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Governance and economic growth: The case of Middle Eastern and North African countries

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ABSTRACT:

Using a Two-stage Least Square (TSLS) regression for cross-sectional observations of 197 countries for the year 2009, the study estimates the impact of: i) an improvement in the quality of governance on per capita income, and ii) an increase in per capita income on the quality of governance. In line with previous empirical studies, the results suggest a positive, strong, and statistically significant causation from quality of governance to per capita income. In addition, the results suggest a statistically significant causation from per capita income to quality of governance. The estimation results are used to interpret the relationship between governance and growth for the 22 MENA countries. One of the striking results of the study is that, despite the relatively low performance of most of these countries in nearly all of the six measures of governance, their estimated levels per capita of income are higher than for the majority of the countries in the sample. This implies that most MENA countries have achieved a relatively high, but fragile, standard of living for their citizens in the face of poor governance. The fragility of the standard of living in most of these countries was demonstrated by the uprisings in Tunisia, Egypt, and Libya, which had economic grievances as one of their key motivating factors. The findings of the study have two major policy implications. First, development requires a strong effort to improve governance, and second, though to a lesser extent, improving governance requires an exogenous increase in income through means such as multilateral aid.

JEL Classification Numbers: O16; O43; N20

KEYWORDS: MENA; Corruption; Democracy; Political Freedoms; Economic Growth

I. INTRODUCTION

From the moment that the first protests erupted in Tunisia in December 2010, following the decision of a vegetable cart owner, Mohamed Bouazizi, to immolate himself over the confiscation of his cart and produce, economic grievances have played a pivotal role in fueling the wave of protests and uprisings in the Arab world that have already toppled the regimes of Tunisian President Zine El Abedine Ben Ali and Egyptian President Hosni Mubarak, and more recently Libyan President Muammar El Gaddafi, and have created serious political strife in Bahrain, Yemen, and Syria. With the exception of oil and gas-rich Bahrain, where tensions have been exacerbated by an age-old divide between the country's Shi'a majority and Sunni political and economic elite, every Arab nation whose political foundations have been seriously threatened over the last three months has a per capita income that places it squarely in middle or lower-income status – and often with high income inequality attached. Popular anger over the economic mismanagement demonstrated by various autocratic Arab governments – and the poverty, unemployment, and limited options for upward mobility that have resulted from it – has arguably been as important a factor during the “Arab Spring” in uniting fractious societies in opposition to the status quo as the yearning for greater political freedoms. Likewise, one could argue that, while far from the only motivating factor, economic discontent has played a meaningful role in driving the protest movement in Iran in recent years. This paper considers the historical reasons cited for such failures of governance among MENA states, and seeks to assign relative levels of importance to each of these factors with regards to their harmful effect on both macroeconomic growth, and the actual economic opportunities available to the general populace of these nations.

By the standards of virtually any significant metric measuring the quality of governance in a particular country, the nations of the Middle East and North Africa routinely rank well below the global average. The findings of the World Bank's Worldwide Governance Indicators (WGI) project provide perhaps the starkest evidence of the mismanagement and misrule produced by many of the region's governments.

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The WGI project seeks to measure the quality of governance in a particular nation using six metrics: Voice and Accountability, Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. These metrics are measured both by a Governance Score that ranges from -2.5 to +2.5, and a Percentile Rank relative to nations worldwide.

For the Voice and Accountability metric, 19 of the Middle East and North Africa region's 20 largest countries by population were given a negative Governance Score, and ranked in the 36th percentile or lower. 14 out of 20 ranked below the 25th percentile. For the Political Stability metric, 13 out of 20 ranked in the 41st percentile or lower; and two of the nations ranked above the 50th percentile (Tunisia and Libya) at the time of the project's last report (2009) would likely see their rankings drop in an updated study. For the Government Effectiveness metric, 12 out of 20 nations had negative scores, and 5 out of 20 ranked below the 25th percentile. For Regulatory Quality, 10 out of 20 had negative scores, and 5 out of 20 again ranked below the 25th percentile. For Rule of Law, 11 out of 20 had negative scores, and 4 out of 20 ranked below the 25th percentile. And for Control of Corruption, negative scores were given to 11 out of 20 nations, with 6 out of 20 ranking below the 25th percentile.

Explanations for the failure of the governments of various MENA states to provide the kind of sound governance for their populations that can deliver strong economic growth and meaningful upward mobility have tended to fall into one of three categories: the implementation of misguided economic policies that provided government officials with an excessive amount of authority over the allocation of national resources, dating to the time of the Cold War; the presence of rampant corruption and cronyism throughout the organs of the state; and the lack of accountability caused by a dearth of democracy and political freedoms. For impoverished states with little natural resource income relative to the size of its population, critiques of economic policy have revolved around the socialist, state-driven economic models adopted by many Arab governments from the 1950s onward. These models, with their emphasis on state control of major industries, the delegating of major resource-allocation decisions to central planners, and stringent controls on foreign trade and capital inflows, have been cited as a key reason why resource-poor Arab nations have failed to keep pace with countries possessing more market-oriented economic policies. For nations awash in natural resource wealth, economic policy critiques have shined a light on both the harmful impact of heavy-handed state control by politicians and bureaucrats, and a general disinterest that's often seen regarding the development of export-oriented industries that are not tied to resource extraction.

The explanations for poor governance that center on institutional corruption, meanwhile, are often quick to point to international studies and rankings that give many MENA states poor marks with regards to corruption and government

transparency. The harmful impact of the widespread need for bribes and kickbacks on both the cultivation of domestic industry and the attracting of foreign investment is well-documented, as is the effect of lucrative business deals and favorable regulatory treatment being provided to the cronies and family members of prominent government officials. And researchers have noted that a lack of political liberty not only prevents autocrats and their underlings from being held accountable for their poor economic judgment, by means of elections, but also prevents critics and whistleblowers from pointing out government incompetence, corruption, and malfeasance to their fellow countrymen.

Considering the impact that the embrace of market reforms, and their implicit reduction of the economic authority of government officials, has had on many developing economies throughout the world, it is not difficult to argue that questionable decision-making by government authorities in MENA countries with statist economic systems has been a major detriment to economic growth. In her paper, *Parameters of Economic Reform in North Africa*, Karen Pfeifer takes account of the economic damage done to Tunisia by its bloated, inefficient public sector enterprises (PSEs), which grew in number from 25 in the 1960s to 400 by 1989 (448), and the government diktats that kept them oversized and unprofitable. With PSEs "assigned objectives other than profit-maximization such as producing import substitutes...and not free to fire workers or raise prices," their losses ended up accounting for 20% of government outlays between 1977 and 1981 (449). The failures of Tunisia's PSEs, and the laws that left them in a particularly woeful state, undoubtedly played a large role in Tunisia's GDP per capita growth declining from an annual rate of 5.1% from 1970-1980 to merely 1.1% from 1980-1990 (449).

Egypt was also criticized by Pfeifer for its heavy-handed support of PSEs. In Egypt's case, not only did massive state investment in PSEs have a detrimental effect on the domestic economy due to their inefficiency, they required enormous imports of capital, technology, and other inputs in order to function – thereby ironically thwarting the Egyptian government's stated goal of import substitution. Moreover, as the Egyptian government officials took an active role in managing quantities and prices for various inputs and outputs, Pfeifer notes that "central planning became very complex (442)." After achieving 5.7% annual growth from 1970-1980, Egypt's per capita GDP grew only 2.4% per year from 1980-1990, and declined 0.5% per year from 1990-1995. As with many other developing economies, a state-driven approach to industrializing what was initially a predominantly agrarian economy yielded healthy economic growth at first, but then witnessed increasingly diminishing returns due to inefficient capital spending and general mismanagement.

That corruption and arbitrary rule-enforcement is widespread and deeply institutionalized in many MENA countries is undeniable. Relying on ten indicators from several major think tanks, economist Tarik M. Yousef sought to compare

“Institutional Quality,” which measures factors such as corruption, the size of the black market, the enforcement of rules and rights, and the quality of bureaucracy, in the OECD and six different sets of developing nations, sorted by geography. In Yousef’s study, found in his 2004 paper *Development, Growth and Policy Reform in the Middle East and North Africa since 1950*, the Middle East and North Africa was given an Institutional Quality score of -0.32 – ahead of only South Asia and Sub-Saharan Africa, and well behind the OECD, which had a score of 1.38 (98). To make matters worse, with a score of -0.78, the Middle East and North Africa ranked last (by far) in Yousef’s rankings of “Public Accountability,” which measured factors such as political participation, civil liberties, and government transparency and responsiveness. OECD nations, by contrast, reported a score of 1.89 (98). Needless to say, Yousef’s findings dovetail very well with the WGI project’s ratings of MENA nations in the areas of Voice and Accountability, Regulatory Quality, and Government Effectiveness.

However, the endemic corruption found within many governments cannot merely be attributed to the failings of autocratic governments: in many situations, cultural factors also appear to play an important role. In his paper, *Expecting the Unexpected: The Cultural Components of Arab Governance*, Lawrence Rosen remarks that “Arabs tend to characterize corruption not as abuse of some formal set of criteria associated with a given position, but as the failure to share whatever largesse comes one’s way with those to whom one has forged ties of obligation (171).” Rosen goes on to note how certain informants of his half-jokingly remarked that “corruption is our form of democracy,” since it allows individuals to disregard an autocrat’s rules in exchange for a bribe. Thus, “corruption” can sometimes take on a whole different meaning than what it is typically viewed as in the West, with the Western concept of corruption being sometimes tolerated, depending on the circumstances. And so, while potentially detrimental to economic growth, corruption in the Western sense of the term could remain in place to some extent even if political elites show a commitment to clean, transparent government.

The historical “democracy deficit” of the Middle East and North Africa has clearly kept many autocrats (and until recently, a couple of others) from being held to account for their failure to deliver economic growth, as well as major improvements in other human development indicators. The chilling effect of the broader lack of political freedoms in a number of countries in the region, as manifested by widespread reports of journalists, writers, and activists being arrested and/or beaten, has also contributed to the lack of accountability for poor governance, as many potential critics are frightened into silence, lest they run afoul of the state. And on a micro level, evidence appears to exist that a lack of political freedom has a strongly negative effect on the governing competence of the state. In their paper, *Civil Liberties, Democracy, and the Performance of Government Projects*, Jonathan Isham, Daniel Kaufmann, and Lant H.

Pritchett sought to examine the relative effectiveness of World Bank-financed government projects in nations that do and don’t possess civil liberties, human rights achievement, media pluralism, and the freedom to organize, after controlling for economic, project, and regional variables. While the study found little relationship between the freedom to organize and performance, it found a moderately positive relationship with human rights achievement, and a highly positive relationship with both civil liberties and media pluralism (229-230).

Given the evidence, sound arguments exist for all three of the analyzed factors – unsound economics doctrines, rampant corruption, and a lack of political accountability – having a harmful effect on the quality of governance in MENA countries, and thereby damaging economic growth. But at first glance at least, economic policy appears to be the largest culprit, given that it can be harmful not only in its own right, but can aggravate the other two factors. Considering the extent of the cultural roots of corruption in many MENA nations, it could be argued that the most effective solution for minimizing its economic impact is to migrate away from a centrally-planned economy, and thereby eliminating the power of fallible government officials to “manage” the economy. And to the extent that misguided economic policies can stunt socioeconomic development, they can also inhibit a variety of factors (higher education levels, a more developed civil society, greater exposure to the outside world) that serve to increase the demand for political reform. Thus, while the effects of an improved economic policy on the general quality of governance may vary tremendously from nation to nation, its positive ripple effects are likely to be considerable.

II. EMPIRICAL SPECIFICATION

The main focus of this section is to estimate the causal effect of governance on per capita income. The model is first estimated using Ordinary Least Squares (OLS) and Two-stages Least Squares (TSLS). The model is estimated using the cross-sectional data of the 197 countries in 2009. Next, the estimation results are used to interpret the relationship between governance and growth for 22 MENA¹ countries.

Following Kaufmann and Kraay (2002), equation (1) below provides a parsimonious specification of the model;

$$pgdp_i = \alpha + \beta gov_i + e_i, \quad (1)$$

Where *pgdp* is the log per capita income, *gov* is governance, *e* represents all the other factors not included in this parsimonious equation, and the subscript *i* represents the country being studied. The model is complemented by the following equation;

$$gov_i^* = gov_i + u_i \quad (2)$$

¹ Algeria, Bahrain, Cyprus, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, Turkey, United Arab Emirates, West Bank and Gaza, and Yemen.

Where gov^* refers to the observed governance (a noisy measure of actual governance) and u refers to the measurement error. The measurement error is assumed to have a zero mean and variance σ_u^2 .

The main aim of the above model is to estimate the long-run impact of governance on per capita income. The governance indicator covers the six main facets of governance: voice and accountability, political stability, government effectiveness, rule of law, regulatory quality, and control of corruption. Accordingly, equation (1) above is estimated six times - once for each type of governance.

The second part of the empirical model aims to estimate reverse causality, the impact of income per capita on governance. This relationship is represented by equation (3) as follows;

$$gov_i = \mu + \gamma \text{ pgdp}_i + \delta x_i + v_i \quad (3)$$

Where gov and pgdp are as defined above, and x represents geographic location measured in latitude. Similar to e in equation (1) above, v is the measurement error term with zero mean and a variance σ_v^2 and it captures all other factors not included in this simple parsimonious model. Following Kauffman and Kraay (2002), it is assumed that the error terms, or the omitted variables, of equations (1) and (3) could be correlated together such that $E[e.v] = \rho \cdot \sigma_e \cdot \sigma_v$, thereby allowing for the possibility that other factors affecting income per capita could be related with other factors affecting governance.

Finally, as in equation (2) above, the observed level of per capita income pgdp_i^* is a noisy measure of actual per capita income such that;

$$\text{pgdp}_i^* = \text{pgdp}_i + w_i \quad (4)$$

where w refers to the measurement error with zero mean and variance σ_w^2

The leading study by Acemoglu et al. (2001) uses settler mortality as an instrument for institutions, assuming high settler mortality in a country is an indication of bad institutions. Hall and Jones (1999) have used colonial origin, as measured by the percentage of the population speaking a major European language. Kaufman and Aaray (2002), in their sample of 156 countries, use tropical location and colonial origin to impute the missing values in Acemoglu's settler mortality data, which is only available for 56 countries. Moreover, Easterly and William (2002) find that tropical weather, germs, and crops have an indirect effect on development, which passes through to institutions.

Based on previous empirical literature on institutions, geographic location or tropical location is proven to be correlated with a country's level of governance, and can be assumed as an exogenous variable in equation (3), or not correlated with other factors affecting per capita GDP in

equation (1). Accordingly, without going through relevance and exogeneity tests, it is fair to assume that x is a valid instrument for governance.

III. DATA

The data set consists of cross-sectional observations for 197 countries, using the latest available data on governance in 2009. The parsimonious model under study includes economic growth as the dependent variable, measured as the log of per capita GDP (constant 2000 US\$), and taken from the World Development Indicators (WDI) data in the World Bank database. Data on the six measured areas of governance - voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and corruption - is taken from the Worldwide Governance Indicators (WGI) project (World Bank database), and constructed by Kaufman, Aary, and Massimo. Finally, data on latitudes was taken from the CEPII research center databases².

IV. ESTIMATION RESULTS

The main aim of the model represented in equation (1) is to estimate the impact of different areas of governance on economic growth. The equation was estimated six times, with the log of per capita GDP as the dependent variable in each instance, and the six types of governance as regressors, each one in a turn. Table (1) below shows the results of estimating equation (1) using both Ordinary Least Squares (OLS) and Two-stage Least Squares (TSLS).

In line with previous empirical research, our results confirm the positive impact of improving governance on the log of per capita GDP. All the coefficients show a positive and statistically significant impact of governance on economic growth. For instance, OLS Column (1) shows that a one standard deviation increase in the regulatory quality measure increases per capita income by nearly three-fold in the very long run. An impact of similar magnitude is shown for the rule of law measure on per capita income.

Using country latitudes as the selected instrument, Column (2) of Table (1) shows the results of the TSLS. Two things to notice about the results; first, the signs of all six governance measures are positive and statistically significant, confirming the results of the OLS. Secondly, in line with prior empirical literature such as Kaufmann and Kraay (2002), the estimated coefficients of the TSLS are larger than the OLS. For instance, using the TSLS, the impact of a one standard deviation increase in the rule of law measure leads to an eight-fold increase in per capita income in the very long run, as compared with only a three-fold increase using OLS.

Table 1: The Causal Effect of Governance on Income Per Capita

² Centre d'Etudes Prospectives et d'Informations Internationales (EPII) <http://www.cepii.fr/anglaisgraph/bdd/bdd.htm>

Regressors	Ordinary Least Squares (1)	Two-stage Least Squares (2)
Intercept	7.932 (0.091)	7.987 (0.199)
Voice and Accountability	0.992 (0.093)	3.422 (1.168)
No. of observation	189	189
R^2	0.38	0.38
Intercept	7.938 (0.091)	8.025 (0.248)
Political Stability	1.037 (0.095)	4.256 (1.789)
No. of observation	189	189
R^2	0.39	0.39
Intercept	7.883 (0.065)	7.880 (0.071)
Government Effectiveness	1.353 (0.067)	1.747 (0.217)
No. of observation	188	188
R^2	0.69	0.63
Intercept	7.868 (0.074)	7.859 (0.079)
Regulatory Quality	1.279 (0.077)	1.660 (0.230)
No. of observation	188	188
R^2	0.59	0.54
Intercept	7.929 (0.068)	7.936 (0.077)
Rule of Law	1.327 (0.070)	1.836 (0.244)
No. of observation	189	189
R^2	0.66	0.56
Intercept	7.894 (0.078)	7.891 (0.110)
Control of Corruption	1.178 (0.079)	2.242 (0.434)
No. of observation	188	188
R^2	0.55	0.10

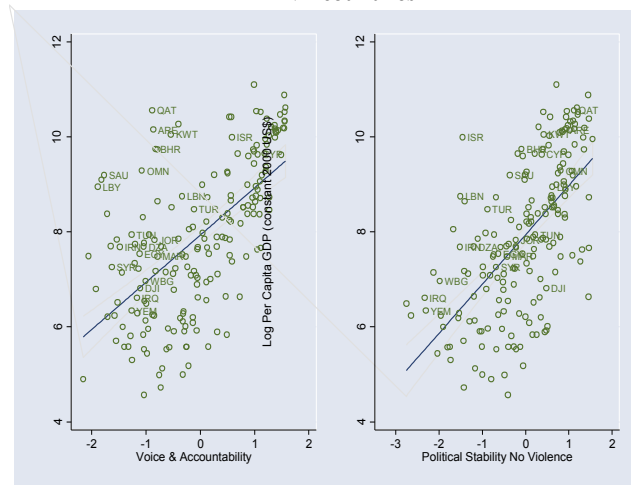
Notes: The dependent variable is log per capita GDP. The table summarizes the results of running six different regressions. The numbers in parentheses are the standard errors.

Figures 1 through 3 show the estimation of log per capita income regression on the six governance measures, with a 95% confidence interval. Regarding the voice and accountability measure, as is obvious from the graph to the left of Figure 1, nearly all MENA states lie above the average estimated income per capita for the countries in the sample. This is very obvious for countries such as Qatar, Bahrain, Kuwait, Oman, Libya, and Saudi Arabia. Few countries in the MENA region performed below the average for the 197 countries in the sample with regards to the voice and accountability measure. More specifically, only three countries out of the 22 MENA nations, namely Djibouti, Iraq, and Yemen, lie below the regression line. Similarly, with the exception of Djibouti and Yemen, most of the MENA states lie above the average political stability score for the 197 countries.

A striking fact about this figure is that, except for two

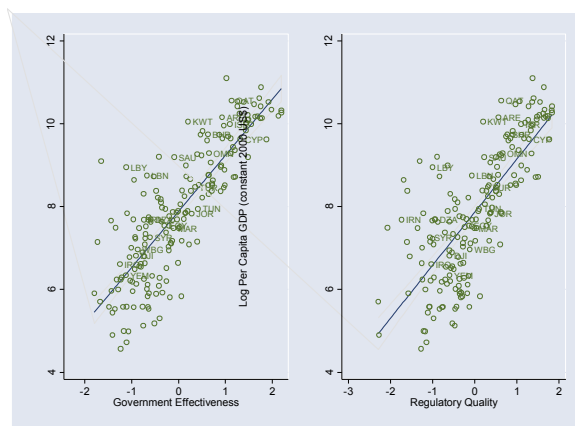
countries, Cyprus and Israel, all of the MENA states have a negative score in the voice and accountability measure. Moreover, except for Libya, Oman, Qatar, United Arab Emirates, all countries score near zero in the political stability/no violence measure. This finding suggests that the relatively high per capita income of many MENA countries is derived from sources other than firm governance.

Figure 1: Voice & Accountability and Political Stability
MENA countries



Regarding government effectiveness, Figure 2 demonstrates that, except for Cyprus, Jordan, Morocco, and Tunisia, every MENA state is on or above the fitted per capita regression line. Libya, with a low government effectiveness measure, turns in a per capita income way above the sample's average. Similarly, regarding the regulatory quality measure, Libya's per capita income measure is well above the sample's average, though Egypt, Tunisia, and Yemen's are below it.

Figure 2: Government Effectiveness and Regulatory Quality in
MENA countries

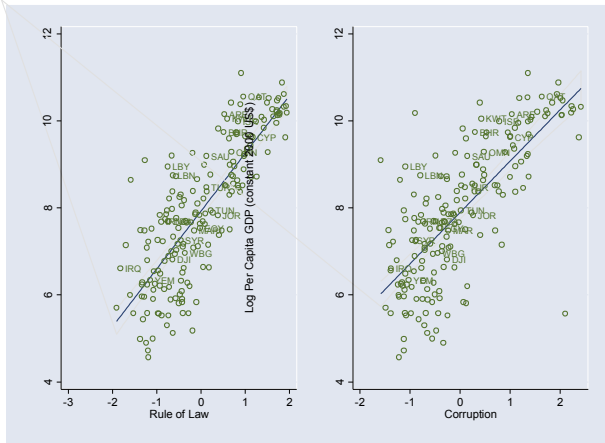


Next, regarding the performance of MENA countries in the rule of law measure, as is obvious from the left panel of Figure 3, in spite of only 8 countries in the MENA region

scoring above zero in the rule of law measure, the majority of these countries land above the fitted regression line. For example, Lebanon and Libya, with respective rule of law scores of only -0.63 and -0.75, are both well above the line.

Finally, despite the fact that almost half of all MENA countries perform poorly on the corruption measure, only five countries (Djibouti, Jordan, Morocco, West Bank and Gaza and Yemen) perform below the regression line.

Figure 3: Rule of Law and Corruption in MENA countries



The second part of estimating results involves the estimation of the reverse causality from per capita income to governance. The main idea behind this estimation is to check whether the increase in income can lead to an improvement in governance or not. By observing the performance of developed countries, for instance, it can be expected that countries able to achieve high income levels are also able to obtain high-quality governance.

Table 2: The Causal Effect of Income Per Capita on Governance

Dependent Variables	Ordinary Least Squares (1)	No. of Observations (2)	R ²
Voice and Accountability	0.380 (0.036)	189	0.38
Political Stability	0.377 (0.034)	189	0.39
Government Effectiveness	0.510 (0.025)	188	0.69
Regulatory Quality	0.465 (0.028)	188	0.59
Rule of Law	0.497 (0.026)	189	0.66
Control of Corruption	0.464 (0.031)	188	0.55

Notes: The table summarizes the results of running six different regressions. The numbers in parentheses are the standard errors.

Table 2 below shows the results of estimating equation (3) six times, with each governance indicator taking a turn as the dependent variable, and per capita income and latitude acting as independent variables. For the sake of brevity, column (1)

of the table below shows the estimates of γ in equation (3). As is obvious from the results, an increase in per capita income has a positive and a statistically significant impact on all governance measures. For instance, a one percent increase in per capita income leads to an increase of about 0.4 points in voice and accountability and political stability, and an increase of around 0.5 points in the government effectiveness, regulatory quality, rule of law, and corruption measures.

The results of the reverse causality suggests positive feedback exists from income to governance. An exogenous increase in income, from multilateral aid for instance, leads to better institutions. Thus, the results indicate the presence of “virtuous circles” in which economic development brings about better institutions.

It is important to note, however, that estimating the reverse causality robustly requires estimating equation (3) using instrumental variable regression. However, finding an instrument for per capita income is not an easy task, and there are no good instruments for income in the literature. To tackle the instrument problem, future extension of this study will follow Kaufmann and Kraay’s (2002) methodology to infer the slope of effect of income on governance indirectly, through comparison of OLS and IV results.

V. CONCLUSION

A variety of factors have been responsible for the failure of the governments of various MENA states to provide the kind of sound governance for their populations that can deliver strong economic growth and meaningful upward mobility. As previously noted, the largest of these factors include the implementation of misguided economic policies that distorted resource allocation; rampant corruption and cronyism; and a general lack of accountability caused in large part by a shortage of democracy and political freedom.

Nonetheless, in spite of these crippling factors, numerous MENA countries have estimated per capita income levels that are above the estimated average for the 197 countries in the sample. This implies that many MENA countries have achieved a relatively high standard of living for their citizens thanks to other factors, such as an abundance of natural resources. Libya, Saudi Arabia, Kuwait, Oman, Bahrain, and United Arab Emirates depend on oil exports as their main source of income. Meanwhile, major sources of income for Egypt include tourism, remittances from Egyptians working abroad, revenues from the Suez Canal, and oil. Progress towards the formation of democratic institutions that could produce greater government accountability, as well as a more stable foundation for an elevated standard of living, has been very slow in most MENA countries, with citizens enjoying relatively limited amount of social, economic and political freedom. A fragile standard of living, easily upended by economic shocks such as rising food costs, was a key factor behind the Tunisian, Egyptian, and Libyan uprisings.

The main implication of this study is that strong efforts are

needed within Middle Eastern and North African countries to improve the quality and effectiveness of regulatory mechanisms; to bring down corruption levels, to strengthen the rule of law, to achieve political stability and reduce internal violence; and to make governments more accountable to their own citizens. Furthermore, an exogenous increase in income – through multilateral aid, for instance – will feed in better governance. A future extension of this study will work on testing the robustness of the latter implication by calibrating the reverse causality regression, and comparing the results of the TSLS with the OLS.

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