

INSTITUTIONS AND ECONOMIC GROWTH IN THE MENA COUNTRIES: AN EMPIRICAL INVESTIGATION BY USING PANEL DATA MODEL

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Abstract

This paper will investigate the impact of institution on economic growth rates in MENA nations, Using panel data model over the period 1995-2012. Within the framework of the neoclassical growth model, this study integrates a broad set of institutional variables such. Security of property rights, governance, political freedom and size of government are the indicators used in the study, facilitating identification of the most important institutions that account for the observed variations in economic growth rates among nations. We find that, The sign and significance of all of the variables are qualitatively similar to the results obtained by MRW (1992). We also find The human capital is highly significant at 99% with initial income and Investment Share in MENA countries. The Results indicate that the dummy variable for oil exporters is positive and significant, indicating that other things being equal, oil exporters would be expected to have higher economic growth rates in MENA Countries. Basic OLS results, as well as a variety of additional evidence, suggest that (a) security of property rights, is the most significant institutions that explain the variations in economic growth rates, (b) The significant and negative sign on the government consumption, indicating that smaller governments are "better" in MENA countries.

Keywords: MENA Countries, Economic Growth, Institutions, Panel Data Model

INTRODUCTION

The importance of institutions for economic development and growth has long been understood—emphasized, for example, in the writings of Adam Smith and, more recently, David Landes (1998), and recognized in the 1993 Nobel Prize awarded to Douglass North. In the past few years, however, there has been a resurgence of interest in this subject, including research into the sources of institutional differences across countries, the channels through which institutions may affect economic performance, and the quantitative importance of these links.

Motivating much of this work is the renewed attention to the enormous cross-country differences in incomes. Not only are the extremes of this global income distribution striking—GDP per capita ranging from about \$100 a year in Ethiopia, for example, to over \$43,000 in Switzerland—but so also is the uneven dispersion of incomes. It is notable, for example, how few countries have what could be viewed as an “intermediate” level of income, between about \$6,000 and \$16,000 per capita, and how many—including most of sub-Saharan Africa—have incomes of well under \$1,000 per capita. Furthermore, while subsequent improvements in macroeconomic policies may have helped reverse the overall stagnation of per capita incomes among developing economies that set in early in the 1980s, these countries continue to face large and persistent income gaps relative to advanced economies.

In this context, the observation that income differences appear closely correlated with indicators of institutional quality has attracted substantial attention. In particular, recent work on growth and institutions has sought to identify the deep structural determinants of countries’ level of development. In contrast, the earlier growth accounting literature focused on the main proximate causes of growth, including capital accumulation (physical and human) and total factor productivity, together with macroeconomic and structural policies. Building on the close correlation between institutional quality and development, recent analyses attempt to address the possibility of reverse causality from development to institutions, and the relative significance of institutions compared with other influences on development, such as trade openness, geographical factors, and economic policies.

This paper aims to take stock of recent work on the impact of institutions on economic Growth, advance the debate through new empirical analysis in MENA countries, and—to the extent possible—come to some conclusions that may be relevant for policymakers.

The first section considers briefly, what institutions mean, and how are they measured? And how they may affect economic growth. An empirical perspective on these issues is provided in the following section. In final section we measures the influence of institutional measures in income per worker, in MENA countries for offered some policy messages and

conclusions, including a discussion of institutional measures that may contribute to economic development.

What Is Meant by the Term “Institutions” and How Are They Measured?

Proxies for institutions were first introduced into cross-country growth and investment equations more than a decade ago, and recently this literature has experienced a renaissance. Researchers have used diverse measures, encompassing political instability, the attributes of political institutions, social characteristics and social capital, and measures of the quality of institutions that affect economic exchange. The literature on economic growth typically has classified and treated these proxies collectively as “sociopolitical measures.” This practice has tended to obscure the different channels through which institutions operate and has impoverished the interpretation of the role of institutions in growth. This is a serious flaw in analyzing developing countries, where weak institutions are implicated in low growth.

Defining Institutions

One of the most influential persons in the institutions literature is the Noble laureate Douglass C. North. The reason for North’s popularity is probably because his discussion of institutions is clear and intuitively appealing. In North’s definition of institutions, there are two important distinctions. The first of these is between institutions and organizations. Consider the following statement. *It is the interaction between institutions and organisations that shapes the institutional evolution of an economy. If institutions are the rules of the game, organizations and their entrepreneurs are the players.* (North, 1996, p. 345)

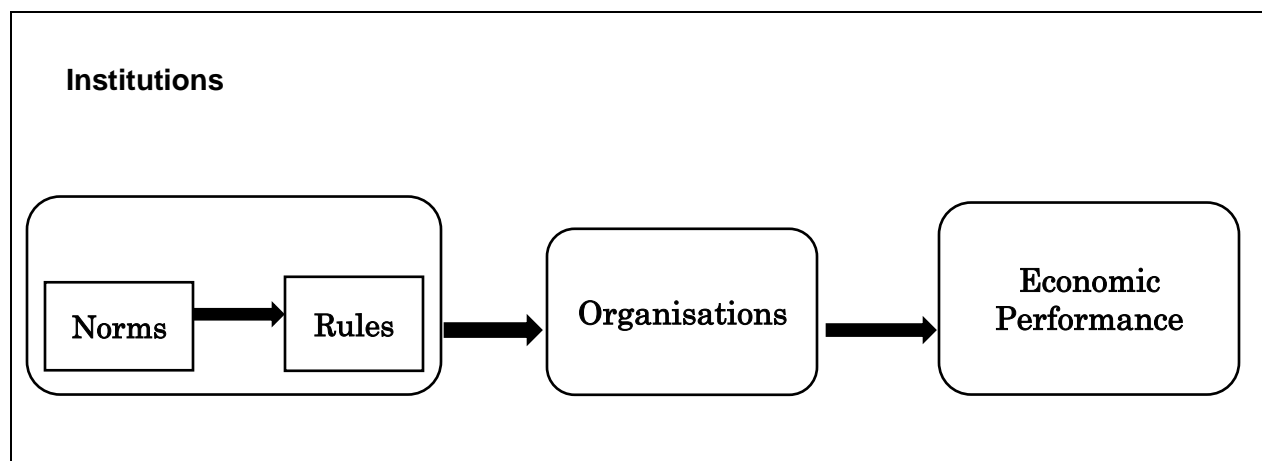
There is here an important distinction between institutions and organizations, where organizations in this context are: Political bodies (political parties, councils etc), economic bodies (firms, trade unions etc), social bodies (churches, clubs etc), and educational bodies (schools and universities). Institutions are then the key determinant of what kind of organizations a society develops. The organizations will reflect the opportunities provided by the institutional framework; if the institutional framework promotes corruption, the organizations will be corrupt.

The institutional framework seems here to be very important, but the definition of institutions so far only consists of “the rules of the game”. It is here that North makes his second important distinction; a distinction between formal and informal constraints: *Institutions are the humanly devised constraints that structure human interaction. They are made up of formal constraints (rules, laws, constitutions), informal constraints (norms of behavior, conventions,*

and self imposed codes of conduct), and their enforcement characteristics. Together they define the incentive structure of societies and specifically economies. (North, 1996, p. 344)

The differences between formal constraints (rules) and informal constraints (norms) are interesting. The maybe most important difference is that rules can easily be changed, but norms cannot. Norms are said to give “legitimacy” to the rules. Since it is the norms that give legitimacy to the rules, a society that adopts the rules of another country will not necessarily experience the same economic performance, due to differences in norms. This is because the most important enforcement of the rules is through the self-enforcing codes of behavior, norms and values. In order for the rules to have their desired effect, the underlying norms and values have to change in accordance with the rules. This change can however be a very lengthy process. The norms of a society have an even more dominant and important role then the presence of formal rules only (North, 1986, 1996). The discussion and interpretation of North motivates the following figure of plausible causal linkages:

Figure 1: Causal Linkage among Key Constructs



Institutions are made up of informal and formal rules (norms and rules) where the informal rules determine the formal rules. It is then the informal and formal rules that together shape the behavior of organizations which help to determine economic performance.

The Measurement of Institutions

To measure institutions, the literature has focused on several sets of variables. Here we discuss three. The first set, used initially by Knack and Keefer (1995) and Hall and Jones (1999), and more recently by Acemoglu et al. (2001), are survey indicators of institutional quality from the International Country Risk Guide, collected over the 1980s and 1990s. The second set, used most recently by Rodrik, Subramanian, and Trebbi (2002), is an aggregated index of mostly

survey assessments of government effectiveness collected by Kaufmann et al. (2003). The third set, coming from the Polity IV data set collected by political scientists (Jaggers and Marshall, 2000), aims directly to measure the limits of executive power.

Below we discuss these measures of institutions. We make three distinct points. **First**, all three data sets measure outcomes, not some permanent characteristics that North refers to. As such, all these measures (1) rise with per capita income, and (2) are highly volatile. Both of these facts are inconsistent with the view that they measure permanent or even durable features of the political environment. **Second**, the first two sets of measures of institutions are constructed so that dictators freely choosing good policies receive as high evaluations as governments constrained to choose them. An examination of these variables shows, for example, that dictators who chose to respect property rights—for example, in the USSR or Singapore—received high scores, which the literature has interpreted as having "good institutions." Even if these measures are extremely useful indicators of policy choices, they are by their very construction not constraints, and therefore unusable for discussions of how specific constraints on government that would guarantee the security of property rights. The Polity IV variables are intended to focus on political constraints, but we show that they too reflect political outcomes rather than durable constraints. **Third**, these measures of political institutions appear to be uncorrelated with the available constitutional measures of constraints on government coming from either electoral rules or courts. It is possible that these constitutional measures are noisy, and it is certain that "rules on the books" are very different from what actually takes place in a country. But this is precisely the point: the institutional outcomes that scholars have used as measures of constraints have very little to do with the constitutional constraints, raising doubts about the effectiveness of changing political rules.

Begin with the data from ICRG. The data include subjective assessments of risk for international investors along such dimensions as law and order, bureaucratic quality, corruption, risk of expropriation by the government, and risk of government contract repudiation. Of all three data sets, this one is probably the most problematic. It is plain that these measures reflect what actually happened in a country rather than some permanent rules of the game. For example, in 1984, the top ten countries with the lowest expropriation risk include Singapore and the USSR. In these cases, the data obviously reflect the choices of dictators and not political constraints. Along similar lines, the data show a bizarre reduction in the risk of expropriation over time. Between 1982 and 1997, Iran moves from the score of 1 (highest expropriation risk) to 9 (close to the top score of 10), Libya from 1.5 to 9, and Syria from 1.5 to 9. We are not familiar with significant institutional constraints on the leaders of Iran, Libya, and Syria; although of course in the last few years these dictators had stayed away from expropriation and the data reflect their

choices. Indeed, consistent with the intellectual victory of the Washington Consensus, the data show that the average score on expropriation risk in the sample rises from 5 in 1982 to 9 (with the median of 9.5) in 1997. Whatever expropriation risk measures, it is obviously not permanent rules, procedures, or norms supplying checks and balances on the sovereign.

The Kaufmann et al. (2002) "government effectiveness" variable is likewise a clear outcome measure. Starting in 1996, these authors have aggregated a large number of subjective assessments of institutional quality into broad indices of government effectiveness. "In government effectiveness, we combine perceptions of the quality of public service provision, the quality of the bureaucracy, the competence of civil servants, the independence of the civil service from political pressures, and the credibility of the government's commitment to policies into a single grouping" (p. 8). These are clear ex post outcomes, highly correlated with the level of economic development, rather than political constraints per se. Indeed, the country that receives the highest score in the world is Singapore, a state known both for its one party rule and for this party's chosen respect for private property.

Polity IV data make the greatest attempt at measuring the political environment rather than dictatorial choices. Constraints on the executive refers to "the extent of institutionalized constraints on the decision-making powers of chief executives, whether individuals or collectivities." The highest score for this variable is 7, the lowest is 1. The rich democracies, but also countries like Botswana, India, and South Africa, tend to get the perfect score of 7. Dictatorships like Cuba, Iraq, North Korea, but also Pinochet's Chile get the worst score of 1, the communist countries such as China and USSR are in the middle with 3s. It is difficult to see how property is more secure in Mao's China than in Pinochet's Chile, but at least it is clear what the variable is trying to get at.

The concern of this variable is, according to its creators, with the checks and balances between the various parties in the decision making process. However, a closer look at how this variable is constructed immediately reveals that it is an outcome measure, which reflects not the constraints, but what happened in the last election. When countries have inconsistent electoral experiences, their scores fluctuate wildly. For example, Haiti gets the worst score of 1 under the dictatorship during 1960-1989, Jumps up to 6 when Aristide is elected in 1990, goes back to 1 when he is ousted during 1991-1993, rises again to 6 and even a perfect score of 7 during 1994-1998 as Aristide and his party return to power (even though the elections had been widely criticized), but falls down all the way to 3 during 2000-2001. Likewise, Argentina fluctuates between the worst scores under generals, and the best ones after elections, even when the elected leaders undermine the legislature and courts. The data make it obvious that Polity IV provides a rapidly moving assessment of electoral outcomes over time, not a measure of actual

political constraints on government, and certainly not a measure of anything permanent or durable. And to the extent that rich countries are more likely to hold regular elections, "constraints on the executive" may well be a consequence of development rather than the other way around.

Likewise, the measure of "democracy" in Polity IV reflects the extent to which "the three essential, interdependent elements" are actually adhered to. These include "the presence of institutions and procedures through which citizens can express effective preference about alternative policies and leaders, the existence of institutional constraints of the exercise of power by the executive (see above), and the guarantee of civil liberties to all citizens in their daily lives and in acts of political participation." Although the definition is intended to suggest some permanence, the construction of the variable, like that of the previous measure, reflects most recent experiences.

LITERATURE REVIEW

Institutions & Growth

The majority of studies investigating the economic growth-institutions nexus use a version of the neoclassical growth model (Solow, 1956), augmented to include measures of human capital (from Mankiw, Romer and Weil (MRW), 1992) and institutions.

Previous studies examine the relationship between one aspect of institutions and economic growth, without controlling for the presence of other institutions that could alter the significance of the relationships. Among the pioneers in the growth and institutions literature, Kormendi and Meguire (1985) explored the link between the Gastil indices of political freedom (civil liberties and political rights) and economic growth and found a marginal effect of civil liberties on growth. Results from Scully's (1988) analysis using the same indices provide similar support for the growth-political freedom nexus. Helliwell's (1992) study however does not find a significant net effect of democracy on growth.

Barro (1996) finds the overall effect of democracy on growth to be weakly negative, and some indication of a nonlinear relation in which more democracy enhances growth at low levels of political freedom but depresses growth when a moderate level of political freedom has already been attained. The more general conclusion of this study is that the advanced western countries would contribute more to the welfare of poor nations by exporting their economic systems, notably property rights and free markets, rather than their political systems, which typically developed after reasonable standards of living have been attained.

Knack and Keefer (1995) pioneered the use of indicators of security of property rights in the growth literature, with the ICRG and BER! indices as proxies for this aspect of institutions. The results from their analysis indicate that institutions that protect property rights are crucial to economic growth. More recently, Mauro (1995) found corruption in countries to be growth retarding.

In the last five years, a number of studies have used the Economic Freedom Index from the Fraser Institute to investigate the link between economic growth and institutions. Ali (1997), and Ali and Crain (1999) find economic freedom to be a more robust determinant of growth than political freedom and civil liberties. Ayal and Karras (1998) find that economic growth enhances growth both via increasing total factor productivity and via enhancing capital accumulation. In a study by Dawson (1998), economic freedom is found to be growth enhancing. Easton and Walker (1997) find that economic freedom is an important explanatory variable for steady-state levels of income.

The addition of a variable for economic freedom is also shown to increase the explanatory power of the neo-classical growth model. Norton's (1998) study compares property rights to indicators of development and determines that the "well-being of the world's poorest inhabitants [is] sensitive to the cross-national specification of property rights." The paper shows that well specified property rights enhance the well-being of the world's most impoverished.

Results from empirical analyses suggest the existence of the economic growth institutions nexus, but statistical support is not uniform across all indicators of institutional quality. Depending on the institutional variables chosen, the group of countries in the analysis, and the time period of the study, the results are mixed. This study attempts to integrate all available indicators of institutional capital within the same model to determine the relative importance of each of these in explaining the variations in growth performance across nations.

RESEARCH METHODOLOGY

Using the framework of the neoclassical growth model, this study examines the relationship between economic growth and institutions in 15 nations for the period 1995 to 2012 through a pooled regression model. The sample distributed according to 2012 gross national income (GNI) per capita, calculated using the World Bank Atlas method. The groups are shown in the Table 1.

Table 1. Economic Development

Group 1 lower middle income, \$1,036– 4,085	Group 2 upper middle income, \$4,086– 12,615	Group 3 High income, \$12,616 or more.
Egypt, Arab Rep.	Alegria	Bahrain
Morocco	Iran, Islamic Rep.	Kuwait
Syrian Arab Republic	Jordan	Saudi Arabia
Yemen, Rep	Lebanon	Qatar
.	Libya	United Arab Emirates
	Tunisia	

Source: World Bank, World Development Indicators Database (July 2013)

The basic theoretical framework outlined in Solow (1956) and MRW (1992) is used for the analysis. The model assumes that the economies are characterized by a production function exhibiting the standard characteristics -constant returns to scale and diminishing returns with respect to each of the factors of production. It is also assumed that it is possible to derive the steady-state level of output for the model, and the dynamics of the path to such a steady-state can be described. Estimating equations are derived similar to Dawson (1998).

The paper utilizes four measures of institutions. **First:** A measure of governance computed as a simple average of six indicators pertaining to the seminal work by Kaufmann et al (2005) and these are: Voice and Accountability, Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption. The data set spans across the years 1995 to 2012 (The Worldwide Governance Indicators, 2013 Update). The indicators take values ranging from -2.5 to 2.5 inclusive, with an increase consistently implying better quality of institutions.

Second: The measure of security of property rights is computed as a simple average of two indicators: risk of repudiation of contracts and risk of expropriation, measured on a scale of 0-10, with higher values indicating "better" ratings. The data set spans across the years 1995 to 2012 (2014, Index of economic freedom).

Third: Political freedom is computed as the simple average of indicators of civil liberties and political rights, measured on a scale of 1-7, between 1.0 and 2.5 were designated "Free"; between 3.0 and 5.5 "Partly Free," and between 5.5 and 7.0 "Not Free." The data set spans across the years 1995 to 2012 (Freedom House 2014).

Fourth: Government consumption as a share of total consumption is measured on a scale of 0-10, with larger values indicating smaller governments. The data set spans across the years 1995 to 2012 (2014, Index of economic freedom)

Following previous studies in the literature, the data on growth rate of GDP per worker are derived from the Penn World Tables Mark 7.1 (Summers and Heston, 1991). Initial income and the period average for investment share are also from the same source. Labor force growth is derived from the world development indicators 2014, the data on human capital (secondary school enrolment, %) are taken from Barro and Lee (2010), and averaged for the years 1995-2010. Oil exporting economies is a dummy variable 1=OIL; 0=other, we constructed this dummy variable based on the World Bank classification.

As the basic hypothesis consists in stating that; Investment Share, Human Capital, property rights and the dummy variable are expected to be positively correlated with economic growth. Negative correlation between Labor Force and economic Growth, Uncertain correlation concerning the other variables.

The MRW (1992) human-capital augmented version of the Solow model is first estimated for the sample of MENA countries. The model is of the form:

$$Growth_i = \beta_0 + \beta_1 InitialIncome_i + \beta_2 LaborforceGrowth_i + \beta_3 InvestmentShare_i + \beta_4 HumanCapital_i + \varepsilon_i \dots [2]$$

The revised version of the model attempts to identify the most important components of the institutional variable that account for the differences in growth rates. The revised model is of the form:

$$Growth_i = \beta_0 + \beta_1 InitialIncome_i + \beta_2 LaborforceGrowth_i + \beta_3 InvestmentShare_i + \beta_4 HumanCapital_i + \beta_{4i} Institutions_j + \beta_i Oil_i + \varepsilon_i \dots [3]$$

Where,

j=1.....4 and j=Governance, property rights, political freedom and government consumption.

The standard assumptions and estimation procedures for SUR apply to this revised version of the model.

Table 2: Factors affecting economic growth Dependent Variable:
Growth Rate of GDP per worker, 1995-2012

	Model 1	Model 2	Model 3	Model 4	Model 4
Intercept	0.013 (3.79)***	0.014066 (4.16)***	0.072 (7.038)***	0.011 (1.57)	0.0065 (0.82)
Initial Income	1.09E-06 (0.63)***	9.78E-07 (0.65)	5.47E-06 (2.93)***	-6.63E-08 (-0.039)	-3.05E-07 (-0.180)
Labor Force Growth	0.035 (1.78)*	-0.034 (1.79)*	0.0036 (0.099)	0.035 (1.63)	0.030 (1.35)
Investment Share	0.0004 (3.13)***	0.0004 (2.97)***	0.00027 (1.42)	0.000557 (3.49)***	0.00058 (3.62)***
Human Capital	0.0005 (5.30)***	0.0005 (-5.23)**	0.0008 (6.15)***	0.00053 (-4.62)***	0.00054 (4.68)***
Oil Exporters	—	0.0008 (4.77)***	0.004 (3.09)***	-0.0007 (-1.04)	-0.0007 (-1.017)
Property Rights	—	—	0.004 (4.52)***	-0.00012 (-0.19)	-9.71E-05 (-0.14)
Governance	—	—	0.028 (6.46)***	—	—
Political Freedom	-	—	0.0019 (4.59)***	—	—
Government Consumption	-	—	-0.0031 (-3.25)***	-3.07E-05 (-0.037)	0.0016 (1.39)
Government Consumption squared	—	—	—	—	1.48E-08 (1.90)**
R ²	0.16	0.21	0.48	0.23	0.24
Adjusted R ²	0.15	0.20	0.459	0.21	0.210
Sample size	252	252	252	252	252

All variables in logs. Parantheses contain p-values.

, ** and * denote significance at the 10%,5% and 1% level.*

The empirical results are displayed in Table 2 above. The various scenarios done areal so explained after the Table in a very detailed manner. Table 2 shows the result from the pooled regression model. Each column contains information about the estimated coefficients of variables included in the regression.

Model [I] reproduces MRW's (1992) human-capital augmented version of the Solow model for the MENA countries under consideration in this study. The sign and significance of all of the variables are qualitatively similar to the results obtained by MRW. The human capital is highly significant at 99%with initial income and Investment Share in MENA countries, Model [2] is an extended version of Model [I], with a dummy variable included for the oil exporters, to account for higher growth rates merely because of the presence of one natural resource, exports of which account for a significant fraction of GDP in these economies.

As expected, the dummy variable for oil exporters is positive and significant, indicating that other things being equal, oil exporters would be expected to have higher economic growth rates. The sign and significance of the other variables in Model 2 is as expected.

Model [3] includes all of the institutional variables for the MENA countries included in the study. All four institutional variables affect economic growth rates positively. The significant and negative sign on the government consumption in Model [3], indicating that smaller governments are "better". Over the last century, the size and scope of government have expanded enormously, particularly in the industrial economies. The post-World War-II confidence in the government bred demands for it to do more. Industrial economies expanded the welfare state, and much of the developing world embraced state-dominated development strategies. The result was a tremendous expansion in the size and scope of government worldwide. State spending now constitutes almost half of total income in the established industrial countries, and around a quarter in the developing economies (World Development Report, 1997). The positive effect of government consumption on economic growth rates is a reflection of this shift in government consumption.

In an attempt to determine the relative significance of the four component measures of institutional capital, a stepwise regression is employed, where we start with a model containing all of the component institutional indices (Model 3) and then individually drop those that are statistically insignificant. This approach results in governance and political freedom dropping out of the model, leaving us with Model [4], in which the security of property rights and size of government are the institutional variables that explain to a significant extent the differential growth performance across nations.

The model [3] explains up to 50% of the variability in growth rates. More secure property rights lead to a high level of GDP per capita through their effect on allocative efficiency. When property rights are not well defined, resources may be directed towards unproductive activities. Transaction costs also tend to be high, and may prevent mutually beneficial transactions. With well-defined property rights, growth will occur either through an increase in the quantity of factors of production or through a more efficient use of available factors of production.

The first direct effect of security of property rights on growth arises through a more efficient use of capital. Capital devoted to productive activities will enhance the productive capacity of the economy. The structure of property rights is also expected to affect the allocation of capital. The presence of a secure system of property rights promotes innovation, since rewards can be reaped from new products or processes. In the absence of property rights, human capital may be used for rent seeking and other redistributive activities. Other things being equal, growth rates are higher with a more secure system of property rights.

For the sample of countries included in this study, the differences in growth rates is consistent with differences in their security of property rights. However, the lack of statistical significance for the institutions of governance in the cross-country regression should not be construed to imply that this institution is unimportant for the process of economic growth. In the context of New Institutional Economics, Williamson (2000) distinguishes four levels of social analysis. The top level is the social embeddedness. This is where the norms, customs, mores, traditions etc. are located. Religion plays a role at this level. Although an analysis of this level is undertaken by some economic historians, it is taken as given by most institutional economists. The New Institutional Economics has been concerned principally with levels 2 and 3. The second level is referred to as the institutional environment. Much of the economics of property rights are of a Level 2 kind. The third level is where the institutions of governance are located. Within this theoretical framework, there is a virtuous cycle of feedback between the governance structures and security of property rights. The high degree of correlation between these two institutions possibly captures this phenomenon, with the Level 2 variable dominating the effect of the Level 3 variable.

Model [5], an extension of Model [4], tests for non-linearity of government consumption. Although the results seem to indicate decreasing returns when governments are too large, they should be interpreted with caution, since our sample consists predominantly of developing countries, where the average size of government is small. All of these countries with smaller governments lie in the increasing portion of the growth government consumption curve. Further analysis with a larger sample of countries is expected to yield more robust results.

CONCLUSION

This paper attempts to identify the most important institutional determinants of differences in economic growth rates among countries. It provides an analysis of which institutions prove to be growth enhancing in MENA countries for the period 1995 to 2012, from the pooled regression model. The results from the analysis are significant, and provide support for the historical evidence presented by North and Thomas (1973), Rosenberg and Birdzell (1986) and North (1990). They show that the security of property rights provides incentives for economic growth in the world. Secure property rights also lead to an efficient allocation of investment and to an efficient use of capital.

The results seem to indicate that: The usual of dummy variable for oil exporters is positive and significant, indicating that other things being equal, oil exporters would be expected to have higher economic growth rates.

On the other hand, it was found that the government consumption is found to have an adverse impact on economic growth, so smaller governments are "better". However, government consumption merely reflects its size, and says nothing about the "quality", i.e. its effectiveness. Dramatic changes in the global economy have fundamentally changed the environment in which states operate, and the state is no longer seen merely as a provider, but as facilitator and regulator. Since there is, also a predominance of "developing" countries in the sample, which lie in the "increasing" portion of the curve, results for the size of government variable should be interpreted with caution.

Finally, the measures of institutional capital used in the study are far from perfect, and do not capture all of the dimensions of institutions. Differences in Level 1 (Williamson, 2000) institutions are also not captured in this study, a factor that could be a significant source of variation in growth rates. A theoretical discussion of cultural differences and long-run economic performance is provided by Lal (1998), which could be used as the building block for empirical testing of this factor endowment as an important source of growth differences.

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