

THE RELATIONSHIP BETWEEN INSTITUTIONS, BANKING REGULATION AND BANKING DEVELOPMENT IN THE MENA REGION

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Abstract

The purpose of the paper is to check, on the one hand, the nature of the relationship existing between institutional development (measured by the corruption level, quality of bureaucracy, rule and law, law enforcement...), banking regulation and banking development. On the other hand, we test the relationship that exists between banking development and economic growth. We used the GMM (General Method of Moments) system on dynamic panel data for 19 countries of the MENA region, in the 2 estimations (Algeria, Bahrain, Egypt, Iran, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, Turkey, United Arab Emirates, Yemen). The main results are: (i) the existence of a positive and statistically significant effect of the economic development on the banking development, (ii) banking regulation affects positively and in a significant manner, the banking development, (iii) the non existence of a significant statistically relationship between institutional quality and banking development, (iv) and finally, our findings also suggest that economic growth is enhanced by banking development. The absence of a significant relationship between institutional environment quality and banking development can be explained by the nature of the institutional indicators, which vary very slowly through time. That's why, may be, banking development level reached by MENA region countries, cannot be explained by institutional development. We have chosen to assimilate the financial development to just banking development, given the relative importance of the banking sector, in comparison to the size and importance of the financial markets in these countries.

Keywords: *Financial Development, Institutional Development, Banking Regulation, Economic Development, Dynamic Panel.*

Introduction

The issue of the paths to follow in order to realize the financial development for the developing economies and even for the developed ones has not finished provoking reactions, suggestions and polemics. So what makes this debate interesting? If we trust on the works of McKinnon (1973) ; Shaw (1973) and for the recent studies of Greenwood and Jovanovic (1990) ; Bencivenga and Smith (1991) ; Roubini and Sala-i-Martin (1992) ; King and Levine (1993) ; Levine (2004) we conclude that the financial development is prominent for the growth and the economic development. Although the fact that this question has not yet been distinct concerning the effectiveness and especially for the sense of the causality between the two concepts.

After the beginning of the vast wave of the financial globalization which accompanied a larger movement of globalization, we attend, since the end of the eighties, to many attempts of the developing countries to insert the globalized financial sphere. This trend is explained by the thought on the benefits of the openness and the exchange on a large scale. Following the example of the commercial liberalization, the policymakers in that period thought that the financial

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integration would be advantageous for the economic development. Nonetheless, the financial crises episode for many developing countries, threw doubts about the advantages of the financial liberalism and the trust on the financial integration, yet defended strongly by the “Washington Consensus” ideas. Since these countries already engaged on reforms plans in order to abolish the restrictions on capital movements and to liberalize their financial systems. In the same way for the decision makers of economic policies in these emergent countries, this understood that the financial opening is not like the commercial liberalization. They also understood that the financial liberalization requested a number of economic, financial and almost institutional and political prerequisites, to do so. The question was then, how to liberalize instead of to liberalize or not, in order to realize the financial development and so the economic development.

These crises attracted the attention on the necessity to be dotod by an adequate frame for the financial openness. Furthermore, it’s necessary to proceed by steps and by following progressive plan to avoid the risks of speedy openness. The examples of South Korea, China, Malaysia in Asia defend the idea of the sequencing and the importance of the gradualism in the process of the financial openness. Indeed, these countries opted for an exclusive and alternative way of financial openness, different from the globalized version recommended by the International Financial Institutions (IFI). This “protected” financial openness avoided them to live the mishaps of the other experiences of financial globalization.

This analysis lead us to express the same interrogations for the case of the South Mediterranean Sea countries (SMS), given the need to the economic development for these countries on one hand, and their specificities in the other. The aim of this paper is to try to show the importance of a gradualist approach in a globalized world. In fact, we will try to show, using a dynamic panel model with the GMM method, the importance of the banking regulation and the quality of the institutions in fostering the banking development without provoking risks and financial disturbances. In our econometric study, we will also test whether the banking development has an effect on the economic development in the SMS countries. The value of this study is to try to provide some clarification on a subject that has not been much discussed, namely, the link between institutional development and financial development. Our study is also important because it involves the region of North Africa and the Middle East (MENA), which has not been the subject of previous studies on the effectiveness of these links

I. The Link between the Banking Development and the Institutional Development

The link between the financial openness and the financial development is not free of ambiguity. Indeed, in order to profit from the capital account liberalization, the financial systems have to be strengthened by a developed legal and institutional framework. Specifically, the economies where the legal and judicial system don’t guarantee the property rights, or don’t look after the enforcement of financial contracts, suffer in general from a lack of incentives to lending activities and the settlement of financial transactions. Lenders and borrowers legal rights, the credibility and transparency level of laws organizing the financial sector are the main factors that govern the financial sector in an economy, and give or not incentives to turn to the financial system. According to this, Claessens and al (2002)¹ and Caprio and al (2004)² founded that more

¹ Claessens. S ; Djankov. S; Fan. J and Lang. L: «Expropriation of Minority Shareholders in East Asia», Journal of Finance, P : 21.

² Caprio. G ; Laeven. L and Levine. R (2004): « Governance and Bank Valuation », mimeo, University of Minnesota, P : 2.

lenders are protected by an efficient judicial system, deeper is the financial system. By considering the effective level of legal and institutional development, we can then surround the ambiguity between the financial openness and financial development. Indeed, we can adopt the hypothesis that the financial development can be the outcome of the financial openness, only if the whole economy reaches a reasonable level of institutional and legal development.

In addition to the legal environment quality which is important to realize the financial development, we notice in the recent economic literature the emergence of another important factor, considered as the natural complement of a good institutional structure. It's the concept of social capital approximated by the level of trust and cooperation among individuals.

1. The Importance of Social Capital

Fukuyama (1997) considers that: « *Social capital can be defined simply as the existence of a certain set of informal rules or norms shared among members of a group that permits cooperation among them. The sharing of values and norms does not in itself produce social capital, because the values may be the wrong ones... The norms that produce social capital... must substantively include virtues like truth-telling, the meeting of obligations, and reciprocity* »³. For Bowles. S and Gintis. H (2002): « *Social capital generally refers to trust, concern for one's associates, a willingness to live by the norms of one's community and to punish those who do not* »⁴

The social capital is a concept borrowed from sociology, related to the benefits taken by individuals via their adhesion to communities and associations (Bourdieu, 1985). It is also the quality of human relationships in a society and its potential to be enhanced (Coleman, 1990). In this context, a high level of social capital leads to the exclusion and the punishment of all who deviate from a set of social conventional standards.

The relationship between social capital and financial development attracted the attention of few economists, comparing to the studies on the link between social capital and economic development. Only the studies of Guiso . L, Sapienza. P and Zingales. L (2000) ; Hong. H, Kubik. J. D and Stein. J. C (2001) ; Calderon. C, Chong. A and Galindo. A (2001) had clearly analyze the link between the two concepts, via empirical studies connecting indicators of social capital and financial development indicators. The existence's intuition of a link between social capital and financial development is the result of the fact that a financial contract between a lender and a borrower needs a given level of trust to be accomplished and to its clauses to be respected. Since in a financial contract, the lender transfer an amount of money at the date t to the borrower, in the hope to recover it at $t+1$ in the future. In order to avoid an opportunist behavior, another clauses comes complete the contract, like collateral requirement. However, in several cases and given many factors, the collateral system loses its effectiveness because of the lack of the system of regulation adopted (like the difficulty to the lender to access to collateral in case of the borrower's insolvency) or a lack in the system of contracts enforcement. Even, in the case of a strict application of laws, the financial contracts are intrinsically incomplete. It involves that no contract can guarantee completely the refund of a loan. It involves also, even if the law is strictly respected, that trust will have an important role to play in defining the financial market deepness, given the fact that a financial contract is basically incomplete.

³ Fukuyama, F. (1997), « Social Capital » Tanner Lecture on Human Values, P: 378-379 cited in Durlauf, N. S and Fafchamps, M. (2004) : « Social Capital », NBER Working Paper Series 10485. P: 4

⁴ Bowles S and Gintis. H (2002) : « Social Capital and Community Governance », Economic Journal 112, P : 422, cited in Durlauf, N. S and Fafchamps, M. (2004) : opus cite., P : 5.

Furthermore, trust is more important in the economies where legal rights of lenders are less protected and judicial system is weak. Hence, a high level of trust would favor the settlement of financial contracts between individuals and then contribute to the development of financial markets. Moreover, the respect of financial contracts is not necessarily due to the threat of legal punishment, but it's an issue of mutual trust among different market participants. Indeed, if the debtor don't respect his commitment and don't repay his debt in the future, the use of financial contracts will be shrank and even involves, in case of generalization of the phenomena, to a high insolvency and risk to weaken the whole banking sector⁵. Hence, the trust level can be considered as a significant factor of development or banking distress and could even explain the differences between financial systems and economic development among countries.

2. Law and Finance Theory

A prolific economic literature noticed the incidence of financial development on growth. Levine, R. and Zervos, S. (1998) showed that the development of banking sector and financial markets is a good proxy of economic development in general⁶. For a microeconomic point of view Demirguç-Kunt and Maksimovic (1998), and also Rajan, R. and Zingales, L. (1998)⁷ showed in their studies that financial institutions are crucial for firms and industry's expansion. Although the existence of discords among theorists about this issue, it seems to be clear the reliance of a positive relationship between financial development and growth. This link fixes more than issue about the financial development state in many countries. Indeed, what makes some countries reach growth and economic development by financial development and other no? The law and finance theory gives more than an explanation about this question and fix the issue of the legal and institutional environment to explain the differences between levels of financial development⁸.

The first part of this theory argues that where the legal and judicial system is strong, respects rigorously the property rights, the investor rights and protects contracts between individuals, savers are more encouraged to turn to banks and then finance the need of firms to invest, contributing by the way to the expansion of capital markets. The absence of that legal framework wouldn't allow investor to access to private financing and so hinders financial development.

The second part of the law and finance theory, argues that the different legal traditions born in Europe during the last centuries, expanded after to all over the world by conquests, the different colonization waves and herding phenomena explain the differences seen today concerning investor protection laws, the application of financial contracts and then the differences between financial development levels, if we trust the first part of that theory.

La Porta and al (1998)⁹ were interested by laws governing the investor protection, the quality of enforcement of these laws and the property concentration in 49 countries. Their analyses lead to three main results. First, laws are different although they give a set of adequate rights to

⁵ Calderon, C, Chong, A and Galindo, A (2001) : « Structure and Development of Financial Institutions and Links with Trust : Cross-Country Evidence », Inter-American Development Bank, Research Department Working Papers N°444.

⁶ Levine, R and Zervos, S (1998) : « Stock Markets, Banks and Economic Growth », American Economic Review, 88, P : 542.

⁷ Rajan, R. G and Zingales, L (1998): « Financial Dependence and Growth », Chicago University and NBER, P : 26.

⁸ Beck, T and Levine, R (2004) : « Legal Institutions and Financial Development » in Claude Menard, Shirley, M (eds) Handbook of New Institutional Economics, Kleuver Dordrecht, The Netherlands, P : 251.

⁹ La Porta, R ; Lopez de Silanes, F ; Shleifer, A and Vishny, R W (1998) : « Law and Finance ». Journal of Political Economy 106, P : 1151.

investors. In particular, the common law legal tradition countries would protect more effectively investors than French civil legal tradition. German civil law and Scandinavian one, take a middle rank between them. In addition, there isn't evidence confirming the existence of privileged category of investors. Evidence show, rather, that common law legal tradition protects all kinds of investors. This result corroborates the hypotheses of La Porta and al (1998) about the investors range's multiplicity of rights in the presence of multiple legal traditions. These rights are induced by laws and not inherent to the equities themselves. Second, the enforcement of laws is different according to the countries. Indeed, the laws enforcement is more rigorous in German civil law and Scandinavian countries. The laws enforcement is also accurate in common law countries, but less rigorous in French civil ones. The quality of laws enforcement, on the contrary to laws themselves is improved with the income level. Third, evidence supports the hypothesis that countries develop substitutes to bad investor protection systems. La Porta and al (1998) argue that : « *Some of these mechanisms are statutory, as in the case of remedial rules such as mandatory dividends or legal reserve requirements. We document the higher incidence of such adaptive legal mechanisms in civil law countries. Another adaptive response to poor investor protection is ownership concentration. We find that ownership concentration is extremely high around the world, consistent with our evidence that laws, on average, are only weakly protective of shareholders. In an average country, close to half the equity in a publicly traded company is owned by the three largest shareholders. Furthermore, good accounting standards and shareholder protection measures are associated with lower concentration of ownership, indicating that concentration is indeed a response to poor investor protection* »¹⁰.

II. The Role of Banking Regulation in Promoting the Banking Sector

Based on the Basel accords of 1988, a policy of prudential regulation began to be imposed on banks participating in the globalization of the economy. The objective of this policy is to ensure a degree of regulation of banking systems. At the same time, and from the early 1990's, policy advice for the economies of emerging countries was based largely on the ideology of « Washington consensus ». This ideology sees in the trade and financial liberalization a model to follow to achieve growth and economic prosperity.

The International Financial Institutions, like the International Monetary Fund, World Bank and WTO defended and worked extensively in the dissemination of these practices. Nevertheless, these institutions have not stressed the need and importance to proceed in stages in the process of monitoring political liberalization. This is called the process of *sequencing*. This is the approach that is to move from a policy of protectionism, to a policy of liberalization by sequences studied, prudent and not by a sudden manner. The emerging market economies of emerging countries were therefore encouraged to liberalize their markets quickly and not in a progressive way. For example, members of the IMF's Interim Committee voted in April 1997 of an amendment of the articles of the IMF, to ensure that the liberalization of the capital account is one of the « fundamentals » of the institution.

We will try to present as part of this section, a possible alternative policy of financial liberalisation in its internal version, as presented and defended by supporters of a financial deregulation and integration. The point of view that we try to defend is that an adequate regulation of the banking activity might be preferable to an encouraging competition policy. In the sense that it can protect the banking sector in developing countries from the misadventures of globalized finance, intrinsically bearer of financial instability.

¹⁰ La Porta. R ; Lopez de Silanes. F ; Shleifer. A and Vishny. R W (1998) : opus cite, P : 1152.

III. The Importance of Banking Development in Economic Growth

Much of the literature on the relationship between financial development and economic growth refers to the precursor work of Schumpeter. J (1911). The essential argument that develops Schumpeter to defend his point of view is that the services provided by the financial sector (mainly capital allocation to projects that offer the best opportunities for profit without the potential risks of losses due to moral hazard, the adverse selection or high transaction costs) represent a real propeller of the economic activity. Empirical work done, seemed to prevail in these assertions. However, the question that was raised following the emergence of this literature was whether the financial sector plays a role in economic development, or is that the financial development followed « passively » and hence a large and rapid industrialization movement, as has been particularly stressed by Goldsmith. R (1969). Indeed, he believes that « *there is no chance, however, to establish with confidence the direction of the causal mechanism i.e., whether financial factors are responsible for accelerated economic development, or is that the financial development is simply a reflection of economic growth* » While Goldsmith has shown that doubts exist on the matter, other economists have shown outright scepticism regarding the role of financial development. Like Robinson. J (1952) who considers that « *where firms lead, finance follows* ».

In what follows, we will give an overview of how Levine. R (1997) adopted a functional approach, to show the impact of development financial sector on growth. Indeed, it is based on the principle that the costs of acquiring information, and establish transactions explain the need for the emergence of banks and financial markets. This means that in a model with the Arrow-Debreu hypothesis, where the cost of information and transactions are inexistent, there is no need to financial intermediaries. Financial systems therefore serve to facilitate the allocation of resources through time and space in an uncertain environment. Levine. R (1997) divided the main function into five sub-cores functions, namely :

- The diversification of risk ;
- The collection of information on investment and resource allocation ;
- Exert corporate control ;
- The savings mobilization ;
- Ease trading of goods and services.

To better profit from the possibilities of growth offered by the financial system, the author advocates that its development affects growth through two channels:

- The accumulation of capital : By improving the capital formation rate and acting on the savings rate, or the reallocation of savings ;
- The technological innovation : The invention of new production processes acts on the technological innovation rate.

1. The diversification of risk

The author considers two types of risk : the risk of liquidity and an idiosyncratic risk. The origins of the Liquidity risk are the uncertainties related to the conversion of financial assets to means of payment. The asymmetries of information and transaction costs are likely to intensify this type of risk. The existence of this kind of distortions legitimates the emergence of financial markets and financial institutions. Liquid Capital markets are markets where it is not very costly to exchange financial instruments, and where there is less uncertainty about the timing and arrangements for such exchanges. This concerns us closely in the search for a link between financial markets and growth, to the extent that the liquidity of a financial market encourages the firm to run long-term investments relatively more profitable, since investors can recover at lower

cost savings. Levine. R (1997) considers that the diversification of liquidity risk, through the development of financial markets can revive and encourage technological innovations. Indeed, he explains that the commitment in funding innovative projects is risky and uncertain. The possibility of having a diversified portfolio for the financing of such projects can temper this risk and promote investment activities to generate technological progress. For example, financial systems may cause the acceleration of technological progress and hence economic growth by facilitating the diversification of risk.

2. The collection of information on investment and resources allocation

Financial intermediaries have more resources, opportunities and skills in collecting information on investments than savers and other economic agents. Therefore, they are more able to reduce the costs of acquiring information, which allow a better allocation of resources. In addition, financial intermediaries allow the identification of the best production technology and thus are likely to encourage technological innovations by identifying entrepreneurs who represent the best opportunities for new manufacturing processes. In addition, the financial market is also important in the dissemination of information on firms and managers through the prices of financial assets, which allow better allocation of resources.

3. Managers Monitoring and exert corporate control

Gale. D ; Hellwig. M (1985) and Townsend. R (1979) consider that in preparing contracts debts between insiders and outsiders, financial intermediaries manage to limit the information asymmetry ex-post. In addition to debt contracts, and financial intermediation of banks, the capital markets can improve the control of firms. For example, the public exchange of shares in the capital markets reflected efficient information on the companies and enables owners to link the compensation of managers with stock prices. In addition, in a developed financial market, it is easier to make takeovers and thus improve the management of small firms in difficulty. It follows a better allocation of resources.

4. The mobilization of savings

Financial intermediaries minimize transaction costs associated to the collection of savings. They minimize also the problems of information asymmetry. Thanks to the comparative advantage they gain in the collection of savings for the short term and its transformation into long-term loans, financial intermediaries manage to minimize the costs of collecting savings. Since doing so, they are able to "save" the efforts of other economic agents in the search for information. They centralize, in a way, the information relating to savers and investors, in order to minimize costs and better allocate resources. Thus, in effectively mobilizing resources to finance projects, the financial system play a crucial role in facilitating the adoption of new production technologies, and incitement to technological innovation. As noticed by McKinnon. R (1973) to illustrate the importance of financial intermediaries in the mobilization of savings : « *The farmer could provide his own savings to increase slightly the commercial fertilizer that he is now using, and the return on this marginal new investment could be calculated. The important point, however, is the virtual impossibility of a poor farmer's financing from his current savings the whole of the balanced investment needed to adopt the new technology. Access to external financial resources is likely to be necessary over the one or two years when the change takes place. Without this access, the*

constraint of self-finance sharply biases investment strategy toward marginal variations within the traditional technology »¹¹

5. Trade facilitation

In addition to facilitating the mobilization of savings and the expansion of production technologies to a large part of the economy, the financial arrangements that reduce transaction costs can promote specialization, technological innovation and hence economic growth. The links between the facilitation of transactions, specialization, innovation and economic growth are the basic elements of the Adam Smith's « *Wealth of Nations* ». Indeed, it considers that the specialization of work is the main factor underlying its productivity improvement. With more specialization, workers are more willing to invent better machines or new production processes. More specialization requires more transactions. Because each transaction is costly, and the financial arrangements that reduce transaction costs will facilitate greater specialization. In this case, the markets that promote exchanges encourage productivity gains. But what is interesting to know is that there is a feedback that goes from these productivity gains to the development of financial markets.

IV. Studies and methodology of analysis

The presentation of the different approaches on the possible links between the institutional development and the banking regulation on financial development, and in a second stage, the link between financial development and economic growth, taught us that there is a divergence of views about to the reality of these links. Indeed, we have seen that there is some theoretical optics that consider that institutions quality contributes to financial development. Other economists consider that there are other determinants of the financial development which explain it more than the institutional environment. The case of the link between financial development and economic growth is more problematic because until now there has been no consensus as to the meaning and reality of this relationship. The value of this study is to try to provide some clarification on a subject that has not been much discussed, namely, the link between institutional development and financial development. Our study is also important because it involves the region of North Africa and the Middle East (MENA), which has not been the subject of previous studies on the effectiveness of these links. Concerning the link between financial development and economic growth, it is linked to the first part of the study, namely the link institutional development and financial development. Indeed, believers in financial development as a determinant of economic growth wondered what makes some countries failing to ensure their financial development, while others do it. They think it's really institutional development, which affects the financial development. An appropriate institutional environment acts positively on the development of the banking sector and the operation of capital markets, which in turn would promote the financing of economic activity. Institutional development is therefore regarded as a direct determinant of financial development and as an indirect determinant of economic growth. We will empirically study in what follows the nature, reality and intensity of these links.

¹¹ Mckinnon. R (1973) : « Money and Capital in Economic Development », The Brookings Institution, Washington. D. C. P : 13

1. Models presentation

The objective of this section is to test the direct and the indirect link of the institutional development on growth of a sample of 19 countries in the MENA region (Algeria, Bahrain, Egypt, Iran, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, Turkey, United Arab Emirates, Yemen) over the period 1982-2005. As we explained earlier, we chose to represent financial sector development only by the development of the banking sector. This choice reflects the relative importance and the large share of the banking sector in relation to capital markets in the functioning of the entire financial sector in the countries of our study. It is also due to the paucity of empirical studies on the development of the banking sector and its impact on economic growth. Therefore, we estimate two equations; the first concerns the link between development banking, institutional development and banking regulation. The second one connects the economic development with bank development.

a. The link between Banking Development and Institutional Development integration banking Regulation

The first equation to be estimated connects the banking development, institutional development and banking regulation, in the presence of other macroeconomic control variables. The objective of the study is to investigate the nature and intensity of the relationship between institutional development and banking regulation on the banking development. To reach this aim, we estimate this equation :

$$DB_{it} = \alpha_0 + \alpha_1 DB_{it-1} + \alpha_2 INS_{it} + \alpha_3 REG_{it} + \alpha_4 LY_{it} + \alpha_5 X_{it} + \varepsilon_{it} \quad (1)$$

Where the dependant variable DB is banking development indicator, INS is institutional quality, REG is banking regulation, LY is logarithm of GDP per capita and X is a set of macroeconomic control variables: inflation rate, trade openness and computer, communications and other services as part of commercial service exports.

From this first equation, we released other equations, by decomposing INS. Indeed, INS represents the institutional quality, which is a synthetic indicator of 6 other indicators. The aim of that decomposition is to care about other institutional aspects, likely to act on the banking development. Here are the 3 other equations :

$$DB_{it} = \alpha_0 + \alpha_1 DB_{it-1} + \alpha_2 CONCOR_{it} + \alpha_3 REG_{it} + \alpha_4 LY_{it} + \alpha_5 X_{it} + \varepsilon_{it} \quad (2)$$

$$DB_{it} = \alpha_0 + \alpha_1 DB_{it-1} + \alpha_2 LAW_{it} + \alpha_3 REG_{it} + \alpha_4 LY_{it} + \alpha_5 X_{it} + \varepsilon_{it} \quad (3)$$

$$DB_{it} = \alpha_0 + \alpha_1 DB_{it-1} + \alpha_2 VOA_{it} + \alpha_3 REG_{it} + \alpha_4 LY_{it} + \alpha_5 X_{it} + \varepsilon_{it} \quad (4)$$

Where CONCOR is the control of corruption variable, LAW represents the law and order, VOA represents the voice and accountability.

The same estimations were made on another set of institutional variables. These new institutional variables pertain particularly to financial transactions, namely, laws enforcement ENFORCE, private property protection index PROPERTY and trust index TRUST.

$$DB_{it} = \alpha_0 + \alpha_1 DB_{it-1} + \alpha_2 ENFORCE_{it} + \alpha_3 REG_{it} + \alpha_4 LY_{it} + \alpha_5 X_{it} + \varepsilon_{it} \quad (5)$$

$$DB_{it} = \alpha_0 + \alpha_1 DB_{it-1} + \alpha_2 PROPERTY_{it} + \alpha_3 REG_{it} + \alpha_4 LY_{it} + \alpha_5 X_{it} + \varepsilon_{it} \quad (6)$$

$$DB_{it} = \alpha_0 + \alpha_1 DB_{it-1} + \alpha_2 TRUST_{it} + \alpha_3 REG_{it} + \alpha_4 LY_{it} + \alpha_5 X_{it} + \varepsilon_{it} \quad (7)$$

b. The Link between Banking Development and Economic Development

We will estimate the second type of equation, in order to try to shed light on which manner the banking development affects the economic development. The equation estimated is :

$$TCR_{it} = \beta_0 + \beta_1 TCR_{it-1} + \beta_2 DB_{it} + \beta_3 Z_{it} + \delta_{it} \quad (8)$$

Where TCR is the GDP growth rate, DB is the banking development indicator, Z is a set of macroeconomic control variables: inflation rate and trade openness.

The regression was made on 19 MENA region countries. The data are sampled every four years between 1980 and 2005 (1982-1985, 1986-1989, 1990-1993, 1994-1997, 1998-2001, and 2002-2005)

2. Data Description

For the construction of the banking development indicator DB, we followed the same method of Demetriades. P and Law. S. H (2005)¹². We use principal component analysis (PCA) to reduce three financial proxies into one principal component. The three financial proxies are : domestic credits to private sector, domestic credits provided by banking sector and liquid liabilities. The three variables are expressed as part of GDP. The source of these three proxies is the World Development Indicators.

We use the same method of the PCA to construct INS the institutional indicator. We reduce six institutional proxies into one principal component. The six institutional proxies are : control of corruption, law and order, bureaucratic quality, ethnic tensions, repudiation of contracts risk and expropriation risk. The source of these proxies are : the International Country Risk Guide.

For the capital social indicator TRUST, the source is the World Values Survey.

We construct also the banking regulation indicator REG by the PCA method. The other proxies of banking regulation are : entry into banking requirements index, capital regulatory index, banking activities restrictions, private monitoring index and official supervisory power. The source of these proxies are Barth. J, Caprio. G and Levine. L (2006)¹³

The source of the macroeconomic control variables : inflation rate, trade openness and computer, communications and other services as part of commercial service exports is the World Development Indicators.

¹² Demetriades, P and Law. S (2005) : « Openness, Institutions and Financial Development », University of Leicester Working Paper N°05/08. P : 7

¹³ Barth. J ; Caprio.G and Levine. R (2006) : « Rethinking Bank Regulation Till Angels Govern », Cambridge University Press.

3. Results and interpretation

The estimations were realized by using the method of the GMM *system* on dynamic panel data, and the standard deviations are calculated by using the procedure of White, what allows us to escape the problem of heteroscedasticity. The results of estimation of the first 7 equations: (1), (2), (3), (4), (5), (6) and (7) are presented in the table 1.

Table 1. The link between the institutional development, the banking regulation and the banking development

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Initial banking development	0,689 (4,1)***	0,635 (4,55)***	0,69 (3,74)***	0,681 (4,23)***	0,697 (3,21)***	0,705 (3,79)***	0,586 (5,81)***
INS	-0,0249 (0,57)						
REG	0,135 (2,01)**	0,095 (2,23)**	0,076 (1,22)	0,129 (2,55)**	0,18 (1,69)*	0,135 (2,19)**	
LY	0,16 (2,17)**	0,167 (1,93)**	0,191 (1,81)*	0,121 (1,06)	0,282 (2,89)**	0,205 (2,61)***	-0,072 (1,56)
INFL	-0,193 (1,23)	-0,030 (0,39)	-0,06 (0,49)	-0,169 (1,47)	-0,18 (1,12)	-0,147 (1,38)	-0,458 (2,97)***
TRADE	-0,03 (0,18)		-0,102 (0,57)		-0,106 (0,48)		0,286 (2,12)**
COMPUTER	0,17 (0,67)	0,077 (0,38)	0,056 (0,24)	0,026 (0,13)	0,318 (1,13)	0,253 (0,86)	0,287 (2,1)**
CONCOR		0,054 (0,62)					
LAW			0,014 (0,12)				
VOA				-0,034 (0,44)			
ENFORCE					-0,107 (1,6)		
PROPERTY						-0,089 (1,27)	
TRUST							-0,145 (1)
Constant	-1,16 (1,98)**	-1,468 (2,28)**	-1,56 (2,23)**	-0,894 (0,98)	-1,973 (2,66)**	-1,29 (2,17)**	0,883 (2,59)***
Observations	41	41	41	41	41	41	36
Hansen Test	4,58 (1)	6,26 (1)	2,04 (1)	7,27 (1)	4,33 (0,998)	7,14 (1)	0,00 (1)
AR(1)	-0,89 (0,373)	-0,27 (0,785)	-0,57 (0,567)	-0,69 (0,49)	-0,69 (0,583)	-0,43 (0,667)	0,9 (0,366)
Wald Test	1264,87 (0,000)	545,87 (0,000)	1119,11 (0,000)	245,39 (0,000)	299,88 (0,000)	339,46 (0,000)	87,41 (0,000)

Notes: Figures in the parentheses are the t-statistics except for the Hansen test and autocorrelation errors test of Arellano-Bond (AR) which are p-value. ***, ** and * denote

significant at 1%, 5% and 10%, respectively. The dependant variable is banking development indicator.

The results of the estimations show that the coefficients of the banking regulations variables and of the Log of GDP per capita are significant. What confirms the theoretical assertions of Patrick (1966) who considers that the economic development exercises a positive effect on the financial development. He considers that the increase of the outcomes is normally followed by an increase in savings. Thus economic agents would be more able to get financial assets, contributing then in financial development. The works of the endogenous theory supported this idea of double causality. Sharing risks allowing by financial intermediation which eases investment in new technologies contains costs and implies itself a given level of GDP per capita. We can explain, as well, the significantly positive coefficients of GDP per head by the fact that the banking sector benefits, in the same way as the other sectors, from the economic development.

For the coefficients of the banking regulation variable, we can notice that they are significantly positive for all the estimated equations, except for estimation (3) where the variable « role of law » represented the institutional development. This informs us that a policy of control and rule of the banking activity, what we qualify by the concept of « banking rigor » can be beneficial and favorable to the banking development in these countries. This result does not keep pace with the assertions of the liberationist theories of the financial activity, because according to the followers of these theories, an increase in competition in the banking sector can be only beneficial for this sector, also in developing countries. The financial crises episode, known by some developing country shows the opposite. These policies were the cause of financial instability and banking system weakness, because of a lack of monitoring and banking supervision caused by the settlement of banking competition without safety nets. These financial turbulences triggered a series of systematic crises which touched the other financial places in the other emerging countries. Also let us remind that for the construction of this indicator of the banking regulation we used other variables: Entry into banking requirements index, capital regulatory index, banking activities restrictions, private monitoring index and official supervisory power. It means that today, following a restriction policy on the entry of new foreign banks and the imposition of limitations on the banking activity would be favorable to the banking development. In other words, the return in a certain financial "protectionism" in the countries which suffer from a lack of development of their banking systems would be favorable to the banking development progression.

For the other variables which interest us in these series of estimation, namely the variable of the institutional development, we notice that their coefficients were not significant. The explanation which we can find for this result is statistical. Because these institutional variables vary very little in time, thus they cannot explain the variation of the indicator of the banking development. We tried to solve this problem by subdividing the totality of period 1982-2005 into 6 under period of 4 years each, with the consideration of the averages of variables over these sub-periods. This improved the already found results, but did not lead to an explanatory power of the institutional development indicators.

For the estimation of the equation (8), we used the same technique of estimation as the other equations, namely the method of the GMM *system* on dynamic panel data. The standard deviations are calculated by using the procedure of White, what allows us to escape the problem of heteroscedasticity. The results of the regression about the link between the banking development and the economic development are presented in the table2.

Table 2. The link between the banking development and the economic development

	(1)	(2)	(3)	(4)	(5)	(6)
Développement économique initial	0,684 (4,35)***	0,676 (2,87)***	0,8 (7,05)***	0,603 (3,07)***	0,339 (0,85)	0,796 (6,1)***
Développement bancaire	0,5 (1,97)**	0,581 (1,75)*	0,173 (0,9)	0,617 (2,17)**	0,951 (1,97)**	0,227 (0,89)
Inflation	0,068 (0,28)	0,006 (0,02)		0,002 (0,01)	-0,239 (0,63)	
Trade	0,243 (1,13)			0,238 (1,22)		
Constante	2,267 (2)**	2,469 (1,4)	1,732 (1,92)	2,894 (2,03)**	5,07 (1,69)*	1,637 (1,65)*
Observations	72	72	80	72	72	80
Test de Hansen	8,23 (0,975)	8,67 (0,797)	10,97 (0,204)	5,4 (0,998)	6,47 (0,927)	7,58 (0,804)
AR(1)	-0,35 (0,727)	-0,09 (0,928)	-0,16 (0,875)	0,1 (0,919)	1,09 (0,274)	-0,25 (0,758)
Test de Wald	367,98 (0,000)	417,21 (0,000)	312,96 (0,000)	682,37 (0,000)	315,38 (0,000)	363,87 (0,000)

Notes: Figures in the parentheses are the t-statistics except for the Hansen test and autocorrelation errors test of Arellano-Bond (AR) which are p-value. ***, ** and * denote significant at 1%, 5% and 10%, respectively. The dependant variable is economic growth indicator.

For the first three estimations of this table, the variable of the banking development is constructed by applying the PCA on to three proxies: domestic credits to private sector, domestic credits provided by banking sector and liquid liabilities. The three variables are calculated as part of GDP. For the three other regressions, we followed the same method, but we just changed the variable liquid liabilities by commercial banks assets as part of GDP.

We notice that for all the estimated equations, the coefficients of the banking development are significant. The only cases where the banking development did not explain significantly the economic growth were the cases where we made the estimations, without adding the variables of control. This shows that although, taken individually they were not significant, the variables of control influence the meaning of the coefficients which interest us.

Indeed, we can see in the first estimated regression (1) that the banking development coefficient is significant at 5 %, at 10 % in the equation (2) when we made the estimation without the variable of the trade openness and not significant when we eliminate the control variables from the regression. It is the same result from the regression of the equations (4), (5) and (6). Because the probability to reject the hypothesis of significance of the banking development coefficient is 3 % for the case of the equation (4), 4,9 % for the case of the equation (5) and 37,3 % for the case of the equation (6). The regression result of the equation between the banking development and the economic development show us that there is a positive correlation between both types of development for considered period and for the whole studied sample. This result is important in the extent that it can encourages the political decision-makers in these countries to act directly on the banking development, given that it may acts on the economic development and the growth. We also notice that the banking development acts on the economic development in significant proportions. It explains, in most of the cases, more than 50 % of the economic development. This

importance of the banking development invites us to check its determinants. The first section of this document revealed us the importance of the legal, political and institutional environment in the financial development in general, and so for the banking development. But by studying the relationship between the institutional environment and the banking development, we did not find a significantly positive relation. For the countries that we studied, they have to implement reforms susceptible to revitalize the institutional and political development, so that it acts on the banking development and thus the economic growth. We also selected variables representing the institutional and political development, such as the control of corruption, the investor protection index, etc. to show what acts directly on the institutional development and thus indirectly on the banking development.

Conclusions

The problem of the financial development in the developing countries continues to be an important theoretical subject among the financial economists community. It continues, above all, to cause polemics and divergences between them. Indeed, the liberal economists believe in the advantages of the free market and the possibility of its enforcement on the financial field. Other economists, like the neostructuralists believe, in contrary, on the benefits of protectionism for a better functioning of the financial sector. The aim of this study was to show that the banking regulation what is a form of financial protectionism, would be a better way to realize financial development in the developing countries. The main results of our study are : (i) the existence of a positive and statistically significant effect of the economic development on the banking development, (ii) banking regulation affects positively and in a significant manner, the banking development, (iii) the non existence of a significant statistically relationship between institutional quality and banking development, (iv) and finally, our findings also suggest that economic growth is enhanced by banking development. The absence of a significant relationship between institutional environment quality and banking development can be explained by the nature of the institutional indicators, which vary very slowly through time. That's why, may be, banking development level reached by MENA region countries, cannot be explained by institutional development. We have chosen to assimilate the financial development to just banking development, given the relative importance of the banking sector, in comparison to the size and importance of the financial markets in these countries.

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