

between fixed and random effect models; hence the alternative random GLS estimation[16] technique was used. The regression model equation is the following:

$$ROAA_{i,c,t} = \alpha + \beta_1 X1_{i,c,t} + \beta_2 X2_{i,c,t} + dum_1 IFS + dum_2 year + \varepsilon_{i,c,t}$$

$$ROAA_{i,c,t} = \alpha + \beta_1 bank\_spc_{i,c,t} + \beta_2 macro\_var_{i,c,t} + dum_1 IFS + dum_2 year + \varepsilon_{i,c,t}$$

ROAA is the dependent variable measuring the profitability of foreign bank "i", operated in country "c" in year t, α is a constant; β1 and β2 are the coefficients (multipliers) of the explanatory variables that describe the size of the effect the independent variables (X1 & X2) have on the ROAA (dependant variable). X1 and X2 are the vectors of explanatory independent variables, where X1 refers to bank specific variable while X2 refers to macroeconomic and banking sector indicators. dum1 IFS is a dummy that equals to one if the bank is Islamic or provides at least one IFS service and zero otherwise; dum2 year is a time control dummy (2002:2007). Finally "ε" is the error term.

In the next section the empirical results obtained from applying this general regression model in context of MENA countries will be presented showing the significance of those variables to test our hypotheses.

[16] *The problem of autocorrelation & heteroscedasticity is considered common problem in most panel datasets that raised after running the regression model, which necessitated to use the GLS technique as one alternative to overcome this problem.*

Table (2): Descriptive Statistics

Variable		*Mean*	*Std. Dev.*	*Min*	*Max*	*Observations*
ROOA	*overall*	*2.509372*	*4.16385*	*-17.82*	*30.18*	*N = 366*
	between		*3.508377*	*-3.672*	*16.9575*	*n = 71*
	within		*2.693807*	*-16.62063*	*17.20937*	*T-bar = 5.15493*
ln_GDP_capita	*overall*	*8.707757*	*1.307682*	*7.000334*	*11.34461*	*N = 422*
	between		*1.295846*	*7.210048*	*10.77305*	*n = 71*
	within		*.2386504*	*8.181256*	*9.279324*	*T = 5.94366*
ln_fdi	*overall*	*6.92765*	*1.491382*	*1.286142*	*9.491988*	*N = 419*
	between		*1.142701*	*3.905075*	*8.832329*	*n = 71*
	within		*1.030868*	*4.308717*	*8.487904*	*T-bar = 5.90141*
ln_tot~e	*overall*	*5.623497*	*2.284659*	*-3.099461*	*9.300508*	*N = 370*
	between		*2.268314*	*-2.678698*	*9.022965*	*n = 62*
	within		*.3454612*	*4.20453*	*6.538696*	*T = 5.96774*
bil_imp	*overall*	*939.3226*	*1443.066*	*0*	*6584.88*	*N = 372*
	between		*1321.532*	*0*	*4801.3*	*n = 62*
	within		*599.6083*	*-1179.677*	*5194.765*	*T = 6*
bil_exp	*overall*	*714.1023*	*1181.395*	*2.51098*	*4706.82*	*N = 300*
	between		*1156.882*	*4.640197*	*3756.737*	*n = 50*
	within		*282.3099*	*-526.1144*	*2216.406*	*T = 6*
ln_trade_vol	*overall*	*10.11135*	*.680286*	*8.967759*	*12.38993*	*N = 355*
	between		*.6165834*	*9.350843*	*11.92108*	*n = 71*
	within		*.2948045*	*9.55543*	*10.63427*	*T = 5*
Stmktcap	*overall*	*.8310644*	*.5117434*	*.0914854*	*2.400464*	*N = 370*
	between		*.431678*	*.108223*	*1.623646*	*n = 65*
	within		*.2968593*	*-.0893695*	*1.607882*	*T = 5.69231*
nrbloan	*overall*	*.7673716*	*1.153245*	*.0189013*	*3.348995*	*N = 426*
	Between		*1.150293*	*.0464322*	*2.801485*	*n = 71*
	within		*.1495527*	*.2648256*	*1.314882*	*T = 6*
offdep	*Overall*	*1.197345*	*1.210372*	*.0835381*	*3.740772*	*N = 426*
	between		*1.193226*	*.1226945*	*3.211746*	*n = 71*
	within		*.2407544*	*.2260118*	*1.726371*	*T = 6*
capital	*overall*	*16.16044*	*12.95643*	*-15.69*	*79.92*	*N = 321*
	between		*13.17907*	*3.788*	*73.76667*	*n = 70*
	within		*5.05123*	*-9.833564*	*45.32644*	*T-bar = 4.58571*
tot_ass	*overall*	*4027623*	*6550826*	*33714*	*4.23e+07*	*N = 323*
	between		*6117436*	*115846.5*	*2.56e+07*	*n = 71*
	within		*2426592*	*-4695243*	*2.07e+07*	*T-bar = 4.5493*
liquidity	*overall*	*43.28567*	*20.31948*	*.21*	*89.59*	*N = 314*
	between		*20.14392*	*.58*	*77.916*	*n = 69*

Variable		*Mean*	*Std. Dev.*	*Min*	*Max*	*Observations*
	within		*6.426403*	*6.943168*	*63.39234*	*T-bar = 4.55072*
Credit risk	*overall*	*57.25964*	*29.8729*	*.43*	*210.2*	*N = 303*
	between		*26.88945*	*.902*	*120.694*	*n = 66*
	within		*13.75957*	*-4.584364*	*146.7656*	*T-bar = 4.59091*
IFS	*overall*	*.4647887*	*.4993451*	*0*	*1*	*N = 426*
	between		*.5023086*	*0*	*1*	*n = 71*
	within		*0*	*.4647887*	*.4647887*	*T = 6*

5. Empirical Results

The estimated model fits the panel data reasonably well as indicated by Wald test statistic, where the null hypothesis of joint insignificance of parameters is rejected. All of the variables in the model were found to be statistically significant. The most significant factors at the bank level were the capital, total assets and liquidity ratios and at the macro level, volume of trade, overall level of development of stock and financial market in host countries (captured by the ratio of stock market capitalization to GDP), and country income growth level (captured by GDP per capita).

Table (4) shows regression results that have been separated into five models. Due to observed high correlation[17] of capital ratio with the rest of the explanatory variables, the first and second models didn't include this ratio. Hence it was tested apart from other bank specific variables and the third model reports this result.

In Model (1) most of the variables are jointly examined and showed a statistically significant results, except for FDI in Macro level, and IFS in banks' level. The effect of overall trade volume on profitability is investigated in Model (2). Model (3) captures the relation between

[17] *see correlation matrix in Table (3)*

capital strength, IFS (Islamic Financial Service) and foreign banks' profitability, the results of model (3) reports a significant positive correlation in the case of capital strength ratio. However, a negative relation between IFS and foreign banks' profitability is reported in the second case. Finally, model (4) and (5) run with bilateral imports and exports, both of which are statistically significant. In the next section these results will be interpreted in detail for each determinant per se.

The control for the time dimension (year dummy), which investigates the existence of a significant shock that may create a trend on profitability, is tested and isn't found significant on the overall model. However, in the subsample (country level) the time dimension factor showed a statistically significant sign for Emirates and Jordan in 2005 and Kuwait in 2006. Table (5) shows the regression results on the country level, where Algeria has been excluded due to data limitations.

Several specifications of our models have been examined; Inter-MENA FDI flows to destination country were tested and found to be insignificant. Furthermore, trade openness, concentration ratio, stock market total value traded, turnover ratios and the level of country's economic freedom have also been tested and found to be statistically insignificant.

Table (3) Correlation matrix

	roaa	ln_GDP_cap	ln_fdi	ln_tot_bi	bil_imp	bil_exp	stmktcap	nrbloan	offdep	capital	tot_ass	liquidity	credit_risk	ifs
roaa	1.0000													
ln_GDP_cap	0.3859 0.0000	1.0000												
ln_fdi	-0.0660 0.2101	-0.2506 0.0000	1.0000											
ln_tot_bil	0.0226 0.6888	-0.0889 0.0896	0.1478 0.0046	1.0000										
bil_imp	0.0124 0.8250	-0.1108 0.0336	0.0716 0.1701	0.7434 0.0000	1.0000									
bil_exp	-0.0512 0.4143	-0.1608 0.0054	0.0525 0.3645	0.7662 0.0000	0.8572 0.0000	1.0000								
stmktcap	0.2342 0.0000	0.3325 0.0000	0.0447 0.3961	-0.0672 0.2234	-0.0461 0.4024	-0.2213 0.0002	1.0000							
nrbloan	0.2621 0.0000	0.4737 0.0000	-0.0813 0.0966	-0.0465 0.3724	-0.1112 0.0320	-0.2553 0.0000	0.1673 0.0012	1.0000						
offdep	0.2416 0.0000	0.4198 0.0000	-0.0772 0.1148	-0.0833 0.1098	-0.1796 0.0005	-0.3668 0.0000	0.3341 0.0000	0.9469 0.0000	1.0000					
capital	0.6789 0.0000	0.4438 0.0000	-0.0649 0.2491	-0.0812 0.1748	-0.1113 0.0614	-0.1488 0.0243	0.1534 0.0104	0.4134 0.0000	0.3700 0.0000	1.0000				
tot_ass	-0.0570 0.3130	0.3594 0.0000	-0.2393 0.0000	0.1746 0.0033	0.0816 0.1708	0.0494 0.4573	0.1322 0.0270	0.1661 0.0027	0.1403 0.0116	-0.1575 0.0047	1.0000			
liquidity	-0.2204 0.0001	-0.0350 0.5387	0.0186 0.7445	0.0061 0.9198	0.0448 0.4584	0.2074 0.0017	-0.1696 0.0051	-0.3891 0.0000	-0.3941 0.0000	-0.3454 0.0000	0.0769 0.1738	1.0000		
credit_risk	0.0267 0.6473	0.2085 0.0003	-0.0637 0.2719	0.0122 0.8435	0.0481 0.4359	0.2386 0.0004	-0.0610 0.3274	-0.2227 0.0001	-0.2497 0.0000	-0.0075 0.8969	0.0153 0.7904	0.8034 0.0000	1.0000	
ifs	0.1108 0.0340	0.2241 0.0000	0.0178 0.7162	-0.3293 0.0000	-0.2929 0.0000	-0.3946 0.0000	0.1176 0.0236	0.3375 0.0000	0.3344 0.0000	0.1756 0.0016	0.0043 0.9388	0.0396 0.4840	0.0787 0.1719	1.0000

5.1. Results related to bank specific variables

* Total assets (used as a proxy of the foreign bank's size) is a highly significant determinant of foreign banks' profitability in MENA region. The negative coefficient indicates that as total assets increases, foreign banks' profit increases at a slower rate than total asset. This phenomenon is known as decreasing returns of scale or diseconomies of scale. This relationship may be due to possible bureaucratic or managerial inefficiencies that banks may suffer as they become larger. This finding is consistent with Pasiouras et al. (2007).

The existence of decreasing returns of scale in the banking industry suggests the necessity of the consolidation of bank operations rather than banking expansion as indicated by Akhtaruzzaman (2006). Another explanation by Athanasoglou et al. (2008) is that the effect of bank size on profitability is not an important determinant in the case of explaining Greek banking profitability. This may be due to the fact that small-sized banks usually try to grow faster, even at the expense of their profitability. Furthermore, newly established banks are not particularly profitable (if at all profitable) in their first years of operation, probably due to greater emphasis on increasing their market share rather than on improving profitability.

* Credit risk (LD) is always found to be positive and significantly affect profitability. High levels of loans mean that the bank is a risk taker, gets involved more and more in lending activities, and opens a way for more operations and transactions which give rise to higher realized return. This increasing in loans risk-averse shareholders to seek more profits and earnings to compensate for higher credit risk. Flamini et al. (2009) stated that credit risk can be lowered through the increase of credit information sharing.

* Capital strength ratio (EA) was found to be highly significant with a positive sign, which indicates the low probability of the well capitalized foreign bank to get bankrupt, or get external subsidies or funds. The higher the capital strength ratio is, the more profit the foreign bank operating in MENA is expected to obtain. The result is consistent with previous studies on this topic such as Berger (1995), Kosmidou, (2005) and (2006), Pasiouras et al. (2007), Athanasoglou et al. (2008) and Flamini, et al. (2009).

* The proxy of liquidity ratio (Loans to total assets) was found to be a highly significant indicator of foreign banks' profitability. Many banking literature argued that poor asset quality and low levels of liquidity are the two major causes of bank failure. Therefore, during periods of increased uncertainty financial institutions may decide to diversify their portfolios and /or raise their liquid holdings in order to reduce their risk. In this context, risk can be divided into credit and liquidity risk. Although Bourke (1989) reported an opposite result, our findings reported a negative relationship between liquidity and foreign banks' profits. These results are consistent with Molyneux and Thornton (1992), Kosmidou (2006) and Pasiouras et al. (2007), who found a negative and significant relationship between the level of liquidity and profitability.

Hakim and Neaime (2005) investigated the impact of liquidity, credit, and capital on bank profitability in the Egyptian and Lebanese banking sectors during the 1990's and concluded that ROE has a strong role in increasing the function of the bank's lending activities and the presence of a strong link between capital adequacy and commercial bank return. They showed that bank liquidity, which represents a risk and is a solvency indicator, is irrelevant as a measure of bank profitability in the Egyptian and Lebanese markets.

* Model (3) investigates the role and effect of providing IFS on foreign banks' profitability the results show that provision of Islamic financial services appears to have a weak explanatory significance for foreign banks' profitability, which could be caused by the following: The insufficient number of observations for the IFS; the fact that the time dimension does not increase the sample size for this variable, where banks are reported either to have the service or not during the full period of six years, therefore the only variability is the cross sectional one. This may be due to the fact that data limitations on the actual initial date when the bank started providing the service is not included in Bank Scope or in most banks' websites.

Nevertheless, in model (3), running the regression of IFS without other bank specific variables except capital, showed the IFS is significant at the 10 % level. The negative correlation with profitability can be due to either the slower development of the Islamic financial market in MENA (i.e, the emergence of IFS as a new intermediary market) or the lack of awareness of Islamic banking tools and services compared to its conventional counterparts.

Finally, this paper, on the one hand, reports that running a separate regression for the banks offering IFS services shows that all variables have a significant effect on the return on assets. On the other hand, although the IFS coefficient is not statistically significant in the rest of models, it shows a meaning weight on profitability as indicated in Table (4). If data insufficiency can be overcome, IFS is expected to have strong impact on profitability of foreign banks.

5.2. Results related to macroeconomic variables

The macroeconomic variables were found to significantly affect foreign banks' profitability in the MENA region. What follows is a brief presentation for these results:

* The income per capita growth is used as a measure for the country's level of economic growth. It shows a significant positive sign suggesting that the better the income per capita growth level in a MENA economy, the greater the profit the foreign banks are expected to earn[18].

* FDI reports a significant effect with a negative coefficient sign on profitability. This implies the less foreign investment flows into the host MENA economy the more the profitability ratio increases and vice versa[19]. The significance and opposite coefficient sign of FDI flows could be a result of one or more of the following:

- Due to the unspecified nature of FDI flows that may include different entry forms as Expansion, Greenfield and/or M&A, the number related to profitable opening opportunities for foreign banks is small. i.e., in the case when a foreign bank takes the expansion or joint venture form and not the de novo[20] investment, the host country's projects' "clients" are already operating and have other banks providing them with different services (domestic or foreign).

- The implicit governmental entry barriers, such as information or bureaucracy, imposed on foreign banks.

[18] *The authors of this paper investigate in a related study in more details the nexus between foreign banks, financial development and economic growth, showing recent evidences from MENA region.*
[19] *The inter-investment flows into the destination country is investigated in this study and doesn't appear to have statistically significant effect on foreign banks' profitability in MENA.*
[20] *i.e. the startup or new Greenfield investments*.

Regardless of weak institutions or low foreign capital flows that may exist, other factors motivating banks to operate in MENA include the regional economic integration, cultural, linguistic and / or colonial links. This paper suggests that further research should be done by relating profitability measures "ROOA" to various subcategories of FDI.

* Bilateral trade between home and host countries and trade volume were found to have a significant positive effect on profitability which gives a signal to policymakers that the trade environment and facilitation improvement (trade measures such as time and cost) is critically important, not only for foreign banks but also for its expected spillover to overall economic development in the host economy. Appendix (1) demonstrates indicators on trade facilitation and reforms that have taken place recently in MENA economies. The defensive expansion hypothesis "that measures banks following their clients" is tested in the model using capital investment flows (FDI) and inter-investment flows by the destination country, in addition to bilateral imports and exports.

* Looking at the financial market factors, this study reports the following results:

- The proxy of the development of stock and financial market (Stmktcap) is found to be a highly significant determinant and positively related to foreign bank profitability. Ben Naceur (2003) investigated the Tunisian banking sector, and showed that the larger the stock market size, the more information is available, which allows the increase in banks potentiality and bank clients base. As a result, these lead to higher flexibility for bank to monitor its potential borrowers, and therefore produce an increase in bank activities and profitability.

- The ratios of loans from non-resident banks to GDP and offshore bank deposits to domestic bank deposits, are used as proxies for the banking sector credibility to promote foreign capitals. These two proxies are found to be statistically significant and positively related to profitability ratio.

Finally, Table (5) shows the regression results on the country level. On the one side, we can notice that the bank specific variables are more significant across countries compared to the macroeconomic ones. Again, total assets are found to be significant with a different coefficient signs across countries like Bahrain, Jordan, Morocco and Emirates. The liquidity and credit risk ratios are also found to significantly affect foreign banks' profitability in Jordan, Morocco and Emirates. On the other side, macroeconomic determinants were found to be statistically significant in Kuwait, Qatar, and Emirates, which are all high income countries.

Table (4)

Model results for the profitability of foreign banks operating in MENA (ROAA is the dep. variable)

VARIABLES	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
ln_GDP_capita	*0.736***	------	*-0.0606*	*0.770***	*0.829**
	(0.00936)		*(0.800)*	*(0.00647)*	*(0.0903)*
ln_fdi	*-0.129*	*-0.459***	*-0.319**	*-0.0826*	*-0.260*
	(0.529)	*(0.0128)*	*(0.0571)*	*(0.679)*	*(0.371)*
ln_bil_trade	*0.286***		*0.136*	------	------
	(0.0428)		*(0.190)*		
ln_trade_vol	------	*1.386****	------	------	------
		(0.000379)			
Bil_imp	------	------	------	*0.000397**	------
				(0.0518)	
Bil_exp	------	------	------	------	*0.000639**
					(0.0874)
Stmktcap	*1.452***	*1.924****	*1.380***	*1.325***	*1.624***
	(0.0211)	*(0.000254)*	*(0.00831)*	*(0.0358)*	*(0.0319)*
Nrbloan	*1.629**	*2.219***	*1.174*	*1.551**	*1.613*
	(0.0736)	*(0.00248)*	*(0.108)*	*(0.0888)*	*(0.135)*
Offdep	*-1.271*	*-1.259**	*-1.061*	*-1.109*	*-1.365*
	(0.134)	*(0.0822)*	*(0.134)*	*(0.193)*	*(0.188)*
Tot_ass	*-1.69e-07****	*-1.14e-07***	------	*-1.67e-07****	*-1.57e-07***
	(0.000356)	*(0.00238)*		*(0.000390)*	*(0.00207)*
Liquidity	*-0.0753***	*-0.0758***	------	*-0.0782***	*-0.0940***
	(0.0129)	*(0.00705)*		*(0.00950)*	*(0.00519)*
Credit_risk	*0.0425***	*0.0481***	------	*0.0444***	*0.0487***
	(0.0454)	*(0.0141)*		*(0.0354)*	*(0.0418)*
Capital[a]	------	------	*0.237****	------	------
			(0)		
Ifs	*0.104*	*0.130*	*-0.786**	*-0.0858*	*0.0323*
	(0.852)	*(0.785)*	*(0.0899)*	*(0.873)*	*(0.957)*
Constant	*-4.137*	*-9.006***	*0.537*	*-3.422*	*-2.209*
	(0.141)	*(0.0156)*	*(0.819)*	*(0.214)*	*(0.541)*
Observations	*220*	*249*	*237*	*222*	*197*
Number of banks	*52*	*60*	*56*	*52*	*45*
chi^2	*75.53*	*73.86*	*318.3*	*75.84*	*62.97*

- *p-values in parentheses*
- *Significant at : *** p<0.001, ** p<0.05, * p<0.1*
- [a] *Capital, IFS are tested by isolating other bank specific variables due to high correlation.*

6. Concluding remarks

Using unbalanced dataset of 71 foreign banks, this work investigated a set of determinants seen as peculiar and having an explanatory effect on the profitability of foreign banks operating across nine MENA economies during the period from 2002 to 2007. Several of these variables were introduced for the first time in this paper. The most significant variables found in this study were capital, total assets and liquidity ratios on the bank level, and stock market capitalization, trade volume, bilateral trade and level of income per capita growth at the macro and banking industry level. Finally, the provision of Islamic financial services appeared, with a negative sign, to have a statistically significant impact on foreign bank profitability.

Table (5)

Regression results on country level

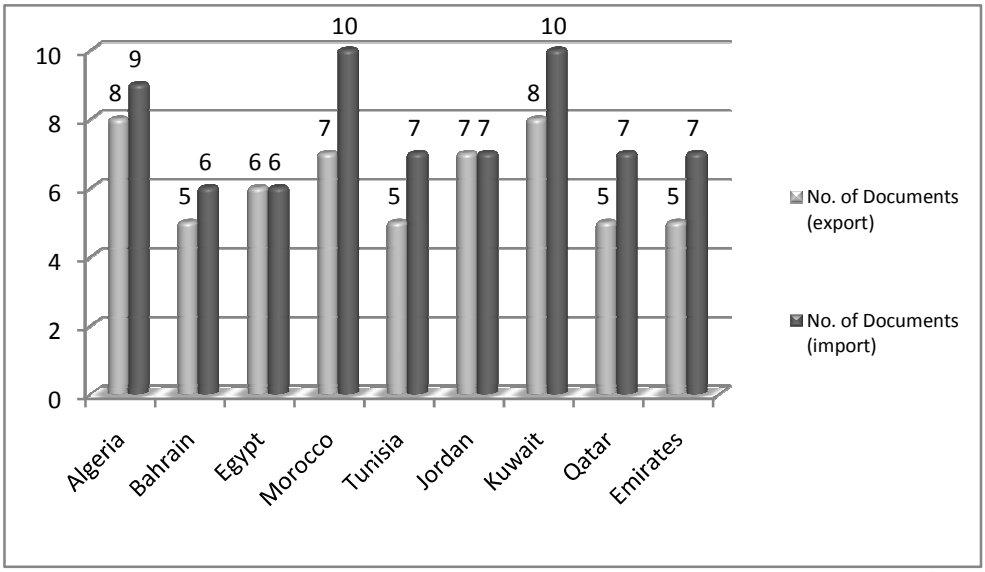
VARIABLES	*BAHRAIN*	*EGYPT*	*JORDAN*	*KUWAIT*	*MOROCCO*	*QATAR*	*TUNISIA*	*EMIRATES*
Macroeconomic variables								
ln_fdi	*-1.688*	*1.909*	*1.250*	*-0.148*	*0.0361*	------	*-0.433*	*-0.118*
	(2.249)	*(1.731)*	*(2.080)*	*(0.348)*	*(0.143)*	------	*(2.007)*	*(1.341)*
lag_exports	*0.000717*	*0.00223*	*-0.000526*	*3.08e-05*	*-0.000545*	*0.000106**	*4.41e-06*	*-1.64e-05*
	(0.000609)	*(0.00135)*	*(0.000352)*	*(2.04e-05)*	*(0.000888)*	*(4.59e-05)*	*(0.000894)*	*(2.99e-05)*
Stmktcap	*12.11*	*-40.67*	*-0.701*	*6.285**	*4.854*	-----	*-8.532*	*3.885**
	(8.701)	*(27.16)*	*(2.621)*	*(2.740)*	*(6.738)*	-----	*(105.1)*	*(1.653)*
Offdep	*0.806*	-----	*-3.415*	------	*0.282*	-----	*-1.507*	*14.00*
	(1.821)	-----	*(2.530)*	-----	*(1.104)*	-----	*(43.07)*	*(19.25)*
Nrbloan	------	*-371.7*	-----	-----	-----	-----	------	------
	------	*(318.5)*	-----	----	----	-----	------	------
Bank specific variables								
tot_ass	*-1.75e-07**	*4.37e-07*	*2.23e-07***	*1.55e-08*	*-2.29e-08**	*-9.81e-08*	*2.18e-06*	*2.10e-06**
	(8.29e-08)	*(2.74e-07)*	*(7.20e-08)*	*(2.54e-08)*	*(1.03e-08)*	*(5.35e-08)*	*(1.52e-06)*	*(8.28e-07)*
liquidity	*-0.113*	*-0.000805*	*-0.0127*	*-0.117*	*-0.0788***	*-0.0338*	*-0.226*	*0.155****
	(0.0681)	*(0.0412)*	*(0.0278)*	*(0.0844)*	*(0.0263)*	*(0.0443)*	*(0.183)*	*(0.0449)*
credit_risk	*0.0571*	*0.0282*	*0.0495***	*0.0803*	*0.0778***	*0.000298*	*0.117*	*-0.0698***
	(0.0469)	*(0.0294)*	*(0.0157)*	*(0.0686)*	*(0.0243)*	*(0.00948)*	*(0.118)*	*(0.0259)*
Constant	*-2.789*	*27.00*	*-1.361*	*-3.976*	*3.328*	*4.115*	*7.655*	*-14.14*
	(16.46)	*(24.18)*	*(7.895)*	*(2.767)*	*(4.652)*	*(2.683)*	*(9.553)*	*(24.67)*
Observations	*63*	*64*	*33*	*20*	*13*	*25*	*26*	*20*
Number of banks	*15*	*14*	*7*	*5*	*4*	*5*	*6*	*4*

- *Standard errors in parentheses*
- *Significant at: *** p<0.001, ** p<0.01, * p<0.05*
- *Time control been tested for all countries and found insignificant except for Jordan and emirates in 2005 and Kuwait 2006.*
- *Lag exports is used to control for Defensive Expansion Approach hypotheses, Williams 2004.*

Appendix

MENA Peculiarities and Profitability of Foreign Banks

Graph (1) No. of documents required before an entrepreneur import or export.

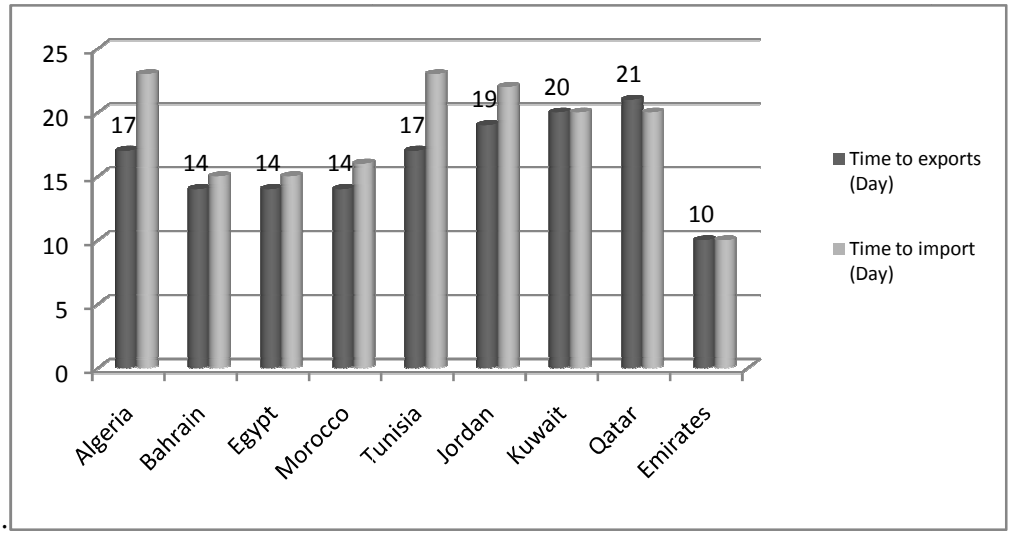


Source: Author elaboration based on doing business 2009, (World Bank).

Algeria in terms of documents and cost of export was found to be less active compared to the rest of the region's countries and also in terms of import time, while other countries like Bahrain, Emirates and Egypt are performing well in enhancing trade facilitation (time, cost and required documents)[21].

[21] *Doing business 2008 - 2009 data been used as a reference, due to unavailability and/ or missing data for most countries in rest of years.*

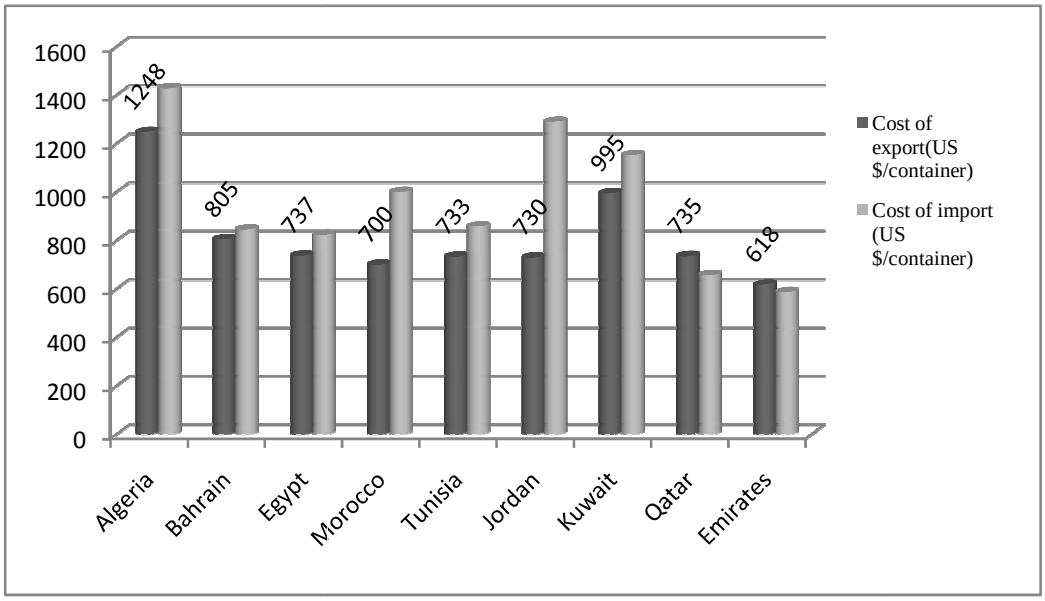
Graph (2) Time (days) required before an entrepreneur import or export in MENA countries.



Source: Author elaboration based on Doing Business 2009 (World Bank).

Economies that have efficient customs, fewer document requirements and making compliance with imports and exports procedures faster and cheaper, are more competitive globally and that can leads to more exports that is associated with faster growth and job creation. Doing business (2009)

Graph (3) Costs an entrepreneur faces before import or export in MENA countries*



Source: Author elaboration based on doing business report 2009, (World Bank).

*Economy with lowest cost in imports or export is better.

Table (A.1)

Foreign banks entry in MENA countries between 2002 to 2007

Economy / Year	2002				2003				2004				2005				2006				2007			
	Comm.	Invest & Sec	Islamic	Total	Comm	Investment	Islamic	total	Comm.	Invest & Sec	Islamic	Total	Comm.	Invest & Sec	Islamic	total	Comm.	Invest & Sec	Islamic	total	Comm.	Invest & Sec	Islamic	Total
Algeria	1	0	0	1	0	0	0	0	1	0	0	1	5	0	0	5	4	0	0	4	2	0	0	2
Bahrain	4	2	1	7	4	3	2	9	5	2	3	10	3	3	1	7	6	4	3	13	6	3	4	13
Egypt	9	1	1	11	4	1	1	11	12	1	1	14	13	1	1	15	9	1	2	12	12	1	1	14
Morocco	1	0	0	1	1	0	0	1	1	0	0	1	0	0	0	0	3	0	0	3	0	0	0	0
Tunisia	1	0	1	2	2	0	1	3	5	0	1	6	4	0	0	4	4	0	1	5	3	1	1	5
Jordan	4	0	0	4	5	0	1	6	5	0	0	5	4	0	0	4	5	0	1	6	5	0	0	5
Kuwait	3	1	0	4	3	1	0	4	0	1	0	1	0	2	0	2	1	2	0	3	2	2	1	5
Qatar	2	0	2	4	2	0	1	3	3	0	1	4	3	0	1	4	2	0	0	2	2	0	1	3
Emirates	2	1	1	4	2	1	1	4	2	1	1	4	2	1	1	4	2	1	1	4	2	1	4	7
Total	27	5	6	38	23	6	7	41	34	5	7	46	34	7	4	45	36	8	8	52	34	8	12	54

Source: Author elaboration based on data extracted from bank scope data base.

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Second Part

Financial Development and Growth Nexus: Recent Evidence from MENA Region

Abstract

This study provides a recent evidence of the nexus between banking sector development and economic growth in MENA region from 2000 to 2007. Rousseau and Wachtel (2000), Beck T., Levine R. (2004) and Ben Naceur et al (2007) investigated this nexus using GMM estimation. The first two studies examined this relationship in other world regions, while the third focused on MENA countries. The differences in time periods, determinants studied and / or the source of examined factors, and finally the estimation technique could better situate the findings of this work in comparison to others. Our results show, as expected, that FDI and trade openness have a positive and robust significant relation with growth across the different models, with the exception of FDI when jointly controlled with bank deposit to GDP ratio. Looking at the financial and banking sectors determinants, the overall results reports that they matter for growth in MENA region and all factors are statistically significant and positively correlated to income per capita growth, except for private credit to GDP and nonresident banking loans. The insignificance of these two variables could be attributed to the latest and ongoing financial reforms taking place in most of the region's countries. Finally, the proxies of quality of regulation and efficient government policies were examined, and always showed a highly significant relationship across different models.

JEL Classification: E44; O16; G30; C33
Keywords : Financial Markets, Forgien Banks, Growth, MENA (Middle East and North Africa)

Introduction

The nature of relationship between financial structure and economic growth has been a topic of research for a long time. According to Shumpeter (1912), a well functioning financial system induces economic growth by evaluating projects, managing risk, monitoring managers, and facilitating transactions. These services allow the reallocation of capital to its highest value use by avoiding issues of moral hazard and adverse selection as well as minimizing transaction costs. Many development economists, however, have ignored the role of the financial intermediaries as a catalyst for economic growth. According to Robinson (1952), financial instruments evolve as a response to the needs created by economic development. As such, financial development should be seen as an outcome of economic growth not the cause of it. Recent empirical literature shed some light on this controversy; see Levine (2004) for an excellent survey.

Empirical research in this area is typically based on a broad cross section of countries, but comparatively little work has been done related to the MENA region. The relative strength of MENA countries, as a group, includes its adoption to modernized regulation and supervising systems, in addition to its financial openness as well as the existence of foreign banks. However, within the MENA region there is substantial variation in the degree of financial development; some countries have advanced financial sectors, while for others progress in this area has been limited.

The lack of clear and direct evidences of foreign banks' entry spillovers on economic growth necessitates filling this gap by highlighting the role of foreign banks in promoting the financial development and thereby spurring economic growth. This paper contributes to current literature

of finance, banking and growth in the context of MENA region by providing new evidence on the nexus between foreign banks, financial development and growth.

This study used the dynamic panel econometric technique (GMM). This estimation technique has been reported to reduce the estimation and statistical shortcoming in previous growth studies, especially before Rousseau and Wachtel (2000), Beck T., Levine R. (2004) and Ben Naceur et al (2007). The rest of the paper is organized as follows: Section 2 introduce a brief literature review. Data sources and variables definitions are discussed in Section 3 and model estimation follow in Section 4. The results will be interpreted in Section 5 and finally Section 6 briefly discusses implications and concludes.

2. Literature review

2.1 Foreign banks and Financial Development

The role of financial and banking sectors in enhancing the economic growth was a topic of interest and debate for many decades. Although a large number of academic work has been done to better understand this relation, a remarkable lack of empirical evidences on direct links between banking sector, openness and economic growth has been reported.

On the one hand the argument that financial sector development is crucial for long-run economic growth is being discussed in many studies, such as Levine (2003); Demetriades and Andrianova (2004); Demetriades and Hussein, (1996); and recently by Baltagi et al. (2009). A detailed review of this nexus is presented in section 2.2.

On the other hand, because the lack of clear and direct evidence of foreign banks' entry effects on economic growth, it's necessary to fill this gap by highlighting the crucial role of foreign banks in promoting the financial development and thereby spurring economic growth. An early study by Levin (1996) on this nexus argued that foreign banks could have direct and indirect effects on financial development. In his view the direct effects could be through the high quality financial services foreign banks' provided to the domestic market, while the indirect effects could be one of the following: (i) enhancing of domestic banks efficiency and quality; (ii) cutting costs, upgrading audit and rating institutions; (iii) pressuring on the government to update and upgrade its regulatory and supervisory systems. Bruno and Hauswald (2009) provide a strong evidence that foreign entry alleviates financial constraints without hurting economic growth prospects, especially in developing countries.

Most empirical evidence emphasized on indirect links; these studies found foreign banks play a statistically and economically significant role in enhancing and improving the financial development and the efficiency of domestic markets. Bayraktar et al (2006) investigated links between foreign banks and economic growth, showed that foreign banks are expected to contribute positively to increasing economic growth by improving domestic banks' competitiveness. They indicated that direct effects of foreign banks on the domestic financial markets can take forms of new and better management techniques, technology, and services. Moreover they may also improve access to international markets, and help the development of institutions by improving the flow of information about borrowers.

A recent study by Classens et al (2009) investigated the performance of a foreign bank in host countries. They argued that in developing countries the level of financial sector development is affecting the performance of these banks. In a country that a large part of its population doesn't

have yet access to financial services, it's easier to gain market share and in turns higher profit. The opposite case exists in countries with a well developed banking sector.

Haiss et al (2005) showed that foreign banks have the incentive, the know-how and expertise to spur financial sector development. They induced knowledge-spillovers to domestic banks and gain higher market share through product innovation and by offering a variety of new financial services, transferred to domestic markets.

Some economists argue that entry of foreign bank into host markets may dominate the entire domestic financial market or addressing specific market segment, specifically the retail banking, while others consider that foreign banks may foster capital flight. But these arguments are relatively weak considering recent evidence showing that the new generation of growth; trade models are not fostering or dominating the domestic market. Banerjee (2009) found weak explanatory evidence that large foreign banks contribute much to the growth process of developing countries.

The cross-country evidence has confirmed that foreign-owned banks are more efficient than domestic banks in developing countries and that entry of foreign bank does indeed exert competitive pressure on domestic banks to become more efficient (Claessens, Demirgüç-Kunt, and Huizinga 2001). According to Levine (1996) lowering the barriers to entry of foreign banks tends to improve the functioning of the domestic financial sector due to foreign banks' direct or indirect positive effects on the quality, pricing, and availability of banking services.

Motives of foreign banks to operate in another country are diversified; Literature on foreign banking suggests that long-term profit interests is the main driver that most investors in the emerging markets are looking for, as these markets offer the potential for strong business growth

across the various client groups. In the meanwhile, Miani and Sagan (2006), investigated the motivations of foreign banks in Poland and their role in the Polish banking sector; with emphasis on the resulting changes in competitiveness, efficiency, and stability in local financial system. In conclusion, they reported that "only very efficient and profitable banks have a chance to survive".

The presence of foreign banks in MENA region helped in shaping the banking and financial systems of most of its countries, and induced them to set out or establish a more modern financial sector architecture and services, see Molyneux, P. & Munawar, I (2005) for an excellent survey on banking sectors in most Arab wrold.

2.2 Financial development and economic growth

The nexus between financial sector, banking system, and economic growth has been one of the most heavily researched areas for many years. There are significant disagreements between economists about "which cause what" in this nexus.

The argument that financial sector development contributes to spur economic activity and is crucial for long-run economic growth is being discussed in many studies. Honohan and Beck (2007) show that financial system open up opportunities to both entrepreneurs and savers. On the one hand, they report that the reducing of entry barriers for entrepreneurs assisting the economy to increase employment, improving the price and quality of services and reducing the influence of established monopolies. On the other hand, given access to the necessary finance, individuals can move to a higher level of productivity and output, and savers can share the returns on an expanded flow of investment (Ex. housing, insurance). See Figure (1) in appendix.

A well-performing financial system is expected to promote growth through influencing savings rates, investment decisions, technological innovation and therefore long-run growth rates. In the meanwhile, a stable and well structured financial system helps the banking sector to reduce the effect of financial crises. Therefore its essential for governments to maintain sound macroeconomic management, with an effective regulatory and supervisory environment and run needed development reforms for the financial and banking sector. Krugman (2009) argued that an important lesson learned from the recent financial crisis is that, economists have to carefully consider how banks and financial institutions should be regulated and how financial innovations should be managed. Most literature on banking crises suggests that many crises that occurred in recent decades were caused by institutional weaknesses in the financial sector, such as poor regulation and supervision, weak corporate governance, and excessive deposit insurance as these are closely related to the incentives of bank managers to take on risks in lending operations.

The spillover of financial crises has been argued in literature to take place through the following; (i) A collapse or decline in export demand for goods and services, (ii) a decline in remittance inflows, and (iii) a slow down or sudden stop of capital inflows (foreign direct investment, portfolio inflows, and bank loans).

A recent study by Moriyama K. (2010) investigated the impact of the global financial crisis (known as Lehman shock) on economic activity in MENA emerging countries. The study states that the increased financial stress[22] and slowdown in economic activity in advanced economies can explain about half of the decline in real GDP growth in MENA emerging economies after the

[22] *The Financial Stress Index "FSI" presented by IMF (2009), summarizes some factors transmitting the spillovers of the global crisis to MENA, The index consists of an exchange market pressure index (EMPI) and four market-based price indicators (sovereign spreads, the banking sector "ß", stock market returns, and stock market volatility), A rising FSI indicates increased financial stress in an economy.*

Lehman shock; nearly two thirds of increased financial stress in MENA emerging countries after this shock is attributable to direct or indirect spillovers of financial stress in advanced economies. Figure (2) in Appendix shows the trends of Financial Stress Index' (FSIs) for MENA and advanced economies, from 2001 to 2009.

Once realizing the role that financial institutions[23] may perform through its influence on savings and investment decisions and hence economic growth, it would be essential to show how financial market operates and what its main functions are. Levine (2004) states that financial development involves improvements in the following: (i) production of information about possible investments, (ii) monitoring of investments and implementation of corporate governance, (iii) trading, diversification, and management of risk, (iv) mobilization and pooling of savings, and (v) exchange of goods and services. These functions assists financial sectors to direct more investments in public sector infrastructure development in addition to supporting the household's investment in human capital, and not limit investments only to private sector development.

Zhuang, J., et al (2009), claimed that structure of financial markets and institutions in many developed economies is inappropriate for many developing economies. The form and function of financial institutions differ depending on a country's legal and political system.

Looking at links between financial intermediaries' services and economic growth, one can find these links are interrelated, as supply of credit to different target-groups has various impacts on economic development. For example, lending to the public sector may be important to reduce budget deficits and thus promote economic stability whereas credit to the private sector is

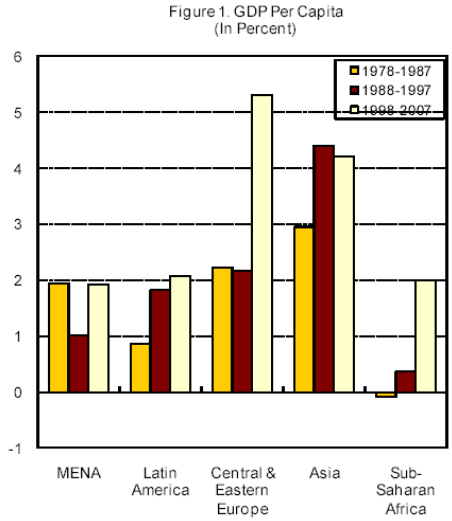
[23] *Next section (2.3) shed some light on the relationship between institution and economic growth.*

necessary to further support of private investment creating more jobs and reducing unemployment. See figure (1) in appendix , financial development and GDP per Capita growth.

Rousseau and Wachtel (2000) was one of the first studies that applied GMM panel data techniques in investigating the finance, growth nexus. They used the difference estimator with annual data over the period 1980 to 1995 across 47 countries. They found a positive link between indicators of bank and stock market development and economic growth; in addition that both stock market development and banks contribute to spur economic development[24].

2.2.1 Financial Development and Growth in MENA

One of the important motives for examining the MENA region is that it has been studied and researched far less than other developing countries. The economic growth in the MENA countries over the last two decades has generally shown a disappointing and/or slowing trends compared to the major emerging market economies in other regions[25] of the world[26] as indicated in Figure (1).



Source: World Development Indicators

Makdisi et al (2007) investigated the growth and development trends across different MENA countries over the period 1960 to 2000; they pointed out that the overall growth performance of

[24] *T. Beck, R. Levine. 2004, used GMM using data averaged over five-year periods.*
[25] *A recent excellent survey explaining the growth behavior in MENA region introduced by Jeffrey B., Nugent and Hashem Pesaran (2007).*
[26] *A possible exception is Sub-Sahara Africa.*

the MENA region has been both mixed and characterized by a higher degree of volatility relative to other regions of the world. They notice diversity trends of growth across countries and over time.

A recent study by Bhattacharya and Wolde (2010) examined the constraints faced by local businesses across MENA economies, and reported that one of the key direct constraints to growth in MENA region is difficulties in access to finance. Although the importance of financial development in enhancing growth is recognized, still little work studies economic growth and finance in MENA region compared to other developing or developed countries. Comprehensive studies are few, and tend to focus on individual countries rather than on the region as a whole. Thereby, the following section attempts to shed some light on those studies.

Ben Naceur et al (2007) examined the relationship between financial sector and growth in 11 MENA countries between 1981 and 2003. They found no evidence of effect of financial or banking sectors' development on the overall economic growth in the region. In their view, this could be a result of the less developed stock markets and banking sectors in most MENA countries; they recommended for more reforms in financial and banking sectors. Ersel and Kandil (2007) investigated the relationship between financial development and economic growth in MENA region by examining direct and indirect channels. The direct channels operate through mobilizing and allocating financial resources. However, the indirect channels act by creating an appropriate environment for monetary policy to be effective. In sum, they stated that the MENA region was quite successful in mobilizing financial resources, but relatively less efficient in allocating them. Therefore, they argued for the importance of promoting competition in the financial sector, strengthening supervision, and increasing the independence of central banks to improve financial development.

Furthermore, other studies investigated the causality[27] relationship between financial development and growth such as Abu-Bader et al (2008) and Lutz (2008). The first investigated the causality relationship between financial development and growth in six MENA countries, and showed a highly statistically significant correlation for the causality running from financial development to economic growth; in brief, their results argued that the undertaken financial reforms in the past three decades were successful, to different levels, in stimulating saving and investment, and consequently enhancing economic growth. However, Lutz' study examined the causality issue in three North African countries (Algeria, Egypt and Morocco) for the period 1960 – 2001 and found that the causality direction is mixed, and the relationship between financial development and income in both the long and the short run is negative. The exception is the case of liquid liabilities to GDP ratio; they reported a positive long-run relationship between financial development and income in the three countries.

2.3 Role of institutional development and governance in growth

Differences in economic institutions have been found to be a major source of cross-country differences in economic growth and prosperity. An early study by North and Thomas (1973) pointed out that: "*the factors (like innovation, economies of scale, education, capital accumulation etc.) are not causes of growth; they are growth"*. They showed that these factors are proximate causes of growth; in their point of view the fundamental explanation of growth is differences in institutions.

[27] *Examples of studies investigated causality relationship are (King and Levine 1993a). It reports that finance causes growth, while others maintain that growth causes financial development (Baliamoune-Lutz2003). Finally studies which found mixed results (Demetriades and Hussein 1996), or bi-directional causality (Luintel and Khan 1999; Calderón and Liu 2003). See Lutz (2008) for a good review.*

Acemoglu D, et al (2005) state that economic institutions matter for economic growth as they shape the incentives of key economic actors in the society. In particular, they influence the investments in human capital , technology and the organization of production. A recent study by Zhuang, J. et al (2009), claims that the important issue regarding the financial system is what it provides to the rest of the economy, and not whether it has big or small banks. In their view, the appropriate policy goal should be construction of laws, regulations, and institutions that create a healthy environment in which financial institutions compete to provide the most useful credit, risk, and liquidity services to the real economy.

A growing volume of theoretical and empirical work shows that the development of institutions and financial markets are vital to economic growth. One recent empirical research that focused on the importance of institutional development in improving overall economic growth[28] is George C. et al (2009). They investigated the role of institutional factors in financial sector development in Sub-Saharan Africa countries (SSA), and found that institutional factors do influence financial systems' development through various direct and indirect channels. They suggested that it is extremely important for policymakers to know which institutional factors are critical for developing strategic goals for their financial sector, as it varies from country to country and certain factors can be less or more important for policymakers' strategic goals.

Demetriades et al (2009) proposed that lack in financial depth in SSA countries is not because of the borrowers' creditworthiness, but because of the lack of developed institutional infrastructure that would enable banks to better screen and monitor borrowers.

[28] *Institutions and financial development nexus has been widely discussed in literature e.g., Acemoglu, Johnson, and Robinson 2004, Djankov, McLiesh and Shleifer 2007, La Porta, et al 1998, Rajan and Zingales 1998, 2003, Roe and Siegel 2008.*

The issue of better governance recently gained an increasing attention from different policymakers and regulators; Kaufmann et al (1999a) defined governance as the traditions and institutions by which authority in a country is exercised. It includes the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies.

On the one hand, the causal effect running from better governance to better economic performance seems to hold at the micro and macro levels. Evidence has identified large causal effects running from governance to per capita incomes (Acemoglu, Johnson, and Robinson 2001; Hall and Jones 1999; Easterly and Levine 2002; Rodrik, Subramanian, and Trebbi 2002). Those studies reveal that the causal link running from governance to growth is stronger than the other way around.

On the other hand, the lack of protection and enforcement of property rights could cause a limited scope for market transactions. Corruption subverts the goals of policy and undermines the legitimacy of the public institutions that support markets. As World Bank (2003)[29] reported, good governance establishes an incentive structure that reduces uncertainty and promotes efficiency, thereby contributing to growth by encouraging investment and improving the effectiveness of the investment. The World Bank showed that these findings have two implications. First, good governance matters for growth. Second, higher incomes do not necessarily lead to better governance; hence good governance is not a luxury good that accrues automatically as countries become richer. In the context of MENA region it has been reported that quality of governance in MENA increases with incomes. The fact that upper-middle-income

[29] *MENA development report, 2003. Better Governance for Development in the Middle East and North Africa.*

countries around the world have average governance quality reported about twice that of lower income countries, is equally valid in MENA.

Kaufman et al (2003) found a strong positive correlation across countries between per capita incomes and the quality of governance. In most MENA countries, higher per capita incomes were the result of substantial oil and gas revenues and of indirect incomes through trade and remittance relationships with oil-rich countries as indicated in the World Bank, MENA report (2003). Following to the 1980s many reforms were taken place in most of MENA countries as a part of an overall strategy toward establishing a more market-based and private sector-led economy. Comparative figures of MENA countries from 2000 to 2008 on selected governance indicators are reported in appendix. Makdisi et al. (2007) pointed out the importance of the institutions quality in explaining the low productivity performance of MENA countries in comparison with the high-performing East Asian countries and with the rest of the world in general. Similarly El-Badawi (1999) and Nabli (2007) argued that the low efficiency of capital in the MENA region can be attributed to the unfriendly business climate or the less institutional support for enhancement of investment climate and in particular financing the private sector.

3. Methodology and model specification

Applying dynamic panel methods, specifically the GMM (Generalized-Method-of Moments) econometric technique initially proposed by Holtz-Eakin et al. (1990), Arellano and Bond (1991) and Arellano and Bover (1995), was necessary to overcome statistical and econometric shortage in previous banking and growth studies[30]; in a recent study of Beck, T (2008) on the

[30] *limitations of using difference equation reported by (Alonso-Borrego and Arellano (1999) and Blundell and Bond (1998) Griliches and Hausman, (1986) and recently by T. Beck, R. Levine (2004) and Beck (2008).*

econometrics of finance and growth, he reported two limitations of using instrumental variables and cross country regressions. Firstly, they control only for endogeneity and measurement error problems, and not other explanatory variables in the regression. Secondly, in the presence of country specific omitted variables, the lagged dependent variable could be correlated with the error term. Our investigation is based on the following equation[31]:

$$y_{i,t} = \alpha + \beta_1 C_{i,t} + \beta_2 F_{i,t} + \beta_3 G_{i,t} + \eta\, i + \varepsilon_{i,t} \qquad (1)$$

Where:

- y is the logarithm of income per capita growth, i,t denotes for country and time respectively. While β's are the estimated coefficients.
- C Denotes control variables, including; FDI (Foreign Direct investments) flows. Trade Openness (sum of exports and imports of goods and services (Trade Volume) as a ratio of GDP). Finally the Log of initial GDP per capita to control for convergence.
- F Contains the financial and banking sector proxies as liquid Liabilities to GDP, bank credit to bank deposit, International debt/ GDP and Loans from nonresident banks / GDP.
- G Denotes governance and institutional proxies such as quality of regulation, government efficiency and corruption indices.
- $\varepsilon_{i,t}$ is the error term and η is the specific country omitted and unobserved effects.

[31] *Traditional liner equation used in many banking, finance and growth studies such as T. Beck, R. Levine (2004), Rousseau and Wachtel (2000) and Ben Naceur et al (2007).*

Arellando and Bond (1991) proposed a difference equation in order to remove the specific country omitted and unobserved effects, hence equation (1) is differenced to get rid of the country fixed effect and the instruments used are lagged levels of regressors:

$$(y_{i,t} - y_{i,t-1}) - (y_{i,t-1} - y_{i,t-2}) = \alpha + \beta_1 (C_{i,t} - C_{i,t-1}) + \beta_2 (F_{i,t} - F_{i,t-1}) + \beta_3 (G_{i,t} - G_{i,t-1}) + (\varepsilon_{i,t} - \varepsilon_{i,t-1}) \quad (2)$$

While difference equation eliminated the country unobserved effects η, it introduced a new bias by constructing a new error term ($\varepsilon_{i,t-} \varepsilon_{i,t-1}$) that is correlated with other explanatory variables, (endogeneity problem). Hence, it's necessary to eliminate this correlation by using the following moment conditions:

$$E\left(C_{i,t-s}(\varepsilon_{i,t} - \varepsilon_{i,t-1})\right) = 0 \quad for\ s \geq 2; t = 3, \dots\dots, T, \quad (3)$$

$$E\left(F_{i,t-s}(\varepsilon_{i,t} - \varepsilon_{i,t-1})\right) = 0 \quad for\ s \geq 2; t = 3, \dots\dots, T, \quad (4)$$

$$E\left(G_{i,t-s}(\varepsilon_{i,t} - \varepsilon_{i,t-1})\right) = 0 \quad for\ s \geq 2; t = 3, \dots\dots, T, \quad (5)$$

Many studies like Arellano and Bond (1991) state that the two step GMM estimators are more efficient compared to the first step estimate, however they indicated that in small samples the two step estimate could provide biased estimates. Since our dataset contains a small number of countries, and limited time period, our econometric investigation results will be presented based on one step GMM estimator.

We used the test proposed by Arellano and Bond (1991) and Arellano and Bover (1995) to capture for the consistency of the GMM estimator in our model. The Sargan test of over-identifying restrictions captures the validity of used instruments. The null hypotheses of Sargan test propose no correlation between instruments and the error term.

4. Data sources and variables definition

A panel analysis is conducted on the nexus between the development of financial and banking sectors and growth. The initial sample contained nine MENA countries. But due to data limitation on Emirates, the final one included only eight countries with 43 observations over a seven year period from 2000 to 2007. The countries included are: Algeria, Bahrain, Egypt, Kuwait, Jordan, Morocco, Qatar and finally Tunisia[32].

The data has been extracted from different sources including World Bank, World Financial Structure Dataset 2009, Governance indicators, United Nations Conference on Trade and Development (UNCTAD), Directions of Trade (DOT) database, and finally, World Development Indicators. Table (1) shows the source of each variable, a brief description and the hypotheses direction.

Looking at equation (1), the dependent variable (y) denotes for logarithm of income per capita growth. While the (ln_gdp_cap_cons) is the log of initial income per capita of the year 2000 that used to control for convergence that was initially predicted and introduced by Solow-Swan growth models.

The following control variables are used in the model; annual flows of Foreign Direct Investments (Ln_FDI): the contribution of foreign direct investment (FDI) to economic growth has been debated quite extensively in the literature. This debate has focused on the channels through which FDI may help to raise growth in recipient countries. In particular, it has been

[32] *Summary statistics at country level are reported in the appendix.*

discussed to what extent FDI may enhance technological change through spillover effects of knowledge and new capital goods.

Another control measure is Trade Openness (trade_open): it captures the trade regime in MENA countries by measuring the degree of openness and exogenous terms of trade changes. Classical trade theory suggests that trade has a positive effect on the level of real income, while new trade theory implies that open economies have higher long-run growth rates, rather than just higher income levels. The proposition that openness to international trade accelerates development and growth has been presented in many studies that found a positive links between trade openness strategies and growth. A recent evidence claimed by Baltagi et al (2009).

Trade openness has been theoretically explained through neoclassical and endogenous growth theories. The first explains the gains from trade liberalization by comparative advantages, (as in the Hecksher-Ohlin model) or differences in technology (as shown by the Ricardian model). While the endogenous growth literature shows that trade openness positively affect per capita income and growth through economies of scale and technological diffusion between countries.

Looking at the proxies of financial and banking sectors' development, this study attempts to capture this relationship by employing the following measures:

- Liquid liabilities to GDP (llgdp) is a traditional indicator for measuring financial depth. Loayza, N., and Ranciere, R. 2005 showed that the financial liberalization can generate both short-run instability and higher long-run growth. On the one hand, they state that financially fragile countries (Banks who experience banking crises or suffer high financial volatility) tends to display significant negative short-run effects of

intermediation on growth. On the other hand they proposed a positive long-run relationship between financial intermediation and output growth.

While this broad measure looks at the liability side of the financial intermediary's statements, other proxies look at the assets side such as:

- Private Credit to GDP (pcrdgdp): this ratio used to assess the allocation of financial assets, it measures more precisely the contribution of banks and financial institution in funding the private sector, and capture claims on the private sector, the increase of this ratio does not necessarily mean an increase in productive investments. Beck, T et al (2009) indicated that countries with high levels of private credit to GDP ratio tends to grow faster and reduce poverty levels.

Capturing financial globalization effect in the local MENA financial and banking markets was important;

- The measure of international debt issues (intldebt) is calculated through deflating the net flow of international bond issues to a country's economic activity, according to Beck, T. et al (2009) the increase in international debt issues has been driven mostly by high-income countries. Another measure is the nonresident banking loans ratio (nrbloan); this measure shows the share of nonresident banks contribution to domestic banking system by the economic growth.

  Since this study looks at the nexus between banking development in MENA and overall economic growth, it is essential to capture the banking and intermediation efficiency;

- The bank credit to bank deposit ratio (bcbd) is used to capture this relationship, this proxy measures the extent to which banks intermediate society's savings into private sector credits and represent the claims on the private sector to deposits banks. Beck et al (2009) states that a high loan-deposit ratio indicates high intermediation efficiency; also, the ratio significantly above one suggests that private sector lending is funded with non-deposit sources. Another measure to capture the intermediation efficiency is the bank deposit to GDP ratio; which is limited to deposit monetary institutions.

The measures for the size of the banking system, financial intermediation are many, for example; central bank assets relative to GDP, financial institutions assets to GDP, and deposit bank assets relative to GDP. The last measure has been used in this study as a proxy that captures claims that financial intermediaries (deposit banks) have on nonfinancial domestic sectors. Lutz (2008) found a negative relationship between the deposit bank assets and GDP, in study of three North African countries.

Beck T., Levine R. (2004) showed that the absence of direct measures of the degree to which markets and banks in a broad cross-section of countries ameliorate information and transactions costs led to the use of proxy measures of banking system size and stock market activity to capture cross-country differences in stock market and banking sector's development.

Finally, this paper examines the hypothesis that good governance and institutions' quality matter for growth: selected indices introduced by Kaufmann, D. et al (2009) of regulation quality (regquality), government efficiency (gov_eff), and corruption control (corrupt) have been used as measures of the general openness of political institutions, good governance and secure property rights. Comparative figures of these measures in context of MENA are presented in Appendix.

Table 1

Variable	Description	Source	Hypo Direction
"ln_gdp_cap"- GDP per Capita growth	Logarithm of GDP per Capita growth	World Development indicators 2009	Dep. Variable
A. Control variables			
"ln_gdp_cap_cons" - initial income per capita (constant 2000 US $)	Logarithm of GDP per capita at constant US $, (control for convergence).	World Development indicators 2009	------
"ln_fdi" – log of Foreign Direct Investment	Logarithm of Foreign Direct Investment annual flows.	UNCTAD	+Ve
"trade_open" - Trade Openness	The sum of exports and imports of goods and services (Trade Vol.) as a ratio of GDP.	DOT (Directions Of Trade) and World Dev. Indicators.	+Ve
B. Financial, and Banking Sectors indicators			
"llgdp" - Liquid Liabilities / GDP	Measures country' financial depth and size of financial market.	Financial Structure Dataset 2009	+Ve
"pcrdgdp" - Private Credit / GDP	Private credit by deposit money banks / GDP, is proxy of the contribution of private and financial institutions in financing private sector.	Financial Structure Dataset 2009	+Ve
"bdgdp" - Bank Deposit / GDP	Is a proxy for the size of financial institutions, its limited to deposits of monitory initiations.	Financial Structure Dataset 2009	-Ve
"bcbd" - Bank Credit / Bank Deposits	Ratio of claims on the private sector to deposits in deposit money banks. It shows the extent to which banks intermediate society's savings into private sector credits.	Financial Structure Dataset 2009	+Ve
"dbagdp"- Deposit Bank Assets / GDP –	Is a measure for size of financial intermediation, capture claims that financial intermediaries have on nonfinancial domestic sectors.	Financial Structure Dataset 2009	------
"nrbloan" - Loans from nonresident banks / GDP	This ratio shows the share of nonresident banks contribution to domestic banking system.	Financial Structure Dataset 2009	------
"intldebt"- International debt issues/ GDP	Measures the net flow of international bond issues relative to a country's economic activity.	Financial Structure Dataset 2009	+Ve
C. Institutional and Governance indicators *			
"regquality" - Quality of Regulations	This index capture the quality of regulations across MENA countries	Governance indicators	+ Ve
"gov_eff" - Government Efficiency	Measures the quality of public services provision, the competence of civil servants and the independence of civil services from political pressure, the index scale (0-100) introduced by Kaufman et al - WGI. (2009).	Governance Indicators	+Ve

* Appendix1 shows the development of different governance indices across MENA countries between 2000 to 2008.

Table (2): Correlation matrix

	ln_gdp_cap	ln_gdp~cap_cons	ln_fdi	trade_opn	pcrdgdp	bcbd	offdep	nrbloanllgdp	intldebt	bdgdp	corrupt	regquality	gov_eff
ln_gdp_cap	1.0000												
ln_gdp_cap_cons	0.9749 0.0000	1.0000											
ln_fdi	-0.1345 0.2705	-0.1984 0.1023	1.0000										
trade_open	0.5854 0.0000	0.5202 0.0000	0.1398 0.2744	1.0000									
pcrdgdp	-0.0594 0.6664	-0.0366 0.7908	-0.0949 0.4992	0.1673 0.2360	1.0000								
bcbd	0.2602 0.0273	0.2369 0.0451	-0.0015 0.9902	0.2212 0.0743	0.7090 0.0000	1.0000							
offdep	0.7178 0.0000	0.7719 0.0000	-0.2904 0.0220	0.5839 0.0000	0.4136 0.0023	0.1364 0.2787	1.0000						
nrbloan	0.3084 0.0124	0.3351 0.0064	-0.2144 0.0942	0.5856 0.0000	0.0883 0.5334	-0.0346 0.7846	0.5838 0.0000	1.0000					
llgdp	-0.4617 0.0004	-0.4344 0.0009	0.1449 0.3007	-0.0598 0.6734	0.6644 0.0000	0.0056 0.9674	0.2765 0.0472	-0.0684 0.6302	1.0000				
intldebt	0.3890 0.0014	0.3994 0.0010	-0.1410 0.2745	0.5591 0.0000	0.2253 0.1082	0.2752 0.0265	0.4189 0.0005	0.6747 0.0000	-0.2440 0.0813	1.0000			
bdgdp	-0.3203 0.0171	-0.2823 0.0368	0.0760 0.5885	-0.0229 0.8720	0.6970 0.0000	0.0290 0.8336	0.3987 0.0034	-0.0078 0.9560	0.9822 0.0000	-0.2225 0.1128	1.0000		
corrupt	0.6982 0.0000	0.7917 0.0000	-0.2252 0.0628	0.4277 0.0003	0.1604 0.2420	0.2266 0.0556	0.7904 0.0000	0.3418 0.0053	-0.2077 0.1280	0.3527 0.0040	-0.1044 0.4479	1.0000	
regquality	0.6749 0.0000	0.6911 0.0000	-0.0543 0.6779	0.6252 0.0000	0.6566 0.0000	0.5989 0.0000	0.8040 0.0000	0.4803 0.0002	0.1345 0.3570	0.4678 0.0003	0.2240 0.1218	0.7057 0.0000	1.0000
gov_eff	0.6113 0.0000	0.6288 0.0000	-0.0842 0.5188	0.5537 0.0000	0.6168 0.0000	0.7402 0.0000	0.6147 0.0000	0.3232 0.0151	-0.0102 0.9448	0.4954 0.0001	0.0522 0.7219	0.6689 0.0000	0.8926 0.0000

Table (3): Summary statistics[33]

Variable		*Mean*	*Std. Dev.*	*Min*	*Max*	*Observations*
ln_gdp_cap	*overall*	*8.729468*	*1.336034*	*7.000334*	*11.34461*	*N = 72*
	between		*1.376829*	*7.22643*	*10.6388*	*n = 9*
	within		*.2760881*	*8.294777*	*9.43528*	*T = 8*
ln_gdp_cap_cons	*overall*	*8.495023*	*1.246958*	*7.146772*	*10.26803*	*N = 72*
	Between		*1.313382*	*7.146772*	*10.26803*	*n = 9*
	Within		*0*	*8.495023*	*8.495023*	*T = 8*
Trade openness	*overall*	*.9045418*	*.4516872*	*.1631143*	*2.154551*	*N = 61*
	Between		*.40612*	*.3157707*	*1.665115*	*n = 9*
	Within		*.2441057*	*.4769863*	*1.649385*	*T = 6.77778*
Ln – FDI	*overall*	*6.7276*	*1.503281*	*1.286142*	*9.491988*	*N = 69*
	between		*1.307821*	*3.719402*	*8.581499*	*n = 9*
	within		*.9814431*	*4.29434*	*8.567837*	*T-bar =*
pcrdgdp	*overall*	*.4729656*	*.1969455*	*.0500784*	*.8858002*	*N = 55*
	between		*.1951805*	*.0945149*	*.7510291*	*n = 8*
	within		*.0398728*	*.4094961*	*.6077366*	*T = 6.875*
nrbloan	*overall*	*.4072535*	*.8637758*	*.0189013*	*3.791218*	*N = 65*
	between		*.9695543*	*.0557701*	*3.047819*	*n = 9*
	within		*.1507787*	*-.3416265*	*1.150653*	*T = 7.22222*
intldebt	*overall*	*.0610853*	*.0759758*	*0*	*.2917012*	*N = 65*
	between		*.0806063*	*0*	*.2226646*	*n = 9*
	within		*.0227867*	*-.0065045*	*.1301219*	*T = 7.22222*
llgdp	*overall*	*.7277295*	*.2472634*	*.3496515*	*1.260743*	*N = 55*
	between		*.249733*	*.379279*	*1.182427*	*n = 8*
	Within		*.0712238*	*.5662857*	*.8877748*	*T = 6.875*
bcbd	*Overall*	*.784408*	*.2603363*	*.1850265*	*1.263921*	*N = 72*
	Between		*.259903*	*.2424581*	*1.231154*	*n = 9*
	Within		*.0829771*	*.6013627*	*1.027326*	*T = 8*
bdgdp	*Overall*	*.617823*	*.2031375*	*.2631202*	*1.069439*	*N = 55*
	Between		*.1994383*	*.3591999*	*.9740958*	*n = 8*
	Within		*.0680925*	*.4653637*	*.7704555*	*T = 6.875*
dbagdp	*Overall*	*.6583532*	*.1827827*	*.3295199*	*1.114005*	*N = 55*
	Between		*.1756934*	*.3650173*	*.9370466*	*n = 8*
	Within		*.0626605*	*.4882594*	*.8353115*	*T = 6.875*
regquality	*Overall*	*55.90317*	*16.1992*	*19.5*	*82.9*	*N = 63*
	Between		*16.57642*	*25.84286*	*76.32857*	*n = 9*
	Within		*3.771999*	*42.01746*	*64.93175*	*T = 7*
gov_eff	*Overall*	*59.47143*	*13.985*	*14.7*	*77.7*	*N = 63*
	Between		*14.02546*	*33.31428*	*74.34286*	*n = 9*
	Within		*4.231231*	*40.85714*	*69.75714*	*T = 7*

[33] *Summary statistics at the country level is presented in appendix.*

5. Estimation and results

Several specifications[34] of our dynamic panel model, as described in section (3) by equation (2), were estimated using the econometric method of GMM employing both one-step & two-step procedures. Table (4) reports the results of some of these specifications, estimated with one-step[35] procedure only. The dependent variable is the logarithm of GDP per Capita growth. Each of the four reported specifications controls for the logarithm of the initial income. The reported estimated equations seem to fit the panel reasonably well, Most of the variables are statistically significant, and the sargan test presents evidence that underlying over identifying restrictions is valid[36].

As expected, FDI and trade openness show a positive and robust significant relation with growth across the four different models, except in model (2) where FDI appears to be insignificant when controlling for bank deposit to GDP ratio.

Looking at the financial and banking sectors determinants, the overall results show that they matter for growth in MENA region and all factors are statistically significant and positively correlated to income per capita growth as indicated in model (1); except for private credit to GDP and nonresident banking loans.

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[34] Examples of specifications that were estimated and excluded due to insignificance or data limitation: stock market total value traded to GDP, stock market turnover ratio to GDP, net interest margin stock market capitalization and financial depostis to gdp ratio in addition to other institutional, governance indicators.

[35] As our dataset contains a small number of countries, and limited time period, our econometric investigation results will be presented based on one step GMM estimator, Arellano and Bond (1991) showed that in small samples the two step estimate could provide biased estimates.

[36] Sargan test controls for the validity of the used instruments and its correlation to the residuals. The null hypotheses suggest that used instruments are not correlated with residuals.

The negative sign of private credit to GDP can be explained due to the small contribution of banking sector in financing the private sector in most MENA countries. Nevertheless this opposite relation changes when controlling for governance variable.

The significance and positive sign of liquid liabilities as a proxy of financial depth shed some light on the openness of the financial market in the region and availability to receive new investments. In investigation of the three North African countries: Algeria, Egypt, and Morocco, Lutz (2008) found a positive relationship between liquid liabilities to GDP ratio. While for other financial development factors; the relationship with growth showed a negative sign. These results are in line with our study results. On the one hand we report a positive correlation between liquid liabilities as a proxy of financial depth and income per capita growth. On the other hand a negative sign between the ratio of deposit bank assets to GDP is found in their study.

The causality relationship from financial development to foreign banks entry suggests that the level of financial development matter for the entry decision of foreign banks. Classens et al (2009) investigated the performance of a foreign bank in host countries. They found that in developing countries the level of financial sector development is affecting the performance of these banks. While this study tried to shed some light at the financial development and foreign banks nexus; other study by Rousseau and Wachtel (2000) looked at the financial development and growth nexus stated that stock market liquidity and the intensity of activity in financial intermediaries have a leading roles on growth. They suggested that potential gains are associated with developing deep and liquid financial markets.

Model (3), introduces institutional determinants and the results show that quality of regulation is the most highly significant and positively related factor to income per capita growth. The role of enhanced regulatory environment in improving overall growth was a topic of interest of many studies. Zhuang, J. et al (2009), recently claimed that regulations and institutions create a healthy environment in which financial institutions compete to provide the most useful credit, risk, and liquidity services to the real economy. This positive correlation with growth is also reported in model (4).

The correlation matrix in table (2) shows a high correlation ratio between governance and institutional factors, and per capita income growth. Hence this relationship has been investigated for each variable per se. and reports only the regulation quality effect that appears not only statistically significant but economically plausible.

It can be noticed that the quality of regulation always highly significant across different models, while efficient government policies proxy show a negative sign when jointly inserted with regulation quality and appears insignificant when controlled alone. The negative relationship between governance factors and growth has been argued by Kaufmann et al (2003) to have two important implications: First, a strategy of waiting for improvements to come automatically as countries become richer (high per capita income) is unlikely to succeed. Second, in the absence of positive feedback from incomes to governance, it's unlikely to observe "virtuous circles" of when better governance improves income; this could give a signal to the policy-makers and civil society to work hard and continuously at improving governance within their countries.

In contradiction to our results, Ben Naceur et al (2007) found that overall financial development is unimportant or even harmful for economic growth in MENA region, linking this lack of relationship to the underdeveloped financial systems in the MENA region or to the unstable growth rates in the region. The apparent contradiction can be attributed to the differences in time periods, determinants studied and the source of determinants.

The recommendations for policy makers on the importance of setting up and improving the financial and banking sectors regulatory and overall performance was a matter of interest for the countries of the region in recent years. Following to the 1980s many reforms were taken place in most of MENA countries as a part of an overall strategy toward establishing a more market-based and private sector-led economy. Egypt's experiences in restructuring its financial, stock market and banking sectors, in addition to its government's efforts with the design of the second generation of financial reforms, has been promoted as a success story among MENA countries. See Egypt: Access to Finance Seminar, World Bank (2008).

To conclude, the results, on the one hand, show the importance of financial and banking sectors in improving growth, through conducting various reforms that expected to have an important impact on overall economic environment and activity in MENA economies. On the other hand, attracting foreign banks could have an indirect impact on overall growth through financial sector development.

Table (4): Financial, banking and growth nexus, GMM "one–step" estimation results

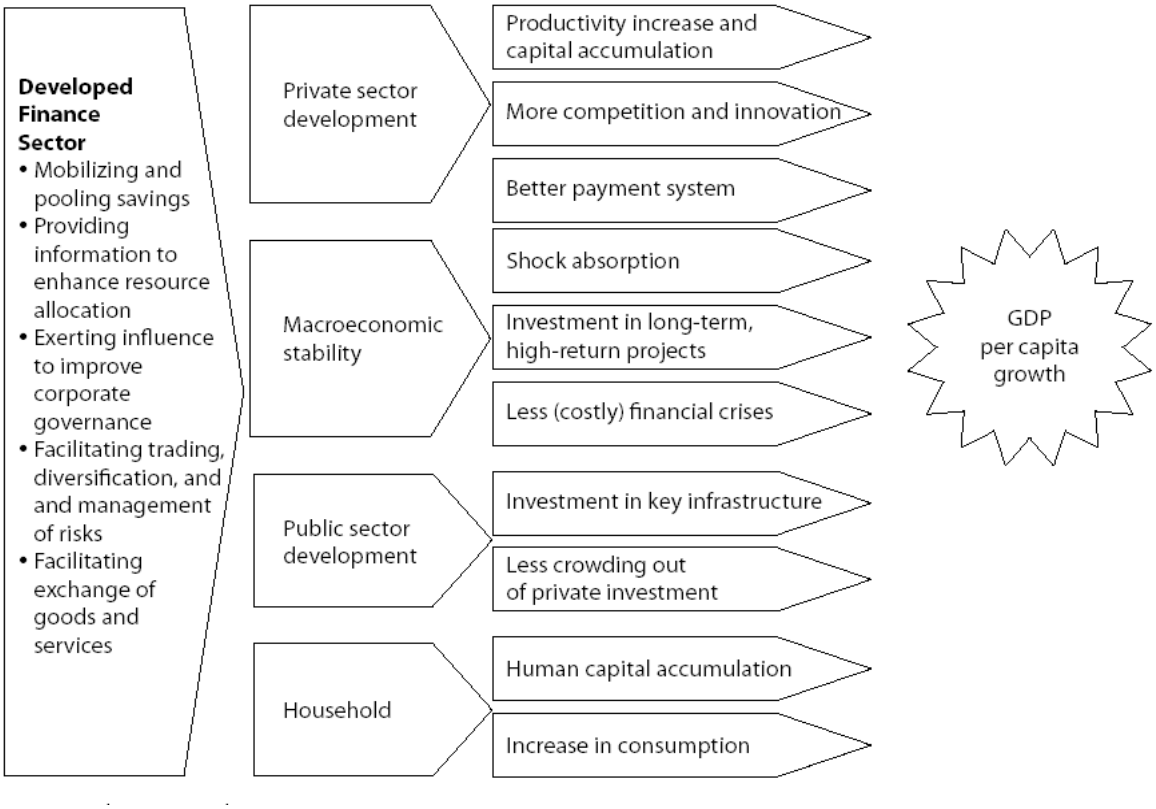
Regressors	(1)	(2)	(3)	(4)
ln_gdp_cap_cons	0.461***	0.441***	0.392**	0.333**
	(7.54e-05)	(0.000174)	(0.00232)	(0.00549)
Trade openness	0.420**	0.447**	0.188**	0.160*
	(0.00340)	(0.00235)	(0.0326)	(0.0558)
Ln – FDI	0.0282*	0.0251	0.0212*	0.0265**
	(0.0831)	(0.134)	(0.0534)	(0.00930)
Private Credit to GDP - "pcrdgdp"	-1.520**	-1.665**	1.399**	1.063*
	(0.0117)	(0.0125)	(0.0258)	(0.0656)
Non-Resident bank loans – "nrbloan"	-0.640***	-0.693***		
	(0.000280)	(8.63e-05)		
Internationl debts - "intldebt"	0.777	1.067*		
	(0.170)	(0.0634)		
Liquid Liabilities "llgdp"	0.839**			
	(0.0292)			
Bank Credit/ Bank Deposit "bcbd"	0.618**	0.714**		
	(0.0464)	(0.0431)		
Bank Deposit to GDP "bdgdp"		0.961**		
		(0.0334)		
Deposit Bank Assets / GDP – "dbagdp"			-1.241**	-0.905**
			(0.00377)	(0.0140)
Regulation Quality –" regquality"			0.0126***	0.00963***
			(5.22e-05)	(0.000180)
Government Efficiency - "gov_eff"			-0.00510*	
			(0.0782)	
Constant	-1.875***	-1.496**	-0.648	-0.919**
	(0.000300)	(0.00100)	(0.103)	(0.00943)
Observations	43	43	41	41
Number of Countries	8	8	8	8
Sargan Test (P-Value)	0.2200	0.2138	0.2947	0.1260

- Significant at : *** p<0.001, ** p<0.01, * p<0.05
- P-Value in parentheses.
- The null hypotheses of Sargan test; suggest that used instruments are not correlated with residuals.

Appendix

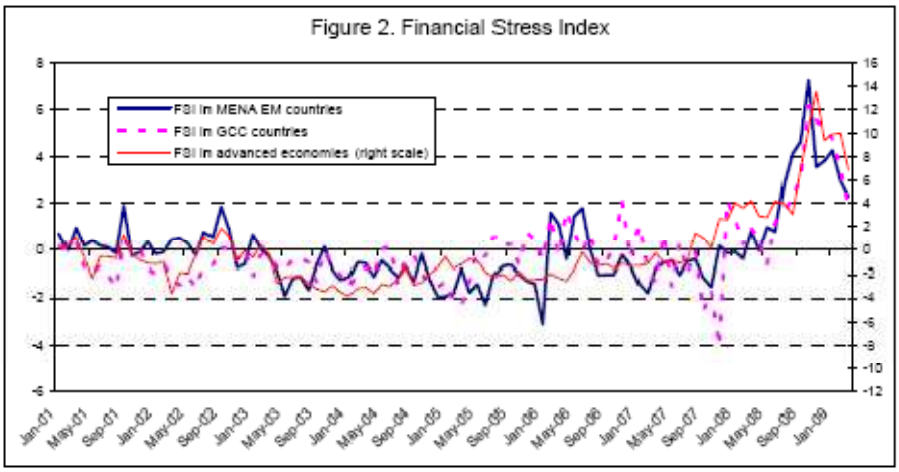
Financial Development and Growth Nexus: Recent Evidence from MENA Region

Figure (1) : Financial Development and Economic Growth relationship



***Source**: Zhuang et al (2009).*

Figure (2): Financial Stress Index (FSIs) in MENA and advanced economies



***Source**: Moriyama, K. (2010)*

Summary statistics / country level

Algeria

Variable	Obs	Mean	Std. Dev.	Min	Max
ln_gdp_cap	8	7.816067	.3243298	7.486053	8.285766
trade_open	7	.7274241	.2382079	.4993141	1.112024
ln_fdi	8	6.908718	.4704909	6.082219	7.492983
pcrdgdp	8	.0945149	.0234474	.0500784	.118714
nrbloan	8	.0557701	.0241757	.0189013	.0911335
llgdp	8	.4919368	.0689617	.3496515	.5544501
bcbd	8	.2424581	.0326739	.1850265	.2859163
bdgdp	8	.3934212	.0621115	.2631202	.451716
dbagdp	8	.3650173	.0406435	.3295199	.4326444
regquality	7	25.84286	3.527443	19.5	29.8
gov_eff	7	33.31428	9.586001	14.7	43.6

Bahrain

Variable	Obs	Mean	Std. Dev.	Min	Max
ln_gdp_cap	8	9.671735	.2725783	9.391662	10.10818
trade_open	6	1.665115	.3185525	1.413078	2.154551
ln_fdi	8	6.384647	1.161496	4.387014	7.977589
pcrdgdp	3	.4694756	.0196146	.4482651	.4869596
nrbloan	6	3.047819	.5307673	2.298939	3.791218
Intldebt	6	.2226646	.0524338	.1550748	.2917012
llgdp	3	.6526569	.0303529	.6307483	.6873032
bcbd	8	.7481327	.0774944	.6436063	.8346252
bdgdp	3	.6050676	.0269951	.5851514	.6357921
dbagdp	3	.5720672	.0138946	.5561997	.5820567
regquality	7	76.32857	3.587811	71.7	80.5
gov_eff	7	69.47143	3.902013	65.4	74.9

Egypt

Variable	Obs	Mean	Std. Dev.	Min	Max
ln_gdp_cap	8	7.22643	.1608309	7.000334	7.50769
trade_open	7	.3157707	.1042832	.1631143	.4746541
ln_fdi	8	7.516634	1.44072	5.469747	9.356871
pcrdgdp	8	.4982835	.0309883	.4389142	.5338448
nrbloan	8	.0913638	.0128671	.0712865	.1046535
Intldebt	8	.0230876	.0150227	.001008	.0431599
llgdp	8	.8569647	.0718231	.7285127	.9203159
bcbd	8	.6689777	.0935275	.5471236	.8025357
bdgdp	8	.734804	.0697576	.6114211	.8012224
dbagdp	8	.7812036	.0502189	.6885228	.8283882
regquality	7	36.41428	2.90197	33.7	42.2
gov_eff	7	41.44286	5.018585	33.2	47.9

Jordan

Variable	Obs	Mean	Std. Dev.	Min	Max
ln_gdp_cap	8	7.665669	.1739954	7.474772	7.962067
trade_open	7	1.019519	.2966224	.6948776	1.513182
ln_fdi	8	6.570914	1.151769	4.80057	8.076926
pcrdgdp	8	.7510291	.0732774	.6875596	.8858002
nrbloan	8	.1199596	.0162438	.0939452	.1401795
Intldebt	8	.0442631	.0380909	.009492	.096082
llgdp	8	1.182427	.0736911	1.07578	1.260743
bcbd	8	.7715664	.05741	.6833338	.8352631
bdgdp	8	.9740958	.0837005	.8555831	1.069439
dbagdp	8	.9370466	.0928536	.856645	1.114005
regquality	7	61.41429	2.586781	57.1	64.9
gov_eff	7	61.61429	2.223682	57.8	63.5

Summary statistics / country level

Kuwait

Variable	Obs	Mean	Std. Dev.	Min	Max
ln_gdp_cap	8	10.03392	.3846606	9.610324	10.57595
trade_open	7	.7464083	.1393222	.6209731	.9792146
ln_fdi	6	3.719402	1.579302	1.286142	5.455321
pcrdgdp	8	.504067	.0436951	.4429639	.5481459
nrbloan	7	.1991489	.0230778	.1672425	.2282692
Intldebt	7	.0141201	.0101252	.000875	.026257
llgdp	8	.6470842	.1238406	.4856403	.8071294
bcbd	8	.8606059	.1513066	.6779361	1.093276
bdgdp	8	.617409	.1169764	.4649497	.7700415
dbagdp	8	.7015555	.1206165	.5314618	.8524869
regquality	7	63.18572	6.667692	49.3	69.8
gov_eff	7	64.58571	2.665477	61.6	68.2

Morocco

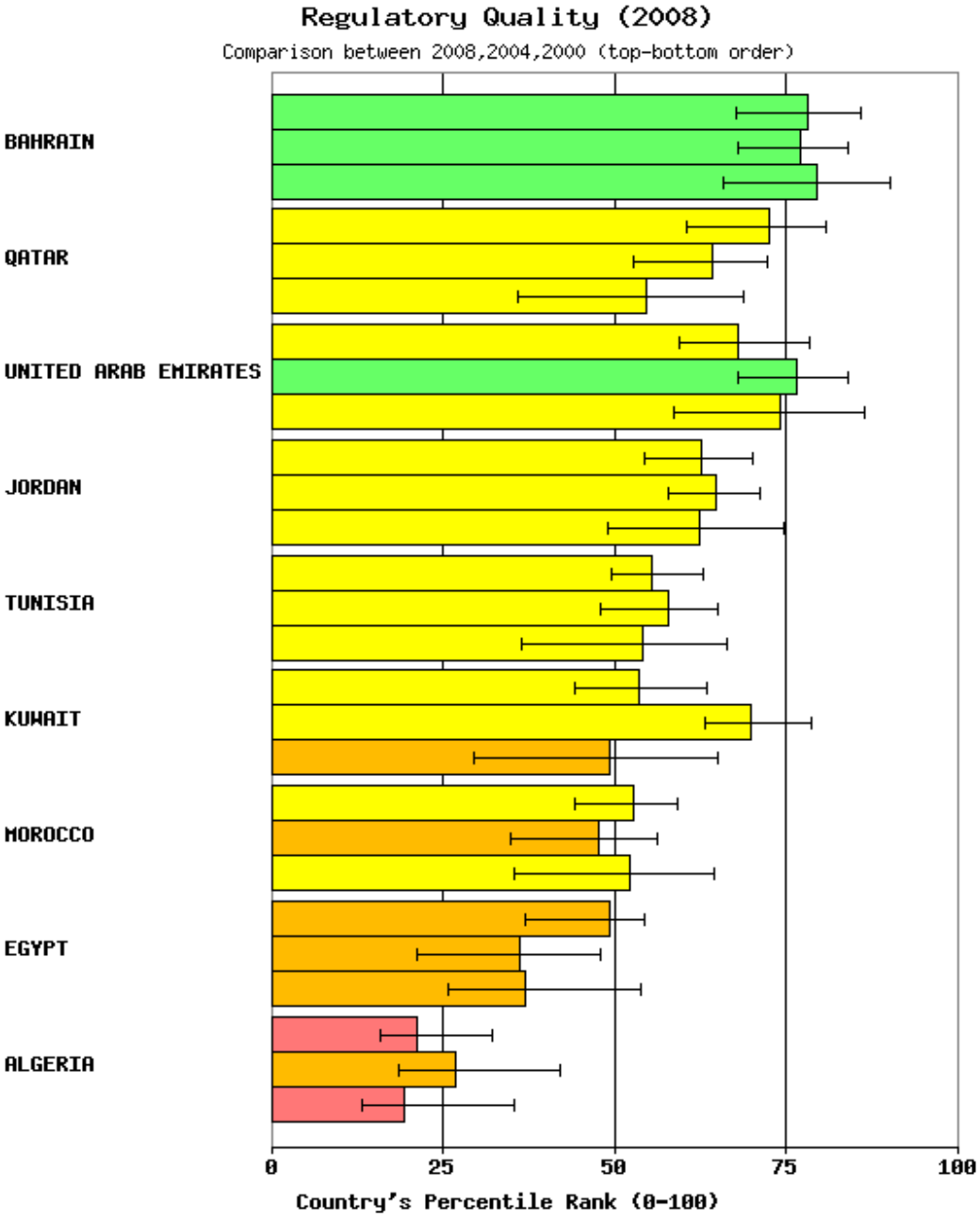
Variable	Obs	Mean	Std. Dev.	Min	Max
ln_gdp_cap	8	7.428894	.2380854	7.146772	7.77191
trade_open	7	.5717812	.1059456	.4697528	.7566178
ln_fdi	8	7.221826	.7767753	6.045506	7.94013
pcrdgdp	8	.5029482	.0472874	.4682524	.6090617
nrbloan	8	.1149195	.0345241	.0699022	.1710646
Intldebt	8	.0096029	.0023684	.0058562	.0126336
llgdp	8	.8133902	.086796	.7165054	.973021
bcbd	8	.7716012	.0431139	.734366	.8571895
bdgdp	8	.6507303	.0739737	.5641088	.7846646
dbagdp	8	.6502535	.0348448	.6249859	.7313784
regquality	7	48.74286	3.011011	42.9	52.2
gov_eff	7	53.1	2.197726	48.8	55

Qatar

Variable	Obs	Mean	Std. Dev.	Min	Max
ln_gdp_cap	8	10.6388	.4404374	10.20411	11.34461
trade_open	6	.9503712	.2384137	.7643649	1.406188
ln_fdi	8	6.306745	.7967546	5.06875	7.168758
pcrdgdp	4	.2903839	.0397988	.2600712	.3484204
nrbloan	6	.256725	.0695188	.185484	.3524242
Intldebt	6	.1661532	.0264786	.137398	.2072911
llgdp	4	.379279	.0268346	.3516144	.4069747
bcbd	8	.8232094	.142836	.6401641	1.066127
bdgdp	4	.3591999	.0255112	.3338894	.3829801
dbagdp	4	.4859142	.049904	.4357527	.5549971
regquality	7	62.18571	3.8912	54.6	67.5
gov_eff	7	67.64286	5.074727	57.3	71.6

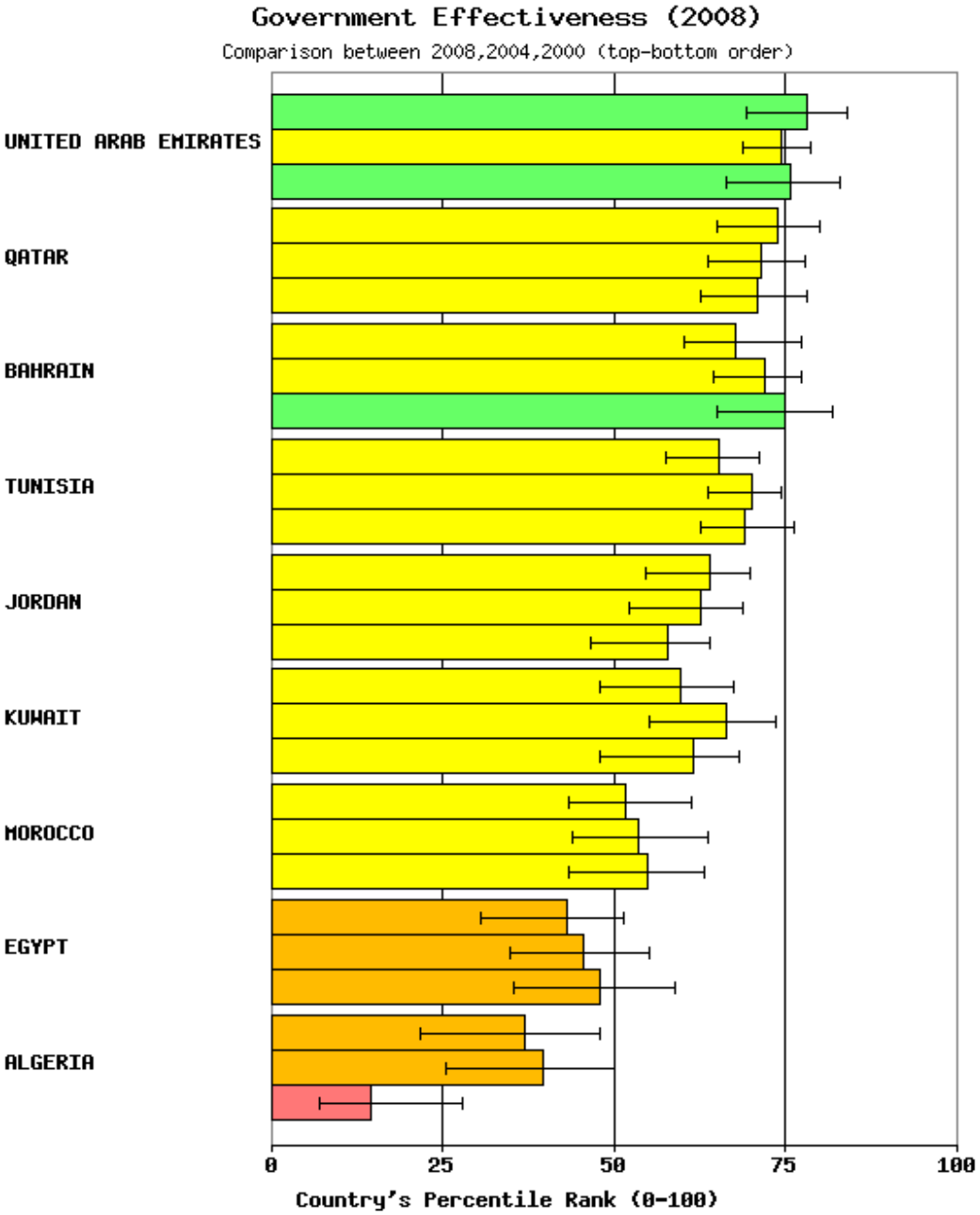
Tunisia

Variable	Obs	Mean	Std. Dev.	Min	Max
ln_gdp_cap	8	7.854726	.1971738	7.617268	8.14584
trade_open	7	.8933368	.1303757	.7507361	1.109971
ln_fdi	8	6.817706	.6292513	6.187031	8.105247
pcrdgdp	8	.5795505	.0212299	.5314924	.5989538
nrbloan	8	.1313639	.0157608	.1092757	.1580763
Intldebt	8	.1077788	.0175229	.0804569	.1280691
llgdp	8	.5769515	.0186209	.54605	.6020576
bcbd	8	1.231154	.0428395	1.146801	1.263921
bdgdp	8	.4705725	.0198874	.4377977	.4987795
dbagdp	8	.633619	.0246631	.5783143	.6581126
regquality	7	55.14286	2.815348	51.2	58
gov_eff	7	69.72857	1.698739	67.3	72



Source: Kaufmann D., A. Kraay, and M. Mastruzzi 2009: Governance Matters VIII: Governance Indicators for 1996-2008

Note: The governance indicators presented here aggregate the views on the quality of governance provided by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries. These data are gathered from a number of survey institutes, think tanks, non-governmental organizations, and international organizations. The WGI do not reflect the official views of the World Bank, its Executive Directors, or the countries they represent. The WGI are not used by the World Bank Group to allocate resources.



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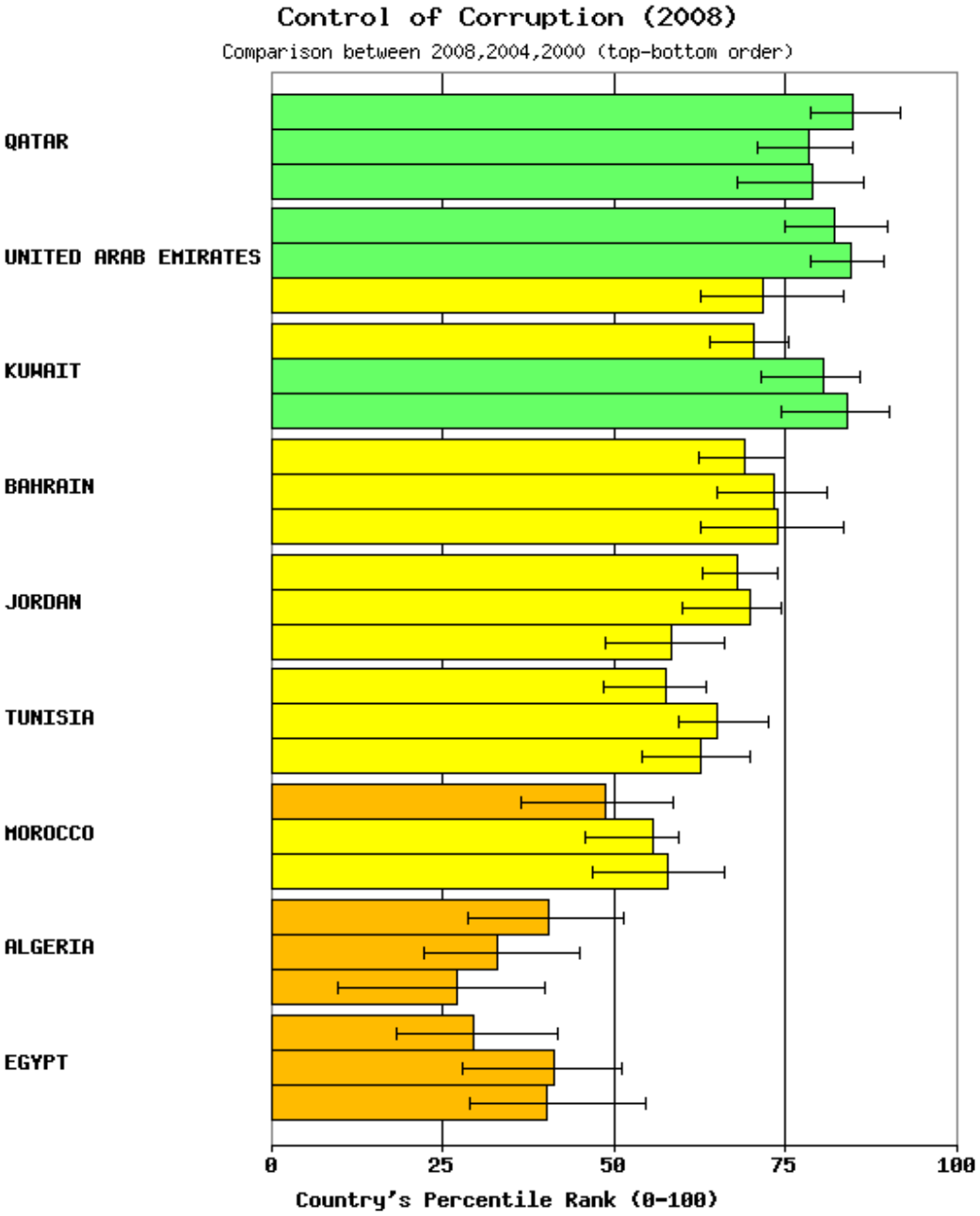

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Final Remarks

Recommendations and Future Research

Final Remarks, Recommendations and Future Research

In this thesis we tried to combine the interests of both foreign banks and policy makers. On the one side, we investigated foreign banks operating in MENA region for better understanding what factors have more effect on their profitability (first part of this work). On the other side, from the policy maker's perspective, we examined factors that could help to enhance the functioning of their countries' financial systems and thereby the economic growth.

Using unbalanced dataset of 71 foreign banks in nine MENA countries, the first part investigated two main research subjects: the impact of selected macroeconomic, financial market and bank specific determinants on foreign banks profitability and the effect of provision of Islamic Financial Services (IFS). The results show that the most significant factors affecting foreign banks' profitability in MENA are capital, total assets and liquidity ratios at bank level, and stock market capitalization, trade volume, bilateral trade and level of income per capita growth on macro and banking industry level. The observed positive impact of country's level of economic growth on foreign banks' profitability lead us to investigate how the financial and banking development could contribute to economic growth in the MENA region. Hence, The second part of this work provides new evidence on the nexus between foreign banks, financial development and growth. The results of the second part report that FDI and trade openness have a positive and robust significant relation with growth. Looking at the financial and banking sectors determinants, the overall results show that they matter for growth in MENA region and all factors are statistically significant and correlated (in different signs) to income per capita growth. Finally, other factors such as quality of regulation and efficient government policies were examined, and always appeared as highly significant.

MENA countries continued their upward trend with 27 reforms in two-thirds of the region's economies. According to Doing Business Report (2009), the main reforms taken by the region's countries in 2007-2008 include creating a better regulatory environment, focusing on facilitating business start-up, mitigating tax burdens, simplifying import and export procedures and improving credit information systems.

The findings of this research lead to the following recommendations for policy makers as well as future research.

- The bank's internal factors are reported to have the most important impact on foreign banks profitability compared to the external factors, which suggests the foreign banks to implement relevant corporate governance practices and standards such as Basel II roles which proposed by policy makers. We suggest more research to take place in the context of MENA region to investigate bank performance, governance and regulation nexus in order to fill the current gap in these relationships.

- The opposite correlation between offering Islamic financial services and foreign banks profitability which could be a result of the lack of awareness of Islamic banking tools and services compared to its conventional counterparts in MENA countries, on one hand, can be seen as an entry barrier for these banks, on the other hand, it may require the policy makers to promote to their societies the culture of Islamic banking and the tools offered by Islamic finance system. Future research could be conducted when insufficiency of data on banks offering Islamic financial services can be overcome.

- Trade openness found to play a crucial role in financial development in MENA region. While the policy makers in most MENA countries are trying to improve the trade and regulation[37] environment, the foreign banks are recommended to pay more attention to the role of the bilateral trade between countries of origin and the host countries in determining their profitability. Future research could be conducted by investigating the role[38] of bilateral trade and investments on the foreign banks entry decision and performance of these banks (efficiency, profitability…etc).

- Policy makers in MENA are recommended to promote to foreign banks the openness and potentiality of their countries, including relaxation of various (implicit and explicit) entry barriers. Future research could be conducted to evaluate the gains of foreign banks to operate in MENA region compared to other regions in the world. i.e the Asian developing countries, Sub Saharan Africa, and / or other developing countries.

- The development of banking and financial sectors are found to be crucially important for spurning of economic growth in MENA region, suggesting the policy makers to continue with improvement in the regulatory infrastructure to attract more foreign banks. Future research could be conducted to investigate the direct relationship between foreign banks entry and economic growth in MENA region.

[37] *See appendix for recent figures on trade enhancements in MENA countries.*

[38] *(Grosse and Goldberg 1991). Yamori (1998) developed a model revealing the positive correlation between the level of bilateral trade, FDI and bank entry in the United States. Williams (2003) investigating foreign banks' profitability in the Australian market, found that bilateral investments and trade between home and host countries have no statistically significant effect on measuring profitability of foreign banks.*