Volume 2, Issue 11 November 2016 ISSN NO: 2454 - 2326

North Asian International Research Journal Consortium

North Asian International Research Journal Of Multidisciplinary

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NAIRJC JOURNAL PUBLICATION

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ISSN NO: 2454 - 2326

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INSTITUTIONAL DEVELOPMENT AND FINANCIAL DEEPENING EVIDENCE FROM THE MIDDLE EAST AND NORTH AFRICA REGION

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ABSTRACT:

This article aims to estimate the effect of the institutional development on financial deepening in MENA countries over the period 1996-2013. Drawing on Demetriades and Luintel (1996) and Ito (2005), the econometric approach used is based on the GMM, the autocorrelation test of errors of Arellano & Bond (1991) and over-identification test of Sargan on dynamic panel data showed considerable delay in this group of countries in terms of financial development *compared to other* ***several emerging countries of Asia and Latin America, and shows the negative effect of the low level of institutional development on financial deepening.***

Keywords: ***financial deepening, Institutional development, MENA, GMM***

1. INTRODUCTION:

The considerable delay in the financial sector in MENA countries compared to some emerging countries of South East Asia (Malaysia, South Korea countries and Latin America can be explained by the weak institutional development.

Some studies show the important role of different political systems (Laporta et al, 1996), the institutional framework (Engermant & Sokoloff, 1996; Chinn & Ito, 2002), the development of telecommunications infrastructure, computing and sectoral policies (Merton, 1992) on the quality and structure of financial institutions in a country.

The objective of this study is to analyze the impact of the institutional and legal development of the MENA countries on their financial development. Through three sections. The second section recalls the main theoretical and empirical outcomes of the relationship between institutional development and financial deepening. Section three describes the methodology adopted, followed by a discussion of results in section four. Section five concludes.

2. REVIEW OF THE THEORETICAL AND EMPIRICAL LITERATURE

The literature on the relationship between financial development and institutional development can be divided into three schools of thought, as she uses the legal system, political factors or social capital to explain the level of financial development.

2.1 legal system and financial system: the theory of law and finance

Taking account of the legal and institutional framework can help explain the difference in the level of financial development observed between countries. In a country where the legal and judicial system strictly enforces the rights of private property, execution of contracts between economic agents and the protection of legal rights of investors, shareholders and investors, the financial markets are growing (La Porta et al, 1998; Beck & Levine, 2004). Indeed, such a system will restore confidence among the various economic agents (depositors, shareholders, investors). Investors will increase their deposits with financial institutions, and this can lead to the higher levels of investment. According to the study of Wurgler (2000), countries where the rights of creditors and shareholders are respected, benefit from an efficient allocation of credit against those countries where these rights are not respected. So fewer the judicial and legal system of a country is developed, plus savings and investment levels are low there Investors and shareholders are "afraid"; which results under the financial development and reducing economic growth. By collecting data on firms in 20 countries love (2000) shows that financial constraints are more developed in countries where the legal and judicial system is broken (origin of legislation, effectiveness of the legal system, risk of expropriation, corruption). The study of La Porta et al (1998) show that the common law is more inclined to promote financial development, compared with other legislations (French civil rights English and Scandinavian).

2.2 Importance of political factors

Political factors can play a major role in determining the level of financial development in a country. When a group of people holds power, it creates an environment (political, institutional, economic) that is profitable to him. The work of Rajan & Zingales (1998) show that when the ruling class of a country is strongly constituted landowning aristocrats, financial markets are poorly developed. But when the power is largely owned by the businessmen (traders, business leaders, industrialists, etc.), financial markets develop. Indeed, the business need financial resources to boost their economic activities. They will therefore establish a climate or an environment conducive to the attraction of capital.

Based on the thesis of Gunnar Myrdal (1963), Touna mama (2006) shows that it is necessary and desirable to establish a "strong state" and kill the "soft state". Corruption, mismanagement, incompetence and inefficiency of public services, administrative delays, Failure to respect the laws, misappropriation of public funds that characterize a "soft state" slashing financial development in many African countries . Indeed, in a "soft state", the political powers may destabilize the functioning of financial markets since they borrow excessively from financial institutions without repaying the credit.

2.3 The role of social capital

In the social science literature, the term social capital has several connotations. The terms usually used in the definition are: cooperative norms (Putnam, 1993; Knack & Keefer, 1997), confidence (Putnam, 1993; Knack & Keefer, 1997) and networks that enable people to act collectively (Putnam, 1993). The effectiveness of a market economy based on perfect information. Financial markets are imperfect (Stiglitz & Weiss, 1981) and characterized by information asymmetries between lenders and borrowers.

In the presence of imperfect information situation in the financial markets, the moral qualities (confidence, loyalty, etc.) can play an important role in financial development. Many exchanges between economic agents are made on the basis confidence that enables a considerable reduction of transaction costs, costs of monitoring and information costs (Fukuyama, 1995). So confidence is the natural complement of institutions (Knack & Keefer, 1997). The loss of confidence of economic agents (depositors and lenders), resulting from the fear of non repayment of the loaned capital and distrust of institutions and financial contracts, leads to a decrease in lending to the economy, also the narrowness of the financial markets.

It is clear that the confidence of economic agents against established financial contracts and the economic and institutional environment plays a major role in the development of financial markets even in case of non compliance with laws (Calderon, Chang, Galindo , 2001). By analyzing the effect of confidence on financial deepening in areas of northern and southern Italy, studying Guiso et al (2004) found that in areas where confidence between economic agents is high , individuals have easy access to credit, investment rates are high, and the use of informal financial market is weak. The development and success of informal finance in many countries are based on family, community and social ties and confidence between these individuals.

3. EMPIRICAL ANALYSIS

3.1 Methodology

The methods of GMM (GMM) in dynamic panel have several virtues: they solve the problems of simultaneity bias, reverse causality and omitted variables. The GMM is better than the OLS estimator. There are two forms of GMM estimators in dynamic panels: the first difference GMM estimator and the GMM estimator system.

The model Arellano and Bond (1991) propose an GMM estimator first difference. It involves taking for each period the first difference of the equation to be estimated to eliminate specific country effects, and instrument thereafter the explanatory variables of first difference equation by their values level lagged one period or more. The model of Blundel & Bond_(1998) determine a GMM estimator system that combines the first difference equations with the level equations where the variables are instrumented by their first differences._The GMM estimator system seems better than the first difference GMM estimator since it gives biased results in the case of finite samples when instruments are weak. The data used in this study come mainly from the World Bank database.

3.2 The model to estimate

The basic equation used for the econometric estimates are based on the work of Demetriades & Luintel (1996) and Ito (2005) on financial development.

the dynamic equation is presented as follows

$$FD_{i,t} = \alpha FD_{i,t-1} + \beta ID_{i,t} + \gamma X_{i,t} + u_i + v_t + \varepsilon_{i,t}$$

where:

- FD: financial development in country i at time t
- ID: institutional development in country i at time t
- X: a vector of control variables_such as GDP per capita (PIB), inflation (INF), a composite index of financial liberalization (FLI.
- u, the country-specific effect
- v specific temporal effect
- ε, the error term

3.2.1 The composite index of financial development (FD)

Several financial development indicators have been identified in the literature since the work of King & Levine (1993). But due to the availability of statistical data, this study makes use only 2 of these financial development indicators: the money supply to GDP (M2 / GDP), and, **private** sector credit to GDP (PSC / GDP). We know that financial development refers to a strong mobilization of savings and the financing of the economy by the financial institutions._M2 / GDP) captures the mobilization of savings, while (PSC / GDP) is used to measure the financing of the economy. These tow indicators were built from statistical data of the World Bank._To capture overall financial development, it seemed appropriate to calculate the composite index; the latter is obtained in the following manner:

$$FD_t = \frac{1}{2}\left(\frac{M2_t}{PIB_t} + \frac{PSC_t}{PIB_t}\right)$$

3.2.2 The index of financial liberalization (FL):

We used the index of financial liberalization International Monetary Fund, which in fact is calculated as the sum of 7 indicators: credit control; interest rate controls; Barriers to entry; banking supervision; privatizations; exchange control and regulation of Financial Markets.

3.2.3 The index of institutional development (ID):

Institutional Development Index is a composite index of five institutional development indicators:_Institutional Development Index is a composite index of five institutional development indicators previously used by Kaufmann and al (2007): Control of Corruption (CC), political stability (PS), rule of law (RL), regulatory quality (RQ), and government effectiveness (GE). and which is obtained as follows:

$$ID_t = \frac{1}{5}\left(CC_t + PS_t + RL_t + RQ_t + GE_t\right)$$

4. MACROECONOMIC VARIABLES

Macroeconomic variables considered in the context of this work are: GDP per capita and inflation:

- GDP per capita: GDP per head which captures economic growth can pose a causality problem. However, the use of GMM overcomes this difficulty. Indeed, some studies have shown that economic growth affects financial development (Schumpeter, 1992; King & Levine, 1993; Beck, Levine & Loayza, 2000) while others (Joan Robinson, 1952) revealed the opposite.

- Inflation (Inf): Taking into account inflation in the analysis due to the fact it is likely to influence economic decisions especially in terms of placement. Indeed, a high inflation rate may discourage the use of financial intermediation, and encourage investment in real assets (such as real estate, gold, oil, etc.). The level of inflation is often considered an indicator of financial repression, particularly because of seigniorage (McKinnon, 1973). these data come from WDI.

5. RESULTS AND DISCUSSION

We started with the autocorrelation test errors, the Sargan over-identification test and stationary test panel data. in a second step we conducted the estimation of results by the method of Arellano & Bond (1991).

The Hansen test does not reject the hypothesis of validity of the lagged variables in levels and in differences as instruments. The error autocorrelation test involves not reject the hypothesis of autocorrelation of errors.

5.1 Stationarity test panel data of Im-Pesaran-Shin

we have chosen to use the stationary test of Im-Pesaran-Shin (IPS)(2002) which is the most used due to certain relative advantages it has compared to other stationarity tests. For example, unlike the test Levin & Lin (1992), the IPS test authorizes under the alternative hypothesisan heterogeneity of the autoregressive root and an heterogeneity regarding the presence of a unit root in the panel.

ADF stationarity tests are applied separately for each country in the model, and the model can be written:

Model without trend: $$\Delta Y_{i,t} = \alpha_i + \rho_i Y_{i,t-1} + \sum_j \beta_{i,j} \Delta Y_{i,t-j} + \varepsilon_{i,t}$$

Model with trend: $$\Delta Y_{i,t} = \alpha_i + \rho_i Y_{i,t-1} + \delta_i t + \sum_j \beta_{i,j} \Delta Y_{i,t-j} + \varepsilon_{i,t}$$

Where α_i is the individual effect, $\varepsilon_{i,t} \rightarrow N(0, \sigma_\varepsilon^2)$, i=1,2…N; t=1,2…T

the IPS test consists in testing the hypothesis of non stationarity for all country

$H_0: \quad \rho_i = 1$

Against hypothesis of stationarity for at least one country

$H_1: \quad \rho_i < 1$

IPS-t statistic is the average of N-ADF individual statistics. The results of the IPS test (2002) stationary panel are shown in the following table.

Variable	**FD**	**FL**	**ID**	**GDP**	**INF**
model without trend	I(1)	I(1)	I(1)	I(1)	I(1)
model with trend	I(0)	I(0)	I(0)	I(0)	I(0)

I(0) means that the series is stationary in panel at the 5% threshold.

I(1) means that series is not stationary in panel;

We note that all series are non-stationary when the trend is not taken into account, and they are stationary around a deterministic trend.

5.2. Results of the model Arellano and Bond

Variable	Coefficient	Standard error	t_{cal}	P> $\lvert t_{cal} \rvert$
FD_{lagged}	0,431*	0,08211	2,79	0,001
FL	0,00062*	0,00033	2,88	0,001
ID	-0,00311*	0,00002	-2,32	0,014
GDP	0,00061*	0,00061	3,11	0,001
INF	0,000001	0,00023	0,97	0,317
constant	0,03251*	0,0053	5,2	0,000
Sargan test of overid. Restrictions: prob>chi2=0.1324 Arellano-Bond test for AR(2) in first differences: z=-3.4 pr>z=0.9287 Arellano-Bond test for AR(1) in first differences: z=-2.72 pr>z=0.0082*				

*coefficient significant at the 5%, **coefficient significant at the 10%

The lagged endogenous variable is statistically significant, assuming a positive sign, which proves that there is a dynamic relationship in the model.

The financial liberalization coefficient is positive and significant, this result supports the thesis of McKinnon and Shaw that the liberalization policy promotes financial deepening.

The low level of institutional development of the MENA countries, affects negatively and significantly their level of financial development. Indeed, corruption, political instability, inefficient government actions, the unreliability of the regulatory framework for financial activities that characterize these countries in the MENA region contribute to its financial underdevelopment.

An increase in the level of GDP per capita has a positive and significant effect on financial development, this result supports the "Demand following “thesis of Patrick[1966] where financial development is a consequence of economic growth.

A high inflation rate has a positive effect on financial development but not significantly. The over-identification test instruments Sargan (P = 0.1324) does not authorize the rejection of the assumption of validity of the lagged variables in levels and differences as instruments. Similarly, There are an absence of autocorrelation of order two errors (P = 0.9287); but errors autocorrelation is present at Order 1 (P = 0.0082) as is the expected outcome for the GMM is better.

6. CONCLUSION

To conclude it should be noted that most MENA countries could improve the level of financial development if the level of institutional development was also high. Unfortunately this is not the case. MENA countries have an interest in implementing strategies that support the fight against corruption and political stability and improve the effectiveness of government actions and the quality of the regulatory framework.

Thus, this study shows the importance of having adequate institutional infrastructure. Control of corruption, respect for democratic principles, respect for laws and the legislature are important elements related to the success of any financial policy promoting sustainable economic growth.

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