

# Financial Development and Economic Growth: Case of the MENA Region

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## Abstract

The controversy over the relationship between the financial and real economic sphere was ambiguous. Many studies showed a positive relationship between these two spheres whereas others presented the perfectly opposed thesis. On the basis of data relating to 11 MENA countries, observed during the period 1995-2011 and by using the GMM method of the dynamic panel, the result showed that there is a positive relation between the financial development and economic growth. This relationship and more intense for the role of the MENA financial system.

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*Index terms*— banks, financial market, growth economic, mena countries, GMM dynamic panel

## 1 INTRODUCTION

In the recent years have witnessed significant progress in the study of the relationship between financial development and real economic sphere. Two streams of literature come to intervene: one shows the positive effect of the development of the banking sector and financial markets on economic growth, while the other supports the opposite thesis perfectly. The opening shares and boosting the financial system in general, and the banking system in particular, are the source of financial instability and a spread of banking crises have led to a decline in economic growth that is due to the high costs which are taken into consideration. The positive effect of financial development on economic growth has been primarily studied by the authors of financial repression school: ie Mc Kinnon (1973) and Hawtrey (1973) and the authors of the liberal school namely Keynes and Hicks. These latter have shown that an efficient financial, dynamic and modernized system is causing an accumulation of capital, stimulating investment and then an economic development.

The adverse effect of financial development (banking system and financial markets) on economic growth has been adjusted from the recent banking and financial crises in the context of a policy of financial liberalization.

On the one hand, the strong asymmetry of information characterizing financial markets can cause a failure in coordinating the allocation of savings to investment. This campaign of informational asymmetry can distort expectations of investors who prefer to invest in less risky world rather than in another uncertain and risky one. This is by taking into account the degree of risk aversion of investors, the financial market imperfections and high transaction costs. These problems in the financial market and the ineffective intermediation can only hinder economic growth.

## 2 II.

## 3 BRIEF LITERATURE REVIEWS a)

Nowadays, several studies have been concerned with checking the nature of the relationship between financial sector and real economy. The most famous works that highlight the actuality, are those of R. King and R. Levine (1993). Both authors consider the important role of the banking system and financial markets in the development of economic growth. They experienced a strong correlation between GDP as an indicator of economic growth, and the size of the financial system.

## 4 Theoretical

The study prepared by T. Beck and R. Levine (2004), represents a good example which has centered its axes on the relationship between banks, financial markets and economic development. They also reveal that development of the banking system and financial markets can lead to the development of economic growth unless some conditions must be met. It has to do with a well-functioning financial system, low information asymmetry, low transaction costs and optimal allocation of resources.

## 5 Keywords:

On the other hand, the recent crises of banking insolvency have soaked economies in times of recession. This experience has given us an example of the negative influence of the development of the banking sector on macroeconomic performance. These banking difficulties can turn into banking or financial crises generating huge costs to the economy.

In the first part, we will report on the theoretical and empirical work already done on the subject. The second part will allow us to expose our econometric model, our database and the results and interpretations thereof. e G. M Caporale, P. G. A Howells, A. Mr. Soliman (2004), in their article, have tried to provide an answer to the following question: does the development of the financial market lead to economic development? Results, for which they end up, are consistent with those found in other theoretical studies. A well-functioning financial market can promote economic growth.

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In the same vein, J. Shan, Q. Jianhong (2006) attempted to examine the relationship between financial development and economic development in the case of China. They noted that the contribution of financial development in economic growth can be interpreted as the second power after the contribution of the workers' revenue. The link between the financial sector and the economic sphere has a two-way causality. The development of the financial system (development of the banking system: distribution of credit to finance investments) provides the nominal GDP growth. Thus, they also result in that the high economic growth over the past scores of years has a significant impact on the development of the financial system.

## 6 b)

In one sample out of 74 developed and developing countries with data over the period of 1960-1995, Beck, Levine and Loayza (2000) use two methods to take into account the endogeneity of the financial development variable in a pattern of growth. On the one hand, they make a transversal analysis by instrumenting the financial development from the Anglo-Saxon, Germanic, French and Scandinavian origin of law. On the other hand, in retaining the same instrumental variable, they proceed in a dynamic panel analysis, with a seven period cut over five years, thanks to the estimator GMM (Generalized Method of Moments), the method that allows resolving for example the problem of inversed causality. These authors conclude the existence of a favorable link between the exogenous component of the financial development and the economic growth. But this positive relation passes through the increase of global productivity of factors rather than over the volume of savings and the accumulation of capital. Added that, Rioja and Valev (2002) confirm the idea of these authors.

Despite the multitude of research works which find a positive link between the financial development and the economic performance, an emerging literature questions the strength of this relation. Also, Andersen and Tarp (2003) To conclude, despite the crucial role of the financial development in the process of growth, there are recent researches which show that there exist other sources of growth such as public spending, investments in human capital, research spending and the development of technological innovation etc? Recently, ??uintel and Kahn (1999) have studied the long terms relation between the financial development and the economic growth over the base of multivariate VAR patterns by using a sample of 10 countries during the period of 1950-1990. The authors find a double causality relation between the variables for each sample country. Christopoulos and Tsionas (2004) estimate that, over a sample of 10 countries with the help of a pattern of multivariate co integration in panel, the obtained results sustain a long term causality which goes from the financial development to the economic growth.

? ?avara (2003) have shown that the favorable ?? relation between the financial development and the growth rate of the product focused by Levine, Loayza and Beck (2000) is no longer checked when we restrict their sample to only sub-Saharan African countries and Latin America, because these countries witnessed crises in the 1980s when they liberated their financial system and put quicker reforms of liberalization. They also consider the studies about time data, proper to a country, do not clearly give a causality going from the financial development to the growth. The authors conclude that the favorable effect of the financial development over the growth is not sufficiently studied by the empirical works. 3 has developed a study about the link between the finance and the growth on the empirical plan and has presented results based on transversal data and panel data with a variety of econometric method. He uses two indicators which measure the financial development namely the liquid assets and the credits of the private sector. With the help of the first method (over the transversal data), the financial development appears correlated positively to the growth but this relation disappears when we attempts to examine the endogeneity of the financial development for example through the legal origin as

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102 an instrument 4 Empirical whereas, with the generalized method of moments in dynamic panel, the financial  
103 development becomes insignificant in the equation of growth.

104 In short, the author brings out an ambiguous relation between the financial development and the In a more  
105 recent article, Beck and Levine (2004) consider the financial development from a global point of view. They  
106 simultaneously examine the role of banking activities' development and also of the stock markets development  
107 over the economic growth. The study is done over a sample of 40 countries with average panel data over the  
108 period of 1976-1998. The obtained results with the help of Generalized Method of Moments in a dynamic panel,  
109 show that the level of banking development (measured by the ratio of credits in the private with regards to  
110 GDP) and the level of the stock markets' development (measured by the turnover ratio) each one exercises in an  
111 independent way a favorable effect on the economic growth 1 . economic growth. Le level of credit related to the  
112 GDP influences the growth only in the intermediary steps of development. Emmanuel (2007) reconsiders the link  
113 between the financial development and the growth over the empirical plan of 22 Sub-Saharan African countries  
114 in First Author, Second Author, Third Author, Fourth Author and Fifth Author the period of 1960-2002. The  
115 author considers that the positive and significant correlation between the indicators of financial development  
116 (represented by the ratio of the monetary mass M 2 to the GDP and the ratio of credit to the private sector and  
117 to the GDP) and the growth of GDP is mitigated. On the one hand, the relation of causality varies in the sense  
118 between bidirectional and unidirectional going from financial development toward economic growth.

### 119 7 III.

## 120 8 DATA AND METHODOLOGY

121 The main objective of this study is to analyze and to check empirically the existing relation between the financial  
122 development and the economic growth in the MENA countries namely (Saudi Arabia, United Arab Emirates,  
123 Bahrain, Egypt, Jordan, Morocco, Oman, Iran, Lebanon, Kuwait and Tunisia). In order to do this, we have  
124 chosen 11 MENA country observed during the period of 1995-2011. The econometric method used is that of  
125 GMM dynamic panel. The relative data to the financial development and the economic growth are obtained  
126 nearby the database of the World Bank (2012). Some variables are obtained from other sources 5 a)

127 . There are several econometric patterns which study the link between the financial development and the  
128 economic growth. For this, our choice of patterns relies on the existence of variables as we are going to try in this  
129 empirical part to see the link between the financial development and the economic growth in the MENA region.

130 In reference to the works of Samy. N and Samir. G (2007) our pattern can be written in the following  
131 form:  $GDP_{i,t} = \alpha_0 + \alpha_1 CREDIT_{i,t} + \alpha_2 CAPT_{i,t} + \alpha_3 IC_{i,t} + \alpha_4 FLIB_{i,t} + \alpha_5 OPNS_{i,t} + \alpha_6 INF_{i,t} + \alpha_7 IIP_{i,t} + \alpha_8 i$

132  
133 To control the individual specific and time effects as well as to overcome the problem of endogeneity of variables,  
134 we are going to use the estimator of Arellano and Bond (1991) which consists of taking, for each period, the  
135 first difference of the equation to be estimated to eliminate the specific effects of each country as well as to  
136 instrument the explanatory retarded variables. In our pattern, the retarded variable is that of GDP. Our pattern  
137 can be written in the following form: We have performed the method of generalized method of moments (GMM)  
138 dynamic panel with software STATA 11.0 to estimate the pattern which we have presented above by using the  
139 estimator of Arellano and Bond (1991). The results of our estimation are presented in the following table. The  
140 table summarizes the results of the regression of financial development indicators (Stock market capitalization  
141 compared to real GDP per capita (capt) and the Banking credit in the private sector compared to the GDP  
142 (credit)) over the economic growth after the control of the equation by a certain number of macroeconomic  
143 variables (the inflation rate, the opening rate, the financial liberalization, the political instability and the index  
144 of corruption). We remark from this table that there are explanatory variables which are statistically significant  
145 whereas others are not and therefore they do not have an impact on our endogenous variable.  $GDP_{i,t} = \alpha_0 + \alpha_1 GDP_{i,t-1} + \alpha_2 CREDIT_{i,t} + \alpha_3 CAPT_{i,t} + \alpha_4 IC_{i,t}$

## 147 9 Specification of Psttern

## 148 10 Results and Interpretations

149 The variable (gdpt-1) is correlated positively and with a significant manner with our variable to be explained  
150 (gdp t ). In other terms, the growth rate of real GDP per capita of the year (t) depends on that of the year (t-1)  
151 in a positive and significant manner.

152 Yet, we note that the coefficient relative to the level of credits (credit) distributed by the banks and other  
153 financial institutions in the private sector is significantly negative. This finding can be linked directly to the  
154 predominant public sector in the allocation of credits. Consequently, the countries of the MENA need to improve  
155 the process of allocating credit by the privatization of national banks, by reinforcing the regulation of credit and  
156 by the reinforcement of the competition in the banking sector.

157 In addition to the weak coefficient (0.58%), the results of our estimation show that the stock market  
158 capitalization acts in positive and non significant manner over the rate of growth of the GDP per capita. This  
159 result can be explained by the high level of the financial regression and the weak stock market which is unable

## 10 RESULTS AND INTERPRETATIONS

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160 to sustain a durable economic development in the MENA region, but also by the slow and unbalanced growth,  
161 which weakens any relation between the financial development and the economic growth.

162 Similarly, the commercial openness of the MENA countries has a positive and non significant effect on their  
163 economic growth. This stipulates that the increased mobilization of savings and the best allocation of resources  
164 in the economy, allow an extension of production possibilities and the adoption of more efficient techniques, this  
165 reinforces the specialization, the technological innovation and the economic growth.

166 Concerning the effect of the financial liberalization, the variable (flib) acts in a negative and non significant  
167 manner over the growth rate of the real GDP per capita (GDP). In order to argue for this negative relation  
168 between the financial liberalization and the economic growth in the MENA region, we can mention that almost  
169 half of the countries of our study have not proceeded in the process of the financial openness. Moreover, for those  
170 that have opted for liberalization programs, this policy of liberalization was partial and gradual as in the case of  
171 Tunisia and Morocco. Similarly, this result which is conditioned by an unstable macroeconomic environment is  
172 detected by this regression starting from a coefficient of political instability (iip) which is significantly negative  
as it is <sup>1 2 3</sup>



Figure 1: Financial

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<sup>1</sup>Kpodar. K, (2006), opt. cit. P: 90.2 Guillaumont. S et Kpodar. K, (2004), opt. cit. P : 12.3 Kpodar. K, (2006), opt. cit. P : 99

<sup>2</sup><http://donnees.banquemondiale.org> [http://info.worldbank.org/governance/wgi/sc\\_country.asp](http://info.worldbank.org/governance/wgi/sc_country.asp)  
[http://viewswire.eiu.com/site\\_info.asp?info\\_name=social\\_unrest\\_table](http://viewswire.eiu.com/site_info.asp?info_name=social_unrest_table) &page=noads Geert Bekaert et al. (2005)

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CREDIT: Banking credit in the private sector compared to the GDP.  
 CAPT : Stock market capitalization compared to real GDP per capita.  
 INF : Inflation rate.  
 OPNS : Opening rate measured by the total of X° and of M° related to the GDP.  
 FLIB :

Dummy Variable, reflecting the financial

liberalization .  
 IIP : Dummy Variable , reflecting the political instability .  
 IC : Dummy Variable, reflecting the corruption.  
 b)  
 With :  
 GDPi,t : Real growth rate of GDP per capita  
 GDPi, t-1 : Real growth rate of GDP per retarded capita

Figure 2:

1

Variables	Coefficient	Std, Err	Z	P> Z
C	11,15456	2,406519	4,64	0
gdp t-1	0,1809195	0,0769512	2,35	0,019
credt	-0,075364	0,0193052	-3,9	0
capt	0,0058239	0,0097215	0,6	0,549
inf	-0,017414	0,0226411	-0,77	0,442
opns	0,0417595	0,0458591	0,91	0,363
flib	-1,480606	2,545825	-0,58	0,561
iip	-3,041736	1,132735	-2,69	0,007
ic	-1,205207	0,9856397	-1,22	0,221
Wald chi2 (8)	54,98			
Prob > chi2	0			
Nb of instruments	118			
Instruments for differenced equation				
GMM-type: L(2/.)gdp				
Standard: D.credt D.capt D.opns D.inf D.flib D.iip D.ic				
Instruments for level equation				
Standard: _cons				

Figure 3: Table 1 :



174 First Author, Second Author, Third Author, Fourth Author and Fifth Author shown in the theoretical and  
 175 empirical literature which is contradictory to that of Mc ??innon (1973) and Show ??1973). In the same context,  
 176 we have obtained a negative sign for the variables of corruption (ic) and of the inflation (inf). This incites the  
 177 governments of the MENA countries to present a stable environment from a political and economic point of view.  
 178 IV.

## 179 .1 CONCLUSION

180 To conclude, we have used a sample of 11 countries of the MENA region during the period of 1995-2011.  
 181 We test both the independent impact of the stock market and the banking development over the economic  
 182 growth. In general, the regressions are conducted with the estimator of Arellano and Bond (1991) which uses  
 183 the generalized method of moments ( GMM) and through different explanatory variables which show that the  
 184 financial development is without importance or even harmful to the economic growth in the MENA region, which  
 185 is counter-intuitive and should be justified by reference to the theory. This absence of relation should be linked  
 186 either to underdeveloped financial systems of the MENA region which hinder the economic growth or to the  
 187 instability of growth rates of real GDP per capita in the MENA region which affect the quality of the relation  
 188 between the finance and the economic growth.

189 Concerning the political implication, we should draw proposals in terms of results. It is evident that the  
 190 improvement of the performance of the financial system in the region is absolutely essential in order to allow the  
 191 financial development as a stimulator of growth. Consequently, MENA countries need to improve the process  
 192 of credit allocation by privatizing national banks, reinforcing the regulation of credit and the reinforcement of  
 193 competition in the banking sector. Furthermore, a preliminary condition seems that the regulatory infrastructure  
 194 is well developed and that measures are taken in order to reduce the extreme volatility of share prices, so as to  
 195 allow the stock market of the MENA region to stimulate the economic growth.

196 After these results and taking in account the other most used indicators in the literature to measure the  
 197 efficiency and the activity of financial development ( the ratio of rotation of shares and passive liquids, M3/GDP),  
 198 we can ask the following question: How does the financial development affect the relation between the foreign  
 199 direct investments and the economic growth?

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