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Le rôle des facteurs institutionnels dans le processus de croissance économique : justification théorique et application empirique aux PED

The role of institutional factors in the economic growth process: theoretical justification and empirical application to DCs

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Résumé

Jusqu'à nos jours, plusieurs études montrent que les institutions jouent un rôle crucial dans le processus de croissance économique en exerçant un effet positif à long terme sur l'activité économique et qu'un environnement institutionnel inadéquat peut constituer un obstacle à la croissance et que sa réforme devrait être privilégiée.

Dans le même sens et en s'interrogeant sur les causes de la prospérité des nations et sur les raisons pour lesquelles certaines nations se développent plus vite que d'autres. La réponse du FMI, dans son rpport « world Economic Outlook » de 2003 est claire et nette : « c'est les institutions qui créent la différence en matière de la richesse des nations ».

Le present article examine l'effet des facteurs institutionnels sur la croissance économique des pays en developpement au cours de la période 1996-2016 en utilisant un modèle de données de panel statique et dynamique. En utilisant des indices composites mesurant la qualité des institutions, on constate que les institutions politiques influencent positivement et significativement la croissance des pays en question.

Mots clés : Gouvernance, institutions économiques, croissance économique, GMM system, données de panel.

Abstract

To this day, several studies show that institutions play a crucial role in the process of economic growth by exerting a positive long-term effect on economic activity and that an inadequate institutional environment can be an obstacle to growth and that its reform should be favoured.

In the same vein and in questioning why nations prosper and why some nations develop faster than others do. The IMF's answer, in its 2003 World Economic Outlook, is clear: "it is institutions that make the difference in the wealth of nations".

This paper examines the effect of institutional factors on economic growth in developing countries over the period 1996-2016 using a static and dynamic panel data model. Using composite indices measuring the quality of institutions, we find that political institutions positively and significantly influence the growth of the countries in question.

Key words: Governance, economic institutions, economic growth, GMM system, panel data.

JEL: O43, O47, C23

INTRODUCTION

To this day, several studies show that institutions play a crucial role in the economic growth process by exerting a positive long-term effect on economic activity and that an inadequate institutional environment can be an obstacle to growth and should be reformed. Knack and Keefer (1995) show, in a cross-sectional analysis, that the different indicators of institutional quality (bureaucracy, property rights, political stability) positively affect economic growth. Furthermore, using the corruption control index, Mauro (1995) shows that countries with a low growth rate are those with a very high corruption index. Moreover, Barro (1991), through his pioneering work, has shown that institutions have become a primary subject of analysis for economists. As a result, the interaction between economic and political institutions has given rise to numerous theoretical and empirical works, namely those of North (1990, 1995), Kaufmann, Kraay and Mastruzzi (2004), Clague, Keeferet and Olson (1995) and Alesina and Perotti (1996).

Unlike the market economy, which emphasises the importance of the market as the sole regulator of the system, the institutional approach - also known as new institutional economics is concerned with the justification for the existence of institutions. The NIE refers to a group of schools of thought that contributed to the renewal of the economic analysis of institutions in the 1970s. In fact, the NIS groups together a set of economic currents of thought that have in common the use of institutions as a creator of economic growth. These institutional factors attracted the attention of the World Bank and the International Monetary Fund. The World Bank has published the six institutional indicators. Based on these data, MENA countries face the challenge of improving the institutional quality to support economic development. The IMF, in its 2003 World Economic Outlook, asks why nations prosper and why some nations develop faster than others. The IMF's answer is clear: « it is the institutions that create the difference in the wealth of nations ».

Our objective is to test the effect of a economic and political institutions on economic development during the period (1996-2016), we are trying to identify a relationship between institutional indicators and economic growth in MENA countries.

Through this article we will try to address the following issue: To what extent is the institutional environment important for economic recovery in developing countries? And what type of institution could play a key role in the economic recovery of developing countries?

To answer this question, our paper will be organised as follows:

The First part is devoted to the literature review concerning the relation between institionnal factors and economic growth and then we will empirically analyze the impact of economic and political institutions on economic growth, based on our selected sample. And finally, we will interprete the results of the chosen model estimation.

1. LITERATURE REVIEW

The literature reviews show that the first work that was interested in the empirical reviews of the effect of political institutions on economic performance is that of Barro (1991, 1995), considering democracy as an explanatory variable of growth. Indeed, the analyses carried out on the relationship between democracy and growth are interested either in growth causality towards democracy or in reverse causality.

By analysing the causality from growth to democracy and by measuring democracy by an indicator of electoral rights, Barro (1999) shows that very high levels of income predict an improvement in democracy. This finding is not always true when studying reverse causality. Indeed, Barro (1999) indicates that democracy improves growth when the level of political freedom is low, but decreases it when a reasonable level of freedom has already been achieved. Levine and Renelt (1992) and Wurgle (2000) show that public freedoms and the protection of investors' rights have positive effects on investment efficiency and economic performance. Dixit and Pindick (1994) confirm that investment will be more productive if institutions cost-effectively enforce property rights. Thus, they show that there is a direct link between democracy and the implementation of investment that would have a significant impact on economic growth.

Kormendi and Meguire (1985), Scully (1988), Barro (1996) and Helliwell (1994) and Isham, Kaufman and Pritchett (1997) show a positive correlation between the civil liberties indicator and economic growth.

Using the political instability and violence indicator, Barro (1991) and Londregan and Poole (1992) show that the latter generates low growth. In this sense, Alesina and Perotti (1996) argue that political instability has a negative impact on investment.

Acemoglu, Johson, Robinson and Yared (2005) shows that the positive correlation between democracy and income in cross-sectional regressions disappears once one controls for country fixed effects in country panel regressions.

Person and Tabellini (2008) show that the impact of democracy on growth is often underestimated because of the linearity assumption imposed on this relationship. By adopting a non-parametric estimation, these authors highlight that the impact of a change in political

regime can be considerable. Indeed, Person and Tabellini show that the transition from autocracy to democracy increases the annual growth rate of a country by 1%. However, if a country loses its democratic institutions after the establishment of a dictatorship, it can experience a recession of up to 45%.

Aghion et al (2008) used panel data from 119 developed and developing countries over the period 1970-2000, subdivided into 5-year periods, to show that democracy contributes to the development of the industrial sector in technologically advanced countries.

Using panel data for the period 2000-2011 with a sample of 38 developing countries, Aynur YILDIRIM and Mehmet Faysal GÖKALP (2016), use 23 institutional variables to study the link between institutions and economic growth of the countries mentioned above. The results of this study show that institutional variables such as judicial system integrity, regulation of trade barriers, foreign investment restriction, private sector share in the banking system and the employment-labour variable have a positive effect on macroeconomic performance of DCs. However, other variables such as the independence of the judiciary, public expenditure, transfers and subsidies, civil liberties, money market exchange rate and political stability negatively affect economic growth.

Adama Combbey (2017), studies the direct and indirect effect of indicators of political institutions, namely, political stability and absence of violence and terrorism, rule of law, voice and accountability on economic growth in West African Economic and Monetory Union countries (WAEMU). Using the Group Mean Estimator with Correlated Common Effects (GMECE) model, Combey shows that investment in the rule of law stimulates growth in the countries of this region, however, the indicators of political stability, freedom from violence and terrorism and voice and accountability do not have a direct impact on economic development.

Concerning the indirect effect of political institutions, the results show that these affect positively the economic growth of the countries in question through human capital and negatively through physical capital. Therefore, in order to stimulate economic growth, WAEMUcountries should not only improve the overall political index but also pay attention to indicators that favour physical capital such as corruption, property rights and judicial independence.

Based on a sample of 60 countries, Loi Hook Siong, Thong Lim, Normoz Wana Ismail (2013) examine the sense of causality between institutions and economic development by Granger's causality test. They use institutional data from the International Country Risk Guide (ICRG)

and the World Governance Indicators (WGI). This study shows that there is a bidirectional causal link between the institutional environment and economic growth. It also suggests that the causal mechanisms between institutions and economic performance vary with income level. Indeed, institutional quality is more conducive to economic performance in high-income countries, while economic growth seems to improve institutional quality in countries characterized by low income.

Knack and Keefer (1995), use two indicators to measure the security of contracts and private property rights to prove that good governance has a favourable impact on economic performance. They find a strong correlation between these two indicators and economic growth. Using panel data from 175 developed and developing countries during the period 2000-2001, Kaufman and Kraay (2002), confirm this finding by focusing solely on the relationship between the protection of private property rights as a measure of the quality of economic governance and per capita income. The results found show that the quality of private property rights institutions has a positive effect on economic growth measured by per capita income. However, according to the results, an increase in per capita income is not necessarily conducive to an improvement in the quality of economic institutions. This finding is an empirical exception to the theoretical results often accepted in the economic literature. Indeed, several empirical works find a positive and significant relationship from per capita income to the improvement of the quality of institutions (Feng, 2003, Keefer and Knack, 2002, Clogue et al. 1996,).

Employing the instrumental variables approach, Rodrik and Subramanian (2003) estimate a series of regressions that relate income to measures of geography, integration and institutions. They show that the causal relationship of institutions to growth is significant and positive, and that a poor country that succeeds in changing the "rules of the game" by strengthening the property rights of investors is likely to enjoy improved productive capacity.

Using the Corruption Perception Index and the Property Rights Index obtained from Transparency International and the Legacy Foundation database respectively, W.L and le Roux (2018) investigate the effect of economic institutions on economic development in ECOWAS countries from 1990 to 2015. The results of this study showed that economic institutions represented by the IIP generate GDP per capita growth, however the CPI does not have a significant effect.

2. RESEARCH METHOD :

2.1. The sample

This study was carried out in MENA countries (Algérie, Arabie Saoudite, Bahreïn, Égypte, Émirats Arabes Unis, Iran, Iraq, Jordan, Kuwait, Maroc, Oman, Qatar, Turquie et Tunisie). This study used panel data estimation for the period 1996-2016 on economic variables and institutional variables. The choice of the time horizon is justified by the availability of data on economic and institutional variables.We used 6 main institutional indicators set by the World Bank namely: political stability, voice & accountability, government effectiveness, regulatory quality, rule of law, and control of corruption[1] to measure the quality of political institutions and 10 institutional indicators set by the Transparency international Namely freedom of business (FB), freedom of trade (FT), freedom of taxation (FTx), size of government (SG), monetary freedom (MF), freedom of investment (FI), financial freedom (FF), property rights (PR.), corruption (C) and freedom of labour (FL) to measure the quality of economic institutions. We used, also, macroeconomic variables set by the World Bank namely, percapita GDP taking as reference the constant US dollar of the year 2005 (GDPC), represented as dependent variable, the human capital (HK), the physical capital (K) and labor force (LF). A static estimation panel with the GLS method, and dynamic estimation with the GMM method was carried out to obtain the influence of institutions on economic growth.

2.2. Definition of variables :

2.2.1. Dependent variable :

GDP per capita (GDPC): This is the growth rate of gross domestic product. The study of the impact of macroeconomic variables on private sector performance is generally highlighted in the literature.

2.2.2. Independent variables:

Human capital (KH): This is the stock of human capital, measured by the secondary education enrolment ratio (as a % of GDP)

Physical capital (K): This is the stock of physical capital (K_t) in each year t, measured by the sum of the stock of physical capital in year t-1, corrected by a rate of depreciation (δ) plus investment in year t (I_t).

[1] The World Governance Indicators (WGI) (for more details see WGI 2019; Kaufmann et al., 2010). The WGI cover more than 200 countries and territories and measure six dimensions of governance from 1996. The aggregated indicators are based on several sources of basic data and information on governance reporting the results of surveys and expert judgements at the international level.

Labor Force (LF) : Labor Force measured by the participation rate in the labour force aged 15 years and over**.**

We use the six (6) governance indicators developed by Kaufman, Kraay and Mastruzzi. These indicators range from approximately -2.5 (poor) to 2.5 (good) governance performance.)

Voice and Accountability (VA): Democratic accountability defines the situation in which the citizens of a country can express themselves freely. In addition, citizens in this case are able to express themselves and associate freely without forgetting the freedom of the press.

Political stability and absence of violence (PV): Political stability measures the perception of the likelihood that the government will be confronted with acts of political violence, including terrorist acts.

Government effectiveness (GE): measures the quality of public services, the ability of the civil service to formulate and implement policies, and the ability of government to commit to such policies.

Regulatory Quality (RQ): measures the perceived ability of the government to put in place policies and regulations to foster private sector development. Rule of Law (RL): The rule of law reflects the perceived extent to which economic agents are subject to the law. This indicator is based on the principle of compliance with legal norms, in particular the quality of contract enforcement and property rights.

Control of corruption (CC): Control of corruption reflects the perception of the extent to which public goods and powers are used for personal gain.

2.3. Presentation of the model :

Following the work of Mankiw, Romer and Weil (1992), Knight et al (1993), Ghura and Hadjimichael (1996) and Demetriades and Law (2006), Jalilian et al, (2007) and Calvallo and Daude (2010), The objective of our empirical study is to add institutional variables to the equation of the Solow growth model augmented by human capital, whose endogenous variable is an indicator of economic growth, namely real GDP per capita. We take into account the hypothesis of the existence of a correlation between institutional quality and economic performance. Institutional quality as a determinant such as low-income countries are characterised by poor institutional quality.

In contrast, countries with high national income are characterised by good institutional quality.

$$ln\,(y_{it}) = \beta_0 + \beta_1\, ln(LF_{it}) + \beta_2\, ln(HK_{it}) + \beta_3\, ln(K_{it}) + \beta_4 ln(ecoIns_{it}) + \beta_5 ln(polIns_{it}) + \varepsilon_{it} \quad (1)$$

T : presents the year, 1996, ...2016

GDPC : The gross domestic product is divided by the midyear population (constant 2005US$).

HK : human capital as measured by secondary school enrolment (as % of GDP)

K : physical capital

LF : Labor Force measured by the participation rate in the labour force aged 15 years and over

$\boldsymbol{PolIns_{it}}$**:** Index of political institutions scored voice and accountability (VR), political stability and absence of violence (SP), government effectiveness (GE), regulatory quality (QL), rule of law (RL) and control of corruption (CC)).

$\boldsymbol{EcoIns_{it}}$: index of economic institutions scored (business freedom (LA), trade freedom (LC), fiscal freedom (LF), size of government (weight of public expenditure DG), monetary freedom (LM), investment freedom (LI), financial freedom (LF), property rights (DP.), corruption (C) and labour freedom (LT))

3. ANALYSIS AND FINDINGS :

3.1. Descriptive analysis

First, data was subjected to descriptive analysis. In Table 1, we present a descriptive analysis of the different variables associated with economic growth obtained using the STATA software. In fact, in this study we considered real GDP/capita to be a dependent variable (GDPC) expressed as a function of macroeconomic namely : humain capital (HK), physical capital (K), Labor Force(LF) and institutional variariables such as: Index of political institutions scored ($PolIns_{it}$) and index of economic institutions scored ($EcoIns_{it}$).

Table N°1 : Descriptive Statistics for variables

Variables	Moyenne	Écart-type	Minimum	Maximum
GDPC	17188.83	19258.88	1711.465	72670.96
Polins	0.4732865	0.196941	0.008568	0.96551
Ecoins	58.48952	13.74117	15.6	77.7
Kt	3.601532	6.375532	1.537825	27.66273
LF	53.49131	14.23296	28.15248	86.564
HK	83.1388	17.03317	34.61998	116.3458

Source : Author's calculation

We find that the average GDP per capita for the whole sample is (17188.83 USD) with a standard deviation of 19258.88 which is considered very high. We note then, the presence of a non-stationarity problem in variance that we can correct by the log transformation. The highest value of this variable is (72670.96 USD) which is recorded in Qatar in 2011. This is a record high GDP per capita compared to its MENA neighbours. According to the World Bank, Qatar has the seventh highest GDP per capita in the world in 2017 with almost zero unemployment. Indeed, it is a wealthy country characterised by political stability and a strong and profitable banking sector. The average index of political institutions is 0.4732865 with a standard deviation of 0.196941. This requires the application of a logarithmic transformation. The highest value of this variable is 0.96551, which is recorded in Turkey in 2015. We also find that the average score of economic institutions for this sample is 58.48952 with a standard deviation of 13.74117 which is considered very high. We notice then, the presence of a non-stationarity problem in variance which we can correct by the log transformation. The highest value of this variable is 77.7 which is recorded in Bahrain in 2011. A logarithmic transformation will then be applied on all variables

3.2. Examination of the correlations :

In order to detect a possible relationship between the different variables, we performed the correlation test, the results of which are shown in Table 3. In fact, if the correlation coefficient is high we say that the variables used are strongly correlated, if not they are weakly correlated

Table 2. Correlation matrix

	logGDPC	logPolins	logEcoins	logKt	logLF	logHK
logGDPC	0.000					
logPolins	0.1973	0.000				
logEcoins	0.3614	0.0673	0.000			
logKt	-0.1900	0.1343	0.1196	0.000		
logLF	0.7772	-0.1770	0.3848	-0.0564	0.000	
logHK	0.5826	0.1252	0.6346	0.0886	0.4098	0.000

Source: Author's calculation

In general, values that are greater than or equal to 0.5 indicate that there is a strong positive or negative correlation between the variables depending on the effect of the variable under consideration on the other. In the light of the table representing the different correlation coefficients, we find a high correlation between the variable **logGDPC** and the variable **logLF** of (0.7772), **logEcoins and logHK** of (0.6346), we also notice that there is a weak correlation between the variables **logkt and logHK** (0.0886). Also, we can say that the dependent variable **logGDPC** is negatively correlated with the independent variable **logkt** (-0.1900).

3.3. Stationarity of Data :

The study of stationarity on panel data has become essential in the current econometric literature. Indeed, since the study period is long, most analyses are subject to disturbances that can modify the variance of the data, which sometimes biases the results of the estimates. For this reason, the study of the stationarity of the series considered is considered to be the preliminary stage of any empirical work and this through the application of a unit root test. In our analysis, we have chosen the test developed by IM, PESARAN and SHIN (2003) based on the famous Dickey-Fuller procedure and which takes into consideration the problem of heteroscedasticity and auto-correlation of errors. The results of the stationarity test are given in the following table, where M1 denotes the model with constant and without trend, M2 denotes the model with constant and with trend and M3 corresponds to the model without trend and without constant.

Table 3 : ADF stationarity tests

	Augmented Dickey-Fuller (ADF-test)						
	Level			1st difference			Results
	M1	M2	M3	M1	M2	M3	
logGDPC	0,9814 (0,8368)	0,5680 (0,7150)	-0,7127 (0,2380)	-5,7987 (0,000)	-6,4350 (0,000)	-7,1695 (0,000)	I(1)
logHK	1,1501 (0,8750)	1,1817 (0,1187)	1,8144 (0,0348)	-1,8144 (0,000)	-5,7972 (0,000)	-7,3047 (0,0000)	I(1)
logLF	1,4023 (0,9196)	0,0133 (0,4947)	-2,2186 (0,5865)	-6,8540 (0,000)	-7,4025 (0,000)	-7,5173 (0,0000)	I(1)
logPolins	0,9199 (0,8212)	-1,5649 (0,0932)	-0,5649 (0,2861)	-8,5701 (0,000)	-9,1546 (0,000)	-9,4503 (0,0000)	I(1)
logkt	0,6034 (0,2731)	0,6886 (0,0456)	0,0427 (0,0205)	-	-	-	I(1)
logEcoins	4,1888 (0,000)	4,9422 (0,000)	5,9105 (0,000)	-	-	-	I(1)

Source: Author's calculation

The results show that the variables logKt and logEcoins are stationary in level while the rest of the variables are stationary in first difference at the 5% threshold (plus-value < 0.5).

4. Analysis of the estimation results :

we propose two econometric approaches in panel data: the ordinary least squares estimator with country specific effects (in the case of the static panel) and the Generalized Method of Moment (GMM) estimator. The first method controls for country heterogeneity and therefore for structural and time-stable variables that may have been omitted. Two tests are associated with it: the Hausmann test allowing to choose between fixed and random specific effects and the F-test which accounts for the overall significance of the specific effects introduced.

To avoid the problem of endogeneity of the variables, especially those concerning the quality of the institutions, the application of the GMM estimator in the system of Blundell and Bond (1998), seems relevant to us because it simultaneously estimates the first difference equation

and the level equation. The method of generalized moments allows us to correct the endogeneity problem through the use of a series of instrumental variables that consist of the lags of the variables. The heteroskedasticity test is used to determine whether or not there is inequality in the variances of the errors in the regression model. According to the heteroskedasticity test, the probability value of the independent variables is below the 0.05 significance level, so there is a heteroskedasticity problem. The Durbin-Watson test is a statistical test to test the autocorrelation of residuals in a linear regression model. To solve the problem of heteroscedasticity and self-correlation of errors, we can use the Generalized Least Squares estimator. The results of the GLS (Generalized Least Square) estimation are shown in the following table:

Table 4. Results of the regression analysis (GLS)

Variables	Coefficient	Prob
D1logInspol	0.0456943	0.025
logEcoins	-0.0393398	0.001
D1logLF	0.376275	0.000
logKt	0.0052089	0.035
D1logHK	0.0621439	0.027
constante	0.1672778	0.001

Source: Author's estimation

The table shows that all the variables are statistically significant and positively correlated with the dependent variable, except for the variable logEcoins, which measures the quality of economic institutions. Indeed, all variables have a positive and significant impact on the GDPC, while the variable logEcoins has a negative but significant impact. The coefficients of the variables expressed in logarithm will be interpreted as elasticities.

The estimation of our model shows us a positive coefficient of the index measuring the quality of political institutions (governance). We find that this index has a positive (4.569%) and significant effect significant effect of 10% on economic growth, which corroborates the work of Kaufman D., Kraay A. and Mastruzzi M. (2003). In other words, an improvement of one point in the index measuring political institutions would lead to an increase in GDP per capita of 4.569%. As for the economic institutions, an improvement of the scored index by one point would lead to a decrease in real GDP per capita of 3.933%. This unexpected result can be explained by the poor quality of economic institutions in most MENA countries. Political

institutions thus seem to play a major role in the variation of GDP per capita across the 15 MENA countries and over the period considered. These results corroborate previous studies that find a strong and significant relationship between institutional quality and economic recovery. Our study thus contributes to show the robustness of this relationship at the MENA country level. Nevertheless, it has shown that the quality of economic institutions negatively affects the economic growth of the countries in question. The reading of our empirical results also shows the positive and significant impact of macroeconomic variables on the economic performance of the countries studied. With respect to investment, our model suggests that a 10% improvement in real gross fixed capital formation would lead to a gain of 0.5208% of real GDP per capita. This result is corroborated with the conclusions of economic theory highlighting the importance of this indicator.

As for the effect of human capital, it is statistically significant. The coefficient associated with the variable measuring the labour force is equal to 0.376275. That is, a 10% increase in the active population aged over 15 years generates an increase in GDP per capita of 37.62%. This confirms the result that economic growth rates are higher for the economically active than for the unemployed. In other words, being active for an extended period of time can certainly have positive effects on the standard of living and lifestyle which leads to improved economic growth. In this study, a dynamic estimation method, the GMM method, will be used to predict a growth model augmented with institutional variables. This method was introduced by Holtz-Eakin, Newey and Robsen (1988), Arellano and Bond (1991), Arellano and Bover (1995) and Blundell and Bond (1998). This method is very advantageous in terms of the level of solutions it provides. This method not only controls for individual and time-specific effects but also addresses endogeneity bias in the explanatory variables, especially with the existence of one or more lags of the endogenous dependent variable in the equation as an explanatory variable. The equation as an explanatory variable. We distinguish two types of GMM estimators in dynamic panels: the System Generalized Moment Estimator (SGMM) and the estimator GMM in first differences. According to Arrelano and Bonde (1991), the GMM first difference estimator is used to the first difference of the equation to be estimated for each period in order to avoid country-specific country-specific effects and subsequently include the lagged values of the instrumented explanatory variable. Explanatory variable. However, the application of this estimator becomes inefficient if the However, the application of this estimator becomes inefficient if the variable to be explained and the explanatory variables are highly persistent.

In this case, the correlation between the level lagged variables and the first difference equations is weak. Blundell and Bond (2000) show that the instrumented variables in the case of the MMG difference estimator are weak, the application of this estimator is therefore not the need to use the system generalized method of moments (GMMS) estimator.

The GMM in system consists in combining for each period the first difference equations with the level equations in which the variables are instrumented by their first differences. Two tests are associated with the dynamic panel GMM estimator; the Sargan/Hansen over-identification test, which tests the validity of the lagged variables as instruments, and the Arellano and Bond auto-correlation test where the null hypothesis is the absence of second-order auto-correlation of the errors in the difference equation. To avoid the problem of endogeneity of the variables, the use of the GMM estimator in system of Blundel and Bond (1998) seems relevant to us. By introducing the lagged endogenous variable as an explanatory variable. We thus obtain equation (2):

$$ln\,(GDPC_{it}) = \beta_{0+} + \beta_1\, ln(GDPC_{it-1}) + \beta_2\, ln(LF_{it}) + \beta_3\, ln(HK_{it}) + \beta_4\, ln(K_{it}) + \beta_5\, ln(Ecoins_{it}) + \beta_6 ln(Polins_{it}) + \varepsilon_{it} \qquad (2)$$

Table 5 : Results of the regression analysis (SGMM)

variables	Coefficient	Prob
LogGDPC1	0.4879089	0.071
D1logEcoins	-0.1218593	0.734
logPolins	0.1830224	0.015
D1logLF	-1.005341	0.000
logKt	-2.573442	0.129
D1logHK	0.3682795	0.110
constante	-1.862631	0.430
AR(1)	-1.54 (0.123)	
AR(2)	0.61 (0.545)	
Sargan	101.04 (0.014)	
Hansen	6.54 (0.243)	

Source: Author's estimation

The GMM model has shown that the Hansen over-identification test (1,000) largely accepts the null hypothesis of instrument validity. The model has excessive identification restrictions. According to the results of the autocorrelation test, there is first order autocorrelation (AR1), and there is no second order autocorrelation (AR2). Therefore, it is concluded that all the model applied in the study did not contain any autocorrelation problems. The results of the dynamic panel test showed that political institutions (governance) have the largest effect on economic growth across developing countries than economic institutions. In particular, we note the significant effect of the labour factor (logLF). By introducing the variable GDPC1, we notice that the GDP per capita of year (t) depends positively on that of year (t-1).

In conclusion, our results could be logical given the political and economic situation of MENA countries with relatively poor institutional quality. While a sound institutional environment is a necessary condition for stimulating economic growth, this is not the case for the countries in this region. Thus, good governance plays a crucial role in the growth process especially when it is represented by the implementation of favourable socio-economic conditions, a sound legal system, improved bureaucracy and low levels of corruption. However, the region is largely characterised by the low quality of economic institutions, which have been found to be counterproductive in several studies.

CONCLUSION

In this article we have tried to study the impact of institutional indicators on economic performance while emphasizing the importance of the institutional environment in the MENA region by means of an endogenous growth model using the static panel ordinary least squares (OLS) method and the dynamic panel generalized method of moments (GMM) on 15 MENA countries between 1996-2016. The use of this method is justified to take into account the endogeneity of the explanatory variables. The economic analysis of institutions presents a shift in economics towards more realism, this paper aimed to study the impact of political variables namely political stability, quality of regulations, rule of law, voice and accountability and economic variables namely freedom of business, freedom of trade, size of government on economic growth and this by using two synthetic indicators, Polins (governance quality index) and Ecoins (economic institutions quality index) to further our work. As for the institutional variables, our main empirical results suggest that the quality of economic institutions appears as an obstacle to economic growth in MENA countries given its negative and insignificant impact on the GDP per capita of the countries in question. Using the scored indices, we found that political institutions positively affect economic growth. These results have been confirmed

by the work of Kaufman D., Kraay A. and Mastruzzi M. (2005), Kaufman D., Kraay A. and Mastruzzi M. (2003), Barro and Sala-i-Martin (1995) and Mankiw, Romer and Weil (1992). However, as an empirical work and although the model tested is robust, it remains open to criticism. We can argue that no economic model can aim at universality without criticism. The criticism naturally concerns the quality of the data used, especially the data relating to the quality of institutions, but also the specification of the models and the construction of the scoring indices aimed at measuring institutional quality.

Under these conditions, if the authorities want to increase the impact of institutions on economic performance, they need to create a climate of political stability and good government quality that is favourable to the economy. In addition, countries in the region need to strengthen their governance systems based on the following indicators: rule of law, political stability, government effectiveness and control of corruption. Indeed, in order to fight corruption, it is necessary to update legal norms and create new legislation that is relevant to the reality of the citizens of the area. Moreover, in order to increase wealth while reducing corruption, countries in the region need to ensure sustainable political stability, which was not the case for most MENA countries.

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