

Financial Openness, Institutions, Financial Development and Economic Growth: Empirical Evidence from the MENA Region

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Abstract:

This paper discusses the empirical question of whether financial liberalization can involve economic growth, as well as we exploit in detail indicators of political risk, institutions and financial development in order to identify their eventual effects on growth. Utilizing annual data from 12 countries from the MENA region over the period 1985-2007, we provide evidence using both “de facto” and “de jure” indicators of financial openness. Similarly, we utilize fixed effect (within) estimator and Arellano-Bond (1991) GMM dynamic estimator. Our findings shows that the “de facto” indicator is insignificant, however, the “de jure” ones are significant and positively related to economic growth regardless to other economic policy. Indicators of political risk, institutions and banking development sector are found to have negative effects on economic growth. This is due to underdeveloped institutional context and a financial system not enough mature. By contrast, we do not detect a significant marginal effect from the interaction terms between these indicators and capital account openness. Finally, we reveal a positive relationship between financial openness and financial development.

Key Words: Financial liberalization; Capital account openness; Economic growth; Dynamic panel data analysis.

Introduction

Financial liberalization has been an important topic in the literature debate since several capital markets have been liberalized dramatically in the last decades. Over this period, a wide variety of researches have sustained the liberalization policy. The most well known are the studies of RENALD MCKINNON (1973) and EDWARD SHAW (1973) which were among the first to provide literature surveys in favor of financial policy. They had come to believe that external financial liberalization is an important economic policy tool to get rid of financial repression and to enhance economic growth.

However, the prevailing opinion on liberalization policy seems to be disadvantageous in the literature debate. It has been argued that financial liberalization is unlikely to have negative impact on economic stability since it has triggers volatility excess and even financial crises in many countries.

For that time, the literature surveys have undertake with much interest the empirical question of whether external financial liberalization can enhance the economic growth and have involves to inconclusive outcomes.

This paper exhibits an empirical attempt. Our focus is the MENA region. First, we try to identify the connection among capital account openness and economic growth. Second, we are to assess the behavior of the government policy by exploring in detail a set of political risk and institutions indicators. As a next step, we are to look at the properties of the financial system in the MENA region. Finally, we address the empirical question of whether financial openness can enhance the financial development of this region. To start with, we are to report in the first section the data set and the variables used in the following section.

1 Data, variables and sources:

Our analysis comprises a sample of twelve countries from the MENA region such as Algeria, Bahrain, Egypt, Iran, Jordan, Kuwait, Lebanon, Morocco, Oman, Saudi Arabia, Tunisia and Turkey covering the period 1985-2007. The incentive choice of the MENA region is stipulated by some reasons such as countries of this area having set up structural adjustment programs as well as they have followed various financial reforms in the Eighties. In addition, the size and the structure of the MENA markets are not similar. Even, there is a lack of studies that carry out analysis from this region. Since empirical evidences on the linkage among financial hypothesis and economic growth did not therefore focus on MENA region. We report the events of financial liberalization for each sector in appendix Table A1. The dating of liberalization events are provided in detail only for five countries from the MENA countries due to limited dating availability. It however, shows that the dynamic of liberalization is not similar among countries and take a long time to be achieved and may even not to be completed.

1.1 Indicators of financial openness:

As the dependent variable, we use in our empirical specification «Growth» (the real per capita growth rate). It is taken from the World Development Indicators database (WDI, 2008).

In order to maximize the information on financial openness we utilize both de jure and de facto indicators of financial liberalization in our study. A variety of measures have been drawn in the context of literature to gauge financial integration and that are different among studies. In our empirical exercise we focus first on indicator based on the volume of a country's total foreign assets and liabilities (as a share of GDP). As a measure of de facto financial openness, this indicator is drawn from **Lane and Milesi - Ferretti dataset (2006)**. Baltagi et al. (2008) argue that at any given point in time, this measure provides a useful summary of a country's history of financial openness.

Relatively to other de facto measures, the main advantage of this indicator is that it is provided for several countries. Similarly, we have tried to utilize both datasets of the standard approach (Rothenberg and Warnock, 2006), as well the indicator of Janus and Crichton which are both based on gross capital flows (as a share of GDP). However, we have found that these two measures are scant provided for our sample.

The data on de jure financial liberalization is taken from various sources, since we use three different indicators of financial openness. Our first de jure indicator is the **IMF measure** provide by the International Monetary Funds. As noted above, this indicator identifies two capital account regimes such as a no control motif that reflects a full liberalization and a control motif that is characterized by a period of high restriction. Klein and Olivei (2008) claim that before 1996 the IMF index did not distinguish between restrictions on different types of capital flows or even between restrictions on capital inflows and restrictions on capital outflows.

The new dataset assess values between 0 and 1. However, it did not provide information on the level of restriction. It just brings information on the presence or not of restrictions on capital account.

Our second de jure indicator of capital account liberalization is the **Chinn and Ito (2006)** indicator (**KAOPEN**). That is in turn based on information extracted from the IMF's AREAER. As stated before, this index combined four binary dummy variables that codify the degree of restrictions on cross-border financial transactions. The main advantage of the Chinn and Ito index is that it allows both information on the extent and the nature of restrictions on capital account transactions.

For robustness checks, we use an alternative financial openness measure such as the **Quinn (1997)** indicator that captures the intensity of capital account restriction. Even, it is scored 0-4 with higher value implies a fully liberalization.

However, contrary to the IMF and KAOPEN measure, the Quinn index are not available for a long time-series and even not provided for some countries of our sample (such as Kuwait, Lebanon and Oman).

1.2 Control variables:

Prior studies that have addressed the empirical question of whether financial openness has a beneficial or a harmful effects, have shown that the common feature among empirical exercise is the inclusion of some elementary macroeconomic variables in the basic model that

are likely to affect economic growth. Even so, the macroeconomic stability is closely related with the stability of the general level of price and the moderation of public deficit. Our explanatory variables follow those used in the literature. As a proxy of macroeconomic dimensions, *Controls*¹ are defined as follows:

- ✓ Government final consumption expenditure (as a share of GDP), GFCE is an indicator of macroeconomic stability instead of public expenditure. McKinnon (1991) argues that the effect of financial liberalization is closely associated with macroeconomic stability.
- ✓ Trade openness which is usually expressed by the sum of imports and exports to GDP, TO. In general, this ratio may affect positively or negatively economic growth, it depends on the country particularity. The empirical evidence suggests however that a positive link can be expected between TO and FDI (Chakrabarti, 2001).

Thereby, a better economic performance is strongly sensitive to trade liberalization that should conduct to greater trade integration.

- ✓ Deflator inflation. As mentioned in the empirical studies, price stability is a precondition for beneficial liberalization process. Furthermore, countries that look for opening their capital account should first control their inflation rate and even to set inflation targeting policy. Obviously, a high rate of inflation reflects a financial repression situation. We expect a negative coefficient associated with this variable to explain the economic growth.
- ✓ Investment share of real per capita GDP is regarded as an important determinant of economic growth. According to Bussière and Fratzscher², the economic growth immediately after liberalization is often driven by an investment boom, which then becomes detrimental to economic growth in the medium to long run.

After controlling the elementary macroeconomic variables, we turn our attention to exhibit in detail the indicators of institutions quality and financial development indicators.

1.3 Indicators of political risk and institutions:

While institutional factors were not at the core of theoretical matters, recently it however, had shed light on the vital role of institutional arrangements on the global economy.

¹ Source: WDI (2008).

² Bussiere, M. & Fratzscher, M., 2008, financial openness and growth: Short-run gain, Long-run pain?

It is worth noticing that international institutions speak today about “good or bad governance” of the emergent countries. The information on political risk and institutions is provided from Political Risk Services (PRS) Group. Since 1984, PRS Group has drawn a wide range of indicators for political risk and institutions in the aim to reveal the relative magnitude of these indicators to explain economic growth. Given this aim, we are to assess the influence of Government Stability, Socioeconomic Conditions, Investment Profile, Internal and External Conflict, Corruption, Military in Politics, Religion in Politics, Law & Order, Ethnic Tensions, Democratic Accountability and Bureaucracy Quality³.

A number of these political risk and institutions components are closely related to indicators of government quality. According to Kaufmann et al., (1999), these influences constitute relevant sub-components of an overall assessment of “good governance”. They broadly define governance such as the set of rules and institutions by which the authority in one country is exercised. This includes the process by which governments are selected, monitored and replaced as well as its capacity to effectively formulate and implement sound policies that involve the respect of citizens. The indicators of political risk and institutions are taken from the International Country Risk Guide (ICRG) provided by the political Risk Services (PRS) Group. According to the words of Busse and Hefeker⁴, the 12 indicators are defined as follows:

1. Government Stability (GOVST) measures the government’s ability to carry out its policies and to stay in office.
2. SOCIO captures socio–economic pressures at work in society that might restrain government action or elevate social dissatisfaction and thus destabilize the political regime.
3. INVESPROF assess the investment profile, that is, factors related to the risk of investment that are not covered by other (financial and economic) risk components, such as contract viability (expropriation), profits repatriation or payment delays.

³ Source: ICRG

⁴ Busse, M., and Hefeker, C., 2007. « Political Risk, institutions and Foreign direct investment». European Journal of Political Economy, vol. 23, p. 397-415.

4. ICONFL stands for internal conflict, measuring political violence within the country and its actual or potential impact on governance by focusing on, for instance, civil war, terrorism, political violence or civil disorder.
5. ECONFL weight external conflict, namely the risk to the incumbent government from foreign action, ranging from non-violent external pressure, such as diplomatic pressure, withholding aid or trade sanctions, to violent external pressures, ranging from cross-border conflicts to all-out war.
6. CORR assesses the level of corruption.
7. MILIT represents the influence of the military in politics, which could signal that the government is unable to function effectively, therefore, the country might have unfavorable environment for business.
8. RELIG measures religious tensions, stemming from the domination of society and/or governance by a single religious group seeking, for instance, to replace civil by religious law or to exclude other religious from the political and social press.
9. LAW quantifies law and order, that is, the strength and impartiality of the legal system.
10. ETHNIC assesses the degree of tensions among ethnic groups attributable to racial, nationality or languages divisions.
11. DEMOC relates the democratic accountability of the government, that is, the responsiveness of the government to its citizens, but also to fundamental civil liberties and political rights.
12. BUR stands for the institutional strength and quality of the bureaucracy, which might act as a shock absorber tending to reduce policy revisions if governments change.

Each indicator is measured on a scale from 0 to 12. Obviously, the higher values corresponding to better governance policy and less political risk. The key features of these aggregate indicators that are founded on hundreds specifications and capture different aspects not only for political risks but also institutions quality. This implies that are considered as high-quality measures of government reputation. Furthermore, the indicators are linked to each other by different degrees, since all contribute to explain the level of political risks and the degree of good governance policy from different angles.

The correlation matrix shows that the Investment Profile is strongly related to both GOVST and SOCIO, with partial correlations of 0.71 and 0.50, respectively. This implies that better socio-economic conditions and government stability context could enhance investments in one economy. However, the partial correlation between INVEST and CORR is negative - 0.18, this can easily be explained that the investment decision are attenuated when the level of corruption increases.

Likewise, internal conflict (ICONFL) and external conflict (ECONFL) are closely related, with partial correlation of 0.61. This leads to deduce that political violence within one country can plausibly affect country reputation such as it involves diplomatic pressure or trade sanctions.

For the present, we do not know the real effect of these indicators on economic growth. Meanwhile, we wait for a positive coefficient of the institution indicators. Due to that better institutions and suitable government policy are primordial conditions to spur economic growth.

1.4 Indicators of financial development:

Regarding the financial depth measures, our indicators of banking development sector⁵ closely follows those used in recent researches such as those provided in Klein and Olivei (2008); Mukerji (2009) and King and Levine(1993). In order to make as far as possible information, we are particularly focused on three indicators of the level of banking development sector. Our first indicator that we utilize in our empirical analysis is the ratio of liquid liability of financial system to GDP, **LLY**. According to Klein and Olivei, « the liquid liabilities consist of currency held outside the banking system plus demand and interest-bearing liabilities of banks and nonbank financial intermediaries». Hence, LLY is a standard indicator of financial depth, recognized M2 in some studies. The main limitation of LLY is that it does not distinguish between credits allocated to private sector and credits allocated to public sector due to it interested on the whole size of the financial intermediary sector. However, it may not strongly reflect the level of financial development.

Consequently, we utilize two alternative indicators of banking development sector in an effort to make difference between credits issued to public sector and credits issued to the

⁵ Source: WDI.

private sector. Our second indicator of financial development sector is **PRIVY**: private credit by deposit money banks and other financial institutions (% GDP). It represents the ratio of credits issued to private firms. According to Klein and Olivei (2008), this indicator is typically the indicator of financial development preferred in the empirical literature. Our third indicator of banking development sector is **CPS** (domestic credit to private sector) represents an alternative measure of financial resources to the private sector. According to Honig (2008), CPS presents loans, purchase on non-equity securities, and trade credits and other accounts receivable, that establish a claim for repayment. It's therefore clear that these measures identify different aspects of banking development sector and have different strength and weakness.

Table A2 in the appendix provides the definition and the data sources of all variables. With this background, we now turn our attention to the empirical methodology.

2 Empirical Methodology and Results:

Our empirical specification is aimed at addressing the empirical question of whether capital account openness affects positively or negatively the economic growth in the MENA region, as well as checking the assumption of whether institutions and financial development factors can enhance growth in the MENA countries. Given this aim, our empirical attempt endeavors to use annual panel data. Our empirical approach differs from studies which specifically average out data over four or five years in order to avoid the business cycle effects.

Our major concern was to provide an attempt for all MENA countries; however, due to limited data availability we have included only 12 countries in the sample. Besides, some MENA countries have not yet established stock markets (the case of Iraq, Libya, Sudan, Syria and Yemen). Even though, the number of observations among countries is not steady, it varies from 16 annual observations for Kuwait to 23 observations for the most other countries. That leads an unbalanced panel data. Our empirical model is therefore written as follows:

$$Growth_{it} = \beta_i + \beta_1 CapLib_{it} + \beta_2 controls_{it} + \varepsilon_{it} \quad (1)$$

Where Growth is the real per capita growth rate, CapLib is one of the de jure and de facto measures of financial liberalization mentioned above, Controls is the set of the

explanatory variables that are likely to affect growth, β_i is the country fixed effect and ε is an error term for country i and period t .

2.1 Panel analysis, country specific effects:

First, our empirical specification consists on checking if there is individual effect in our data. We can design this effect for each country by u_i . Thereby, we assess the null hypothesis $H_0 : u_i = 0$ in the following regression:

$$Y_{it} = \beta + X_{it}\beta + u_i + e_{it}, e_{it} iid$$

The F-test recommended not using a common intercept for the different countries of our sample, with (N-1, NT-N-K-1) the freedom degree. The p-value or the realization of Fisher statistic $F(11, 246) = 2,15$ (is compared with the tabulated values) suggests rejecting the null hypothesis. This implies using a specific-effect model. In this circumstance, we have to choose between fixed-effect model and random-effect model. The statistics from Hausman test (1978) suggests using a fixed effect instead of a random effect model. (All the analyses are made by STATA.10).

Our first concern in this study is to reveal the coefficient sign associated with indicators of capital account. Relatively to previous studies, the main advantage of our empirical strategy is the using of both de facto and de jure liberalization measures. Besides we use three de jure liberalization indicators. It can be seen from the regressions reported that the relative coefficient of **FinLib** (the de facto indicator constructed by Lane and Milesi-Ferretti) is positive (0.03) but not strong enough as well it is statically insignificant. However, only the **IMF** measure is barely significant at 10% level among the other de jure indicators of capital account openness. This finding is not surprising due to that previous studies have argued that the use of de jure measure may be more suitable than the use of de facto one. Since de facto measures are less susceptible to reflect the level of restriction and only make information on the history of financial openness. According to Levchanko et al. (2009), the advantage of de jure measures is that they reflect policy levers, and thus results based on them may have clearer policy implications for reforms that a government might consider.

Consequently, we accord more attention to the de jure measures in our attempt since the de facto ones did not provide significant outcomes. As a first finding, the economic growth in the MENA countries is barely sensitive to financial liberalization, particularly when the IMF measure is used as indicator of capital account liberalization and under the use of fixed effect (within) estimator.

2.2 Political risk, institutions and economic growth, Static regression:

Now we are particularly interested to reveal the key role of institutions to explain growth in our studied sample. For this purpose, we utilize 12 indicators of political risk and institutions that capture different aspects of governance reputation. As noted above, the indicators on political risk and institutions are provided by political risk services (PRS) group. They are added one by one in the basic model to avoid multicollinearity⁶. The basic equation is therefore rewritten as follows:

$$Growth_{it} = \beta_i + \beta_1 CapLib_{it} + \beta_2 controls_{it} + \beta_3 POLITICAL_{it} + \varepsilon_{it} \quad (2)$$

As can be seen from the results reported in table 4, two out of four control variables are strongly significant and have the expected sign: The Deflator is negative and highly significant at the 1% level for the different specifications with a value around (-0.07). Obviously, an increase of the inflation rate hampers the economic growth. The coefficients relative to the Investment is always positive and significant at 5% level. As expected, this outcome implies that an increase of the investment spurs the growth in the MENA countries.

The coefficient of Trade Openness is positive but statically insignificant. However, the positive expected sign of government final consumption expenditure is not checked. We therefore notice a negative coefficient for GFCE (government final consumption expenditure) but statically no significant. This involves a plausible interpretation is that the macroeconomic context is not stable enough in MENA countries.

As already mentioned only the IMF measure is statically significant among the used de jure indicators. The indicators for political risk and institutions are included one by one in

⁶ Matthias Busse and Carsten Hefeker, 2007, Political Risk, institutions and Foreign direct investment.

the basic equation. The results show that only 2 out of 12 indicators for political risk and institutions (GOVST and ECONFL) have a significant impact on economic growth such as government stability is necessary to reach economic growth. Moreover, according to Alesina et al. (2003), « such conflicts have a strong negative impact on a country's growth rate and therefore investments revolve less attractive».

The lack of significance of most political risk and institution variables leads therefore to deduce that the institution context in the MENA region is underdeveloped. This may be harmful to economic growth and even destabilizes the growth rate.

We next suggest taking back the institution contribution in a dynamic panel data approach.

Table 4: Estimation results with Political risk, Institutions, capital account openness and economic growth (fixed-effects/within estimator).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	IMF	KAOPEN	QUINN	GOVST	SOCIO	INVPROF	ICONFL	ECONFL
Gfce	-0,51 (-0,46)	-0,11 (-0,11)	-0,47*** (-4,56)	0,02 (0,25)	-0,04 (-0,38)	-0,02 (-0,17)	-0,02 (-0,17)	0,10 (0,88)
Trade-Open	0,25 (0,85)	0,035 (1,21)	0,04**	0,02 (0,83)	0,04 (1,40)	0,02 (0,87)	0,02 (0,87)	0,01 (0,40)
Deflator	-0,07*** (-3,08)	-0,07*** (-3,08)	-0,05*** (-2,59)	-0,06** (-2,41)	-0,10*** (-3,13)	-0,07*** (-2,75)	0,07*** (-2,83)	-0,07*** (-2,97)
Invest	0,23** (2,38)	0,22** (2,31)	0,15** (2,20)	0,22** (2,30)	0,22** (2,12)	0,22** (2,24)	0,22** (2,24)	0,23** (2,48)
IMF_measure	2,92* (1,90)			2,82* (1,84)	2,98* (1,89)	2,88* (1,88)	2,82* (1,83)	2,61* (1,74)
KAOPEN		0,45 (1,12)						
QUINN			-1,21 (-0,56)					
Political				0,34* (1,73)	0,05 (0,21)	0,13 (0,7)	0,11 (0,63)	0,68*** (3,59)
R² Within	0,07	0,06	0,15	0,08	0,07	0,07	0,07	0,12
R² Between	0,01	0,00	0,11	0,00	0,00	0,00	0,00	0,00
N° Grps	12	12	9	12	12	12	12	12
N° Obsvs	263	263	206	263	263	263	263	263

t- Student in parentheses. * Significant at 10%. ** Significant at 5%. *** Significant at 1%.

	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	CORR	MILIT	RELIG	LAW	ETHNIC	DEMOC	BUR
Gfce	-0,03 (-0,29)	-0,04 (-0,40)	-0,05 (-0,46)	-0,06 (-0,54)	-0,02 (-0,20)	-0,05 (-0,46)	-0,05 (-0,46)
Trade-Open	0,01 (0,64)	0,02 (0,83)	0,02 (0,84)	0,02 (0,87)	0,03 (0,98)	0,02 (0,85)	0,02 (0,84)
Deflator	-0,07*** (-2,84)	-0,07*** (-3,02)	-0,07*** (-3,04)	-0,07*** (-3,07)	-0,07*** (-2,93)	-0,07*** (-3,05)	-0,07*** (-3,06)
Invest	0,25** (2,65)	0,22** (2,33)	0,23** (2,20)	0,23** (2,36)	0,23** (2,37)	0,23** (2,38)	0,23** (2,41)
IMF_measure	3,11** (2,02)	2,89 (1,87)	2,92* (1,90)	2,97* (1,92)	2,82 (1,82)	2,92* (1,90)	2,87* (1,86)
Political	-0,70 (-1,21)	0,07 (0,17)	0,00 (0,02)	-0,11 (-0,31)	0,24 (0,63)	-0,00 (-0,01)	0,32 (0,38)
R² Within	0,08	0,07	0,07	0,07	0,07	0,07	0,07
R² Between	0,03	0,00	0,01	0,01	0,00	0,01	0,01
N° Grps	12	12	12	12	12	12	12
N° Obsvs	263	263	263	263	263	263	263

t- Student in parentheses. * Significant at 10%. ** Significant at 5%. *** Significant at 1%.

2.3 Dynamic Panel GMM estimation:

Our empirical attempt endeavors as well to allow for dynamics in the behavior of the economic growth variable. By adding a lagged dependent variable on the right hand side, the econometric specification changes to a framework of dynamic panel data approach:

$$GDP_{it} = \beta_i + \beta_1 GDP_{i,t-1} + \beta_2 CapLib_{it} + \beta_3 controls_{it} + \beta_4 POLITICAL_{it} + \varepsilon_{it} \quad (3)$$

In these circumstances, the generalized method of moment GMM introduced by Arellano and Bond (1991) is the most suitable estimator. Since the GMM enables to resolve

autocorrelation problem issued from the presence of the lagged dependent variable at the right hand side. Besides it dropped any time-invariant variables. This makes up endogeneity problem issued from the correlation between the country fixed effect and the right hand side regressor. Baltagi et al. (2009) claim that the additional advantage of the GMM estimator is that by differencing it helps to ensure that all the regressors are stationary.

We therefore lagged independent and control variables for one period, the first difference transforms the previous expression:

$$\Delta GDP_{i,t} = \beta_1 \Delta GDP_{i,t-1} + \beta_2 \Delta CapLib_{i,t} + \beta_3 \Delta Controls_{i,t} + \beta_4 \Delta POLITICAL_{i,t} + \Delta \varepsilon_{i,t} \quad (4)$$

Consequently, the GMM “difference” has eliminated the country fixed effect. However, another problem arises such the differenced errors ($\varepsilon_{it} - \varepsilon_{it-1}$) are correlated with the lagged values of the dependent variables ($y_{it-1} - y_{it-2}$). Arellano –Bond (1991) therefore suggest the following moment conditions:

$$E(y_{i,t-S}, (\varepsilon_{it} - \varepsilon_{it-1})) = 0 \quad \text{For } S \geq 2; t = 3, \dots, T \quad (5)$$

$$E(x_{i,t-S}, (\varepsilon_{it} - \varepsilon_{it-1})) = 0 \quad \text{For } S \geq 2; t = 3, \dots, T \quad (6)$$

Where y is the dependent variable or the real per capita GDP growth rate and x is the set of control and explanatory variables.

Now suppose that the indicators of capital account liberalization such as the IMF measure and KAOPEN are endogenous that is why we use from the second lags as instruments. The explanatory variables such as controls and political indicators are considered as exogenous. We therefore use their current values as instruments.

The main results of the estimating equation (4) are reported in table 5. The positive expected sign of “trade open” is checked but insignificant. The relative coefficient of the deflator is always negative and highly significant at 1 % level. The exception is the coefficient associated with investment which is not yet significant.

The coefficients relative to the IMF measure and KAOPEN are positive but not longer significant. However, relatively to the IMF measure, the coefficient associated with KAOPEN is feeble. This implies that there is a positive effect of liberalization on economic growth in the MENA countries. Due to limited data availability of Quinn indicator we only report results of IMF measure and KAOPEN in the following regressions.

At first glance, the regressions for the 12 political indicators show that only government stability, corruption and bureaucracy have positive but insignificant coefficient. This means that government stability context; a high quality of bureaucracy and a better control of corruption are preconditions to economic growth.

Most of the other variables are negative and insignificant, only the coefficient associated with ETHNIC and RELIG are barely significant. The lack of significance can plausibly be explained by measurement errors of political risk and institutions variables. The sargan test confirms the validity of all the used instruments. Likewise, the autocorrelation test rejects the hypothesis of presence of second order correlation. However, it often accepts the hypothesis of presence of first order serial correlation.

In this regard, our main finding confirms that at first glance the link between capital account liberalization and economic growth is positive in MENA countries, regardless to other factors such as indicators of institutional quality.

However, most indicators of political risk and institutions had shown negative effects on economic growth. A plausible interpretation of these outcomes, first the negative effect of internal and external conflicts on growth can prevent the economic development in the MENA region. Busse and Hefeker (2007) argue that the threat of incidence of these conflicts, such as civil war, trade sanctions; cross boarder conflicts or an all-out war creates higher uncertainty. Thus, investors increase the risk premium of investment projects, which in turn reduces overall investment. Second, the coefficient associated with ethnic is negative and barely significant at 10% level. This leads that racial nationality or language divisions can harm economic development.

In sum, these outcomes may be directly linked to underdeveloped institutional context in MENA region. This may in turn hamper the economic growth in the region. These finding may plausibly be explained that the institutional context in the MENA region did not yet reach a maturity stage that enables them to spur the economic growth. Therefore, MENA countries require redressing government policy by strengthening the legal system, improving the quality of the bureaucracy, highlighting the democratic accountability of the government and reducing internal and external conflicts.

To account for government policy, we focus on three indicators of institutional quality. *GovQual* is a simple average of Bureaucracy quality, Corruption and Law and order. As mentioned above, bureaucracy quality gauges the institutional strength, the quality of bureaucracy as well the autonomy from political pressure. Corruption denotes the level of

corruption. Finally, law and order reflects the strength and impartiality of the legal system. Evidently, a higher value of these variables implies well institutional quality.

On one hand, results show that the relative coefficient of *GovQual* is negative but statically not significant. On the other hand, the interaction terms between *GovQual* and the two measures of capital account openness are negative and insignificant. This implies a plausible interpretation: the benefit effects of liberalization on growth are ensured in countries with low level of institutional quality. This finding corroborated those founded by Honig (2008)⁷.

In brief, as already mentioned institutional context in MENA countries is not enough developed and did not yet reach a maturity stage that enables them to contribute to explain the economic growth. The lack of significance among the different indicators of political risk and institutions can possibly be explained by measurement errors.

Table 5: Estimation results with Political risk, Institutions, capital account openness and economic growth (Arellano-Bond Dynamic panel data estimator).

	(1) IMF	(2) GOVST	(3) SOCI	(4) INVPROF I	(5) ICON F	(6) ECONF	(7) CORR
GDP_{t-1}	0,82 (1,45)	0,35 (0,6)	0,99 (1,62)	0,88 (1,46)	0,83 (1,45)	1,00 (1,60)	0,8 (1,32)
Gfce	-0,47 (-1,49)	-0,45 (-1,80)	-0,54 (-1,53)	-0,49 (-1,49)	-0,51 (-1,54)	-0,65 (-1,76)	-0,48 (-1,52)
Trade-Open	0,16 (1,46)	0,1 (1,08)	-0,17 (-1,46)	0,15 (1,42)	0,07 (1,09)	0,17 (1,17)	0,15 (1,39)
Deflator	-0,35*** (-2,83)	-0,26*** (-2,08)	-0,39*** (-2,87)	-0,36*** (-2,76)	-0,36*** (-2,85)	-0,40*** (-2,79)	-0,35*** (-2,67)
Invest	-0,01 (-0,05)	0,05 (0,26)	0,03 (0,12)	0,05 (0,18)	-0,01 (-0,04)	-0,17 (-0,06)	-0,01 (-0,05)
IMF measure	13,09* (1,85)	15,78** (1,99)	8,35 (1,04)	8,57 (1,01)	12,02 (1,67)	4,83 (0,54)	11,91 (1,36)
Political		0,5 (0,52)	-1,51 (-1,38)	-0,8 (-1,00)	-0,27 (-0,48)	-2,08 (-1,45)	1,24 (0,75)
AR(1)	0,05	0,24	0,039	0,05	0,05	0,03	0,08
AR(2)	0,35	0,84	0,26	0,32	0,34	0,25	0,25
Sargan test	0,33	0,11	0,57	0,37	0,34	0,52	0,11
P-Value>chi2							

⁷ Honig A., 2008, «Addressing causality in the effect of capital account liberalization on growth». Journal of Macroeconomics, March, p 1-15.

t- Student in parentheses. * Significant at 10%. ** Significant at 5%. *** Significant at 1%.

	(8)	(9)	(10)	(11)	(12)	(13)
	MILIT	RELIG	LAW	ETHNIC	DEMO	BUR
GDP_{t-1}	0,93 (1,54)	0,84 (1,50)	0,79 (1,43)	0,86 (1,58)	0,80 (1,41)	0,86 (1,49)
Gfce	-0,50 (-1,47)	-0,49 (-1,54)	-0,48 (-1,48)	-0,58* (-1,75)	-0,50 (-1,58)	-0,47 (-1,44)
TradeOpen	0,17 (1,49)	0,16 (1,47)	0,15 (1,40)	0,14 (1,36)	0,15 (1,46)	0,16 (1,50)
Deflator	-0,37*** (-2,82)	-0,36*** (-2,89)	-0,34*** (-2,88)	-0,37*** (-2,99)	-0,35*** (-2,85)	-0,36*** (-2,84)
Invest	-0,02 (-0,07)	0,07 (0,26)	-0,0 (-0,03)	-0,02 (-0,08)	-0,00 (-0,02)	-0,02 (-0,1)
IMF_measure	12,01 (1,58)	8,26 (1,11)	13,06 (1,75)	5,66 (0,72)	13,16* (1,89)	12,82* (1,77)
Political	-0,81 (-0,51)	-2,41* (-1,66)	-0,00 (-0,01)	-2,80* (-1,76)	-0,64** (-0,61)	1,32 (0,55)
AR (1)	0,047	0,046	0,05	0,036	0,056	0,051
AR(2)	0,30	0,28	0,36	0,28	0,36	0,33
Sargan test	0,42	0,47	0,31	0,48	0,35	0,32
P-Value>chi2						

	(1)	(2)	(3)	(4)	(5)	(6)
	KAOPEN	GOVST	SOCIO	INVPROF I	ICONF	ECONF
GDP_{t-1}	0,91 (1,52)	0,47 (0,68)	1,06 (1,56)	0,91 (1,48)	0,91 (1,52)	1,00* (1,67)
Gfce	-0,47 (-1,41)	-0,47* (-1,76)	-0,53 (-1,45)	-0,47 (-1,42)	-0,49 (-1,40)	-0,61* (-1,70)
TradeOpen	0,16 (1,32)	0,10 (0,83)	0,17 (1,32)	0,15 (1,30)	0,16 (1,31)	0,16 (1,38)
Deflator	-0,38*** (-2,93)	-0,29** (-2,15)	-0,41*** (-2,79)	-0,37*** (-2,87)	-0,38*** (-2,91)	-0,40*** (-2,99)
Invest	0,00 (0,03)	0,09 (0,39)	0,05 (0,17)	0,09 (0,31)	0,00 (0,03)	0,01 (0,04)
KAOPEN	1,32 (0,38)	3,15 (0,76)	0,32 (0,08)	0,01 (0,00)	1,27 (0,36)	0,45 (0,12)
Political		0,36 (0,33)	-1,53 (-1,28)	-0,92 (-1,12)	-0,09 (-0,16)	-2,08 (-1,47)
AR (1)	0,05	0,25	0,05	0,05	0,05	0,03
AR(2)	0,29	0,68	0,25	0,29	0,29	0,24
Sargan test	0,76	0,51	0,88	0,72	0,76	0,89

	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	CORR	MILIT	RELIG	LAW	ETHNIC	DEMO	BUR
GDP _{t-1}	0,97 (1,43)	0,95 (1,55)	0,89 (1,53)	0,89 (1,56)	0,87 (1,60)	0,88 (1,48)	0,94 (1,56)
Gfce	-0,47 (-1,38)	-0,49 (-1,41)	-0,48 (-1,44)	-0,47 (-1,36)	-0,55 (-1,66)	-0,50 (-1,50)	-0,46 (-1,36)
TradeOpen	0,17 (1,30)	0,16 (1,33)	0,16 (1,34)	0,16 (1,29)	0,14 (1,26)	0,15 (1,31)	0,17 (1,36)
Deflator	-0,39*** (-2,74)	-0,38*** (-2,92)	-0,37*** (-2,97)	-0,37*** (-3,02)	-0,37*** (-3,10)	-0,37*** (-2,95)	-0,38*** (-2,94)
Invest	-0,01 (-0,04)	0,00 (0,03)	0,09 (0,31)	0,01 (0,04)	0,00 (0,03)	0,00 (0,48)	0,00 (-0,01)
KAOPEN	0,62 (0,17)	1,31 (0,37)	0,32 (0,09)	1,38 (0,40)	0,41 (0,11)	1,65 (0,48)	0,91 (0,26)
Political	1,50 (0,85)	-0,65 (-0,41)	-2,33 (-1,55)	0,04 (-0,02)	-2,59 (-1,54)	-0,69 (-0,63)	1,36 (0,54)
AR(1)	0,07	0,05	0,04	0,04	0,03	0,05	0,05
AR(2)	0,31	0,27	0,26	0,28	0,27	0,30	0,28
Sargan test	0,45	0,79	0,84	0,75	0,82	0,79	0,75

t- Student in parentheses. * Significant at 10%. ** Significant at 5%.*** Significant at 1%.

2.4 Financial development sector and economic growth (fixed effect estimator vs. dynamic GMM estimator)

Our empirical analysis endeavors to search as well the features of the banking development sector and his impacts on economic growth in the MENA countries. The first empirical surveys studied the connection among financial depth and growth refers to Goldsmith (1969), he highlighted the presence of positive, robust and significant link between financial development system and economic growth.

Similarly, our main focus in this sub section is to show the magnitude of financial deepening and to reveal his effects on economic growth. As mentioned above, *FINDEV* stand for one of the three indicators for financial depth or banking development sector such as LLY; CPS or PRIVY. As mentioned above, these variables are added one by one in the basic equation in order to avoid multicollinearity. The basic model is therefore written as follows:

$$Growth_{i,t} = \beta_i + \beta_1 CapLib_{i,t} + \beta_2 controls_{i,t} + \beta_3 FINDEV_{i,t} + \varepsilon_{it} \quad (7)$$

We first report results using fixed effect (within) estimator. It can be seen from the results reported in table 6 that first, the relative coefficient of TO (Trade-Open) remains positive and insignificant in most specifications. The deflator is always negative and highly significant at 1% level. The coefficient associate with investment is positive and significant at 1% and 5% level. Second, as a result of the inclusion of financial development indicators, the coefficient of the IMF measure turns to be more important and highly significant at 1% or 5% level. However, the coefficient of KAOPEN is positive and statically significant when credit to private sector (CPS) and credits by deposit money bank and financial institutions (PRIVY) are used as measures of banking development sector.

For comparison purpose, we also report results using Arellano-Bond (1991) dynamic panel data regression. Table 7 provides the results which confirm those obtained by country fixed effects estimation. This leads to highlight the qualitative nature and the robustness of our results to different estimation techniques.

The Arellano-Bond (1991) estimation technique shows that no second order serial correlation. Since, the test for autocorrelation accepts the null hypothesis in the different specifications. However, it always accepts first-order autocorrelation hypothesis. Even, the sargan test confirms that the used instruments are valid.

We observe that capital account indicators (either the IMF measure or KAOPEN) are positive and statically significant at different levels of significance. Meanwhile, the coefficients associated with financial development indicators are negatives and statically significant. This involves a plausible interpretation that the banking development sector harms the economic growth. This finding is in contrast with the results reported by King and Levine

(1993) and by other literature studies such Klein and Olivei (2008) that have emphasized the vital role of financial depth to spur the economic growth.

It is important to emphasize that there is a common feature among MENA countries. Since the underdeveloped financial market sector and the strong implication of public sector in credit concession can explain the relevant results. Our outcomes are in line with the findings of Ben Nacer and Ghazouani (2007). They provided empirical evidence about the relationship Stock markets, banks, and economic growth from 11 MENA countries. They proved that the financial sector have negative and insignificant link with growth. They explained this outcome by the following statement: «These results may be explained by the high degree of financial repression and a weak equity market that is unable to support a sustainable economic development in the MENA region but also to sluggish and unbalanced growth, which weaken any relationship between financial development and economic growth»⁸.

In brief, we can deduce from these results that relatively to other developing countries the financial system in the MENA region is not yet robust and did not reach the maturity stage. Besides, some countries of this region have not yet established stock markets like Iraq, Libya, Sudan, Syria and Yemen.

As mentioned by Ben Nacer and Ghazouani: «stock markets in MENA countries do not reach a threshold that will enable them to contribute to economic growth. Besides, the negative effect could be related to the deviation of financial resources from the real sector to stock markets speculation»⁹.

⁸ Ben Nacer and Ghazouani: Stock markets, banks, and economic growth: Empirical evidence from the MENA region.

⁹ Ben Nacer and Ghazouani: Stock markets, banks, and economic growth: Empirical evidence from the MENA region.

Table 6: Panel analysis, country fixed effect: Capital account openness, financial depth and economic growth:

	(1)	(2) LLY	(3) CPS	(4) PRIVY	(5)	(6) LLY	(7) CPS	(8) PRIVY
Gfce	-0,51 (-0,46)	-0,00 (-0,05)	-0,10 (-1,28)	-0,08 (-0,96)	-0,01 (-0,11)	0,03 (0,38)	-0,06 (-0,82)	-0,03 (-0,39)
TO	0,25 (0,85)	0,04* (1,76)	0,02 (1,13)	-0,01 (0,63)	0,03 (1,21)	0,05** (2,12)	0,03 (1,48)	0,02 (1,01)
DEF	-0,76*** (-3,08)	-0,05** (-2,45)	-0,04** (-2,2)	-0,05** (-2,25)	-0,07*** (-3,08)	-0,06*** (-2,78)	-0,05** (-2,51)	-0,05*** (-2,60)
INV	0,23** (2,38)	0,23*** (2,78)	0,33*** (3,79)	0,34*** (3,95)	0,22** (2,31)	0,21** (2,56)	0,32*** (3,66)	0,32*** (3,74)
IMF	2,92* (1,90)	3,06** (2,35)	3,35*** (2,63)	3,83*** (2,99)				
KOPEN					0,45 (1,12)	0,48 (1,46)	0,68** (2,09)	0,77** (2,32)
FD		-7,20** (-2,17)	-10,10*** (-3,74)	-10,63*** (-4,02)		-7,70** (-2,30)	-10,86*** (-3,92)	-11,09*** (-4,07)
R ² W	0,07	0,10	0,14	0,15	0,06	0,09	0,13	0,13
R ² B	0,01	0,01	0,18	0,12	0	0	0,12	0,08
N°Obs	263	229	230	230	263	229	230	230
N°Grps	12	11	11	11	12	11	12	11

t- Student in parentheses. * Significant at 10%. ** Significant at 5%. *** Significant at 1%.

Table 7: Estimation result with GMM in difference estimates (the connection between capital account liberalization, financial depth and growth; one step results):

	(1)	(2)	(3)	(4)	(5)	(6)
Y: GDP	LLY	CPS	PRIVY	LLY	CPS	PRIVY
X :						
Gdp_{t-1}	-0,07 (-0,04)	-0,07 (-0,40)	-0,09 (-0,53)	-0,07 (-0,46)	-0,08 (-0,50)	-0,08 (-0,54)
Gfce	-0,57*** (-3,27)	-0,62*** (-3,7)	-0,60*** (-3,62)	-0,58*** (-3,37)	-0,63*** (-3,8)	-0,62*** (-3,76)
TO	0,0 (0,18)	-0,0 (0,09)	0,0 (0,02)	0,0 (0,01)	-0,0 (-0,03)	-0,0 (-0,19)
Deflator	-0,10*** (-3)	-0,1*** (-2,85)	-0,10*** (-2,87)	-0,12*** (-3,5)	-,11*** (-3,39)	-0,11*** (-3,42)
Investment	0,27** (2,05)	0,28** (2,07)	0,29** (2,20)	0,25* (1,88)	0,25** (1,95)	0,27** (2,03)
IMF	12,61*** (2,99)	11,27** (2,53)	12,22*** (2,88)			
KAOPEN				2,56 (1,63)	2,48 (1,59)	3,07* (1,96)
Financial Development	-10,79* (-1,9)	-10,76* (-1,75)	-10,16* (-1,87)	-11,57** (-2,05)	-13,72** (-2,36)	-12,48** (-2,32)
N. Obsvs	218	218	218	218	218	218
First-Order Serial Correlation test(p-value)	0,03	0,02	0,03	0,02	0,01	0,01
Second-Order Serial Correlation test(p-value)	0,262	0,284	0,346	0,120	0,178	0,188
Sargan Test	0,151	0,110	0,088	0,136	0,116	0,107

(p-value)

t- Student in parentheses.* Significant at 10%. ** Significant at 5%. *** Significant at 1%.

For robustness checks, we have also suggested to reveal the magnitude of banking development sector on growth in no-oil-producing countries such as Egypt, Jordan, Lebanon, Morocco, Tunisia and Turkey. Results are reported in appendix 7 provide partial support to those founded by the whole sample. Unlike, both capital account measures and banking development indicators are no longer significant. Meanwhile, these findings are in line with Ben Nacer and Ghazouani outcomes which argue that despite the difference of the economic structure among oil- producer's countries and no-oil –producer's countries, the financial systems of both groups seem to impact homogenously on economic growth.

2.5 Capital account liberalization and financial depth:

After analyzing the impact of financial liberalization on economic growth in MENA countries, we turn our attention to study the eventual relationship between capital account liberalization and banking development sector.

We are particularly interested in addressing the empirical question of whether the capital account openness can enhances the financial development in the MENA region. We therefore suggest the following benchmark regression¹⁰:

$$FD_{i,t} = \beta_0 + \beta_1 CapLib_{i,t} + \beta_2 X_{i,t} + \varepsilon_{it}$$

Where FD is the indicator of banking development sectors for country i and period t, (either the ratio of liquid liabilities, LLY; the credit to private sector, CPS or the private credit by deposit money banks and other financial institutions PRIVY). As mentioned above, **CapLib** is the indicator of capital account openness (the IMF measure or KAOPEN). As already stated, **X** is the vector of Control variables.

¹⁰ The benchmarking model is taken from the base model of Klein & Olivei (2008): Capital account liberalization, financial depth, and economic growth.

The F-test recommended not using a common intercept in the benchmark model. The Hausman test (1978) reveals using a fixed effect model. The results of the benchmark equation are reported in table 8. This finding shows that the measures of capital account openness matter differently to explain the banking development sector and at different levels of significance:

This regression shows that when the financial depth is gauged by the ratio of liquid liabilities LLY, financial development is not sensitive to capital account liberalization. This is because no significant effects have been revealed from the relative coefficient of capital account openness. This outcome implies a plausible interpretation that the liquid liabilities LLY indicator takes into account the overall size of the financial intermediary sector and it does not; however distinguish between the credits issued to the private sector and credits to governmental and quasi- governmental agencies (Klein and Olivei, 2008).

Meanwhile, when financial development is measured by credits to private sector or credits by deposit money banks and other financial institutions (CPS or PRIVY) the level of financial depth are closely related to capital account openness. This finding shows that capital account openness has an impact positive and significant on banking development sector, particularly when financial depth is measured by credits by deposit money banks and other financial institutions (PRIVY). As argued by Klein and Olivei: “Typically, this indicator of financial development is preferred in the empirical literature”.

It is therefore clear that the banking development sector is highly sensitive to capital account liberalization in the MENA countries, particularly when CPS or PRIVY is used as measures of financial development. This implies that capital account openness spurs financial depth. Therefore, external financial liberalization is a stimulus of financial development as well as of economic growth in MENA countries.

Table 8: Estimation results between financial depth and capital account openness (the regression for LLY; CPS and PRIVY).

	Dependent Variable					
	LLY		CPS		PRIVY	
	(1)	(2)	(3)	(4)	(5)	(6)
Explanatory variables	IMF measure	Kaopen	IMF measure	Kaopen	IMF measure	Kaopen
Gfce	0,00*** (5,41)	0,00*** (5,49)	-0,00 (-1,61)	-0,00 (-1,28)	-0,00 (-0,27)	0,00 (0,31)
TradeOpen	0,00*** (3,52)	0,00*** (3,52)	-0,00 (-0,84)	-0,00 (-0,62)	-0,00*** (-2,60)	-0,00** (-2,38)
Deflator	-0,00*** (-3,58)	-0,00*** (-3,43)	-0,00 (-0,76)	-0,00 (-0,62)	-0,00 (-0,89)	-0,00 (-0,92)
Invest	0,00*** (3,70)	0,00*** (3,90)	0,01*** (6,77)	0,013*** (7,12)	0,014*** (6,92)	0,014*** (7,15)
IMF_measure	-0,00 (-0,3)		0,02 (0,83)		0,06** (2,13)	
KAOPEN		0,00 (1,02)		0,02*** (2,99)		0,03*** (3,82)

t- Student in parentheses. * Significant at 10%. ** Significant at 5%. *** Significant at 1%.

Conclusion

The main purpose of this paper was to identify the relationship between capital account openness and economic growth for a sample of 12 countries from the MENA countries during the period 1985-2007, as well as to address the empirical question of whether political risks, institutions and banking development sector can contribute to explain the economic growth.

Given this purpose, our empirical strategy endeavors to use both de jure and de facto financial liberalization indicators. Besides we have explored in detail the indicators of political risks, institutions and banking development sector.

The first part of our results involves a robust and positive relationship between financial liberalization and economic growth in MENA region regardless to other economic conditions. Importantly, the second part implies that political risks and institution did not spur the economic growth, this leads to deduce that the institutional context are not enough developed and did not yet reach a maturity stage.

Similarly, indicators of banking development sector have shown that the financial system in the MENA countries is underdeveloped and did not yet reach a threshold that enables them to enhance the economic growth. This finding is similar for no-oil-producer's countries.

Our results also suggest that financial openness spurs the financial development in MENA region, particularly when credit to private sector and credits by deposit money banks and financial institutions are used as indicators of banking development sector.

The main feature of our outcomes is the robustness to alternative estimation techniques such as fixed effect estimator and Arellano-Bond dynamic GMM estimator.

To this end, our findings through the present study provide partial support to literature outcomes. However, the limits that can address to our study are first: we did not found robust and significant effects from interaction terms between capital account openness and political risk, institutions and financial development indicators. Second, due to data unavailability we

did not address the empirical question of whether countries with a tenable budget deficit can take more advantage from liberalization policy than other countries. This will be another direction of future research.

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Appendix

Table A1: Dating of liberalization events.

countries	Domestic financial		Stock Market		Capital Account		Full Lib	
	Partial Lib	Full Lib	Partial Lib	Full Lib	Partial Lib	Full Lib	Partial Lib	Full Lib
Algeria	1987-95	1995	1995	-	1994	-		-
Egypt	-	1991	-	1992	1990-91	1991		1992
Morocco	1980-96	1996	-	1993	1990	-		-
Tunisia	1986-96	1996	1989	-	1993	-		-
Turkey	1980-83/ 1987-89	1989	1983- 89	1989	1984-90	1990		1990

Table A2: Definition of variables and data sources

Variables	Definition	sources
GROWTH	Real per capita GDP growth rate	WDI (2008)
FINLIB	International financial integration is the indicator measured by Lane and Milesi-Ferretti	IMF (balance of payment & statistics) and Lane, Milesi-Ferretti (2006)
GFCE	Government final consumption	WDI (2008)

expenditure(% of GDP)		
TRADEOPEN	Trade openness to GDP	WDI (2008)
DEFLATOR	Inflation GDP deflator (annual %)	WDI (2008)
INVEST	Investment share of real per capita GDP	PWT(2007)
CAPLIB:	Capital account liberalization	
IMF AREAER		IMF binary(2006)
QUINN		Quinn (1997)
CHINN & ITO		Chinn & Ito (2007)
GOVST	Government Stability, 0-12 scale	PRS Group(2005b)
SOCIO	Socio economic conditions, 0-12 scale	PRS Group(2005b)
INVPROFILE	Investment profile, 0-12 scale	PRS Group(2005b)
ICONFL	Internal Conflict, 0-12 scale	PRS Group(2005b)
ECONFL	External Conflict, 0-12 scale	PRS Group(2005b)
CORR	Level of Corruption, 0-12 scale	PRS Group(2005b)
MILIT	Influence of military in politics,0-12 scale	PRS Group(2005b)
RELIG	Tensions among ethnic groups,0-12 scale	PRS Group(2005b)
LAW	Law&Order, 0-12 scale	PRS Group(2005b)
ETHNIC	Tensions among ethnic groups, 0-12 scale	PRS Group(2005b)
DEMOC	Democratic accountability of the government	PRS Group(2005b)
BUR	Institutional strength and quality of the bureaucracy,0-12 scale	PRS Group(2005b)
LLY	Liquid liabilities indicator/GDP	WDI (2008)
CPS	private credit by deposit money banks/GDP	WDI (2008)
PRIVY	Private credit by deposit money bank and other financial institutional/GDP	WDI (2008)

