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Financial Development and Economic Growth: Case of the MENA Region

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Financial Development and Economic Growth: Case of the MENA Region

Soltani Hassen [α] & Maktouf Samir [σ]

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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I. Introduction

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 Shaw. E (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.

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.

II. Brief Literature Reviews

a) *Theoretical*

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.

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.

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.

b) Empirical

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.

In a more recent article, Beck and Levine (2004) consider the financial development from a global point of view. They simultaneously examine the role of banking activities' development and also of the stock markets development over the economic growth. The study is done over a sample of 40 countries with average panel data over the period of 1976-1998. The obtained results with the help of Generalized Method of Moments in a dynamic panel, show that the level of banking development (measured by the ratio of credits in the private with regards to GDP) and the level of the stock markets' development (measured by the turnover ratio) each one exercises in an independent way a favorable effect on the economic growth[1].

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, Luintel 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.

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)[2] 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.
Favara (2003)[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 an instrument[4] whereas, with the generalized method of moments in dynamic panel, the financial development becomes insignificant in the equation of growth.

In short, the author brings out an ambiguous relation between the financial development and the economic growth. Le level of credit related to the GDP influences the growth only in the intermediary steps of development.

Emmanuel (2007) reconsiders the link between the financial development and the growth over the empirical plan of 22 Sub-Saharan African countries in

[1] 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

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the period of 1960-2002. The author considers that the positive and significant correlation between the indicators of financial development (represented by the ratio of the monetary mass M_2 to the GDP and the ratio of credit to the private sector and to the GDP) and the growth of GDP is mitigated. On the one hand, the relation of causality varies in the sense between bidirectional and unidirectional going from financial development toward economic growth.

III. Data and Methodology

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

a) Specification of Psttern

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

In reference to the works of Samy. N and Samir. G (2007) our pattern can be written in the following form:

$$GDPi,\ t = \beta_0 + \beta_1\ CREDT_{i,t} + \beta_2\ CAPT_{i,t} + \beta_3\ IC_{i,t} + \beta_4\ FLIB_{i,t} + \beta_5\ OPNS_{i,t} + \beta_6\ INF_{i,t} + \beta_7\ IIP_{i,t} + \varepsilon_i$$

To control the individual specific and time effects as well as to overcome the problem of endogeneity of variables, we are going to use the estimator of Arellano and Bond (1991) which consists of taking, for each period, the first difference of the equation to be estimated to eliminate the specific effects of each country as well as to instrument the explanatory retarded variables. In our pattern, the retarded variable is that of GDP. Our pattern can be written in the following form:

$$GDPi,\ t = \beta_0 + \beta_1\ GDP_{i,t-1} + \beta_2\ CREDT_{i,t} + \beta_3\ CAPT_{i,t} + \beta_4\ IC_{i,t} + \beta_5\ FLIB_{i,t} + \beta_6\ OPNS_{i,t} + \beta_7\ INF_{i,t} + \beta_8\ IIP_{i,t} + \varepsilon_i$$

With :

GDPi,t : Real growth rate of GDP per capita

$GDPi_{,t-1}$: Real growth rate of GDP per retarded capita

CREDT: 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) Results and Interpretations

We have performed the method of generalized method of moments (GMM) dynamic panel with software STATA 11.0 to estimate the pattern which we have presented above by using the estimator of Arellano and Bond (1991). The results of our estimation are presented in the following table.

[5] http://donnees.banquemondiale.org
http://info.worldbank.org/governance/wgi/sc_country.asp
http://viewswire.eiu.com/site_info.asp?info_name=social_unrest_table&page=noads Geert Bekaert et al. (2005)

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Table 1 : GMM dynamic panel regression of the dependent variable (GDP)

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

The table summarizes the results of the regression of financial development indicators (Stock market capitalization compared to real GDP per capita (capt) and the Banking credit in the private sector compared to the GDP (credt)) over the economic growth after the control of the equation by a certain number of macroeconomic variables (the inflation rate, the opening rate, the financial liberalization, the political instability and the index of corruption). We remark from this table that there are explanatory variables which are statistically significant whereas others are not and therefore they do not have an impact on our endogenous variable.

The variable (gdpt-1) is correlated positively and with a significant manner with our variable to be explained (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) in a positive and significant manner.

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

In addition to the weak coefficient (0.58%), the results of our estimation show that the stock market capitalization acts in positive and non significant manner over the rate of growth of the GDP per capita. This result can be explained by the high level of the financial regression and the weak stock market which is unable to sustain a durable economic development in the MENA region, but also by the slow and unbalanced growth, which weakens any relation between the financial development and the economic growth.

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

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

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shown in the theoretical and empirical literature which is contradictory to that of Mc Kinnon (1973) and Show (1973). In the same context, we have obtained a negative sign for the variables of corruption (ic) and of the inflation (inf). This incites the governments of the MENA countries to present a stable environment from a political and economic point of view.

IV. Conclusion

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

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

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

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