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SCIENTIFIC ADVANCE AND THE EFFECTIVENESS OF DEMOCRACY IN MENA

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ABSTRACT

The study employs individual- level data on more than 6000 individuals from three countries in the MENA region to investigate the extent to which an individual's own perception about the importance of giving scientific and technological development in the near future impact their perceptions of the effectiveness of democracy and it reduces the desire for a rouge leader. We find a positive and strong relation between the perceptions regarding the importance of scientific and technological development, and the perceptions regarding the effectiveness of democracy in the whole region. The evidence of such relationship is much stronger in low democratic countries like Egypt, and Morocco than in a higher democratic country like Turkey. People's beliefs about the effectiveness of democracy as a system of governance are also shaped by more income equality, economic prosperity, and the level and satisfaction with household income especially in countries with low levels of democracy. The results suggest that there should be more emphasis on scientific and technological development in the near future in order to have _effective democracy in the low democratic countries in the region.

Keywords: Democracy, MENA Region, Scientific and Technological development, World values survey, Economic development.

1. INTRODUCTION

Perhaps one of the most robust and enduring empirical findings of post-World War two social sciences is the existence of a strong positive relationship between economic development and democratization.

Economists are increasingly interested in the analysis of the political determinants of economic development after the pioneering work by Barro (1996) that explores the causal linkages between long- run economic performance and features of government policy and institutions. The potential impact of economic development on the extent of democracy is an equally important research question, and whether an increase in income of a country causes its democracy to improve has been a subject of recent debate.

The calls for democracy in some countries in the MENA region have made some authors reject Huntingtonk's argument on the incompatibility of Islam and democracy for dead. Others have, particularly declared Lipset's classic modernization argument in relation with the Tunisian revolution, pointing to the relatively higher income level and the size of the middle class in that country. Revolutions in Libya, Syria and Yemen at their calls for democracy surprise many observers and political scientists, and questioned the sincerity of such calls regarding the future prospects of democratization efforts.

This paper aims to contribute to the literature on the determinants of democracy in MENA region. As the recent waves of revolutions and revolutionary attempts in this region have not only been important political events, they have also re-sparked old academic debates.

The study employs individual- level rather than country level data; however, it differs from previous work in an important way, the paper investigates the extent to which an individual's own opinion about the importance of giving more emphasis on scientific and technological development in the near future makes him/her more likely to reveal the effectiveness of democracy in his/her country.

Specifically, an increase in overall scientific advance may increase the individual's subjective probability of future prosperity & development, and increase in the level of per capita income in a country, and therefore it could in turn influence his/her propensity for satisfaction with democracy as a system of governance.

Model

The Basic model can be specified as follows [1]:

$D_{ict} = a0_{ict} + a1\ S\&TA_{ict} + a2\ X_{ict} + a3\ Y_{ict} + \varepsilon_{ict}$,

Where:

D_{ict}, measures individual i's propensity for happiness with democratic efficiency , who lives in country c, and surveyed in year t. It is observed to be equal to 1 when individual strongly or absolutely agrees that it is important for him or her to live in a democratic country, and zero otherwise.

When $D_{ict} > 0$ so that $(D_{ict}=1) = \text{Prob}\ (a0_{ict} + a1\ S\&TA_{ict} + a2\ X_{ict} + a3\ Y_{ict} + \varepsilon_{ict} > 0)$. If the error term ε_{ict} is normally distributed, then the result is a standard single-equation probit specification.

$a0_{ict}$, Differences across individuals with respect to their general attributes towards democracy. Larger values indicate higher propensity for dissatisfaction with democracy, this could be caused by differences in historical, cultural, and institutional differences between countries.

$S\&TA_{ict}$, measures individual i's propensity for happiness with scientific & technological development, who lives in country c, and surveyed in year t. It is observed to be equal to 1 when he/ or she agrees or strongly agrees that it is good to have more emphasis scientific and technological advance in the near future.

X_{ict}, stands for personal attributes of the individual, such as, gender, employment, marital status, the number of children, religion, the level of education, and the level &satisfaction with personal income.

Y_{ict}, stands for individual i's beliefs towards the importance of some characteristics of democracy such as income equality, and economic prosperity who lives in country c, and surveyed

in year t. It is observed to be equal to 1 when he/ or she strongly or absolutely agrees that it is important to have income equality, and economic prosperity.

Data

The primary data obtained from the (2005-2008) wave of the World Values Survey (WVS). We use micro data on 6000 individuals from three countries in the MENA region (Egypt, Morocco, and Turkey) [2].

The paper proceeds as follows: section one introduces the introduction of the study, a literature review of the impact of science and technology on democracy and the other determinants of democracy will be discussed in section two, Section three deals with the specification of the model and results of estimation, and finally section four gives the summary and conclusions of the study.

2. LITERATURE REVIEW

As noted above, the literature on determinants of democracy is large, and points to a vast set of quite different potential explanatory factors. We do not take aim to review the entire literature, but rather focus on some particularly important proposed explanatory factors and debates from the literature.

Economic factors are among the most studied potential determinants of democracy. There are two main open questions in the debate on the relationship between economic development and democratic institutions. One is whether or not countries become democratic only at higher levels of per capita income, and the second is whether or not democracy enhances economic development, captured by per capita GDP growth.[3]

On both questions there are disagreements amongst scholars. Most observers would agree that richer countries are democracies, as argued by Lipset (1959) famously argued that a high GDP per capita increased the probability of a country being democratic, and several later studies corroborated this result. Barro (1999), finds that the propensity for democracy rises with per capita GDP by using a panel data of over 100 countries from 1960 to 1995.

Minier (2001) also shows that an increase in per capita GDP is associated with an enhanced demand for democracy. Papaioannou and Siourounis (2008) report that economic development is a key factor determining the intensity of democratic reforms in a country.

However, Acemoglu *et al.* (2008) find insignificant impact of the level of income on democracy by adding country fixed effects in repeated cross- country regressions.

The modernization literature and other contributions point to a set of variables related to economic development, other than income level, that may be of particular relevance for democracy. First, as emphasized by Lipset (1959) a high level of education and an enlarged middle class are key elements to democracy; see also Almond and Verba (1963), and Diamond (1992).

Second, Industrialization and the transformation of a country from an agrarian to a manufacturing and trading one, generates social differentiation, as specified by Rueschemeyer *et al.* (1992). Other potentially important modernization variables are related to communications infrastructure, which allows for rapid diffusion of ideas and information across and within borders, perhaps enhancing the prospects of democracy as noted by Diamond (2008).

Also short-term economic fluctuations may impact movements against existing undemocratic regimes that experienced a decreasing GDP per capita in the previous year were much more likely to fall than those experiencing positive economic growth, see for example Prezworski *et al.* (1996).

Income inequality may also affect regime change and stability, for example Boix (2003), argues that a decrease in economic inequality leads to a higher probability of democratization, since the rich will have less to lose from taxation in relatively equal societies. Acemoglu and Robinson (2000) find that in unequal societies on the other hand, the poor have much to gain from democratization, and the rich are not able to credibly commit to redistribution in the future under dictatorship.

Others like Houle (2009) finds no clear effect of inequality on the probability of democratization, and finds evidence indicating that low inequality stabilizes existing democracies. Altindag and Mocan (2010), find that personal joblessness experience translates into negative opinions about the effectiveness of democracy; they also find evidence that people's beliefs about the effectiveness of democracy as a system of governance are also shaped by the unemployment rate in countries with low levels of democracy.

Also different types of non-economic factors such as values, or other cultural traits, having important impact on democratization as specified by Almond and Verba (1963), and more recently by Inglehart and Welzel (2006). Huntington (1996) argues that Islamic, and Catholicism countries are less susceptible to democracy compared with Protestantism, also Treisman (2000) show that in religions such as Protestantism religion, there may be stronger emphasis on monitoring potential abuses of state officials than in more traditional religions such as Islam or Catholicism.

The ethnic fractionalization structure of a country may also impact the country's regime type. Lijphart (1999) emphasizes that various types of heterogeneity in the population, among them ethnic, linguistic and religious heterogeneity, is an importation determinant of the design of political institutions and regime type.

3. MODEL DESCRIPTION AND ESTIMATION

Descriptive statistics are provided in Table 1. The two dependent variables are democracy is important for the economy, and Rogue Leader is bad for governing the economy. Democracy is important for the economy takes the value of 1 if the respondent strongly or absolutely agrees with the statement that" It is important to live in a country that is governed democratically", and zero if the respondent disagrees or strongly disagrees. Rouge Leader is bad takes the value of 1 if the respondent indicated that "Having a strong leader who does not have to bother with parliament and elections" is very bad or fairly bad; and zero if the respondent replied that such a leader is good or very good.

Scientific Advance: takes the value of 1 if the respondent agrees with the statement that "it is good to have more emphasis on the development of technology in the near future", and zero if the respondent replied that he /she doesn't mind with such development or it is bad.

Income: takes the value of 1 if the respondent earns a middle or high income, this is if he/she codes from five (moderate decile) to ten (highest decile), and zero otherwise. The study uses also another indicator to estimate the impact of income which is the satisfaction with income position,

which takes the value of 1 if the individual strongly or absolutely, satisfied with his/her financial position, and zero otherwise.

Education Level: Low Education takes the value of 1 if the person has completed at most elementary education, but has not completed a technical or vocational training, and zero otherwise, Middle Education takes the value of 1 if the individual completed the secondary education but has not completed the tertiary education, and it is zero otherwise. The indicator variable High Education is equal to 1 if the respondent has a university degree, or some university-level education, without degree, and zero otherwise.

Economic Fluctuations: takes the value of 1 if the respondent strongly or absolutely agrees that "The economy is prospering" is an essential characteristic of democracy, and zero otherwise.

Income Equality: takes the value of 1 if the respondent strongly or absolutely agrees that "Governments tax the rich and subsidize the poor" is an essential characteristic of democracy, and zero otherwise.

Family characteristics of the individuals are captured by dummies for martial status, sex, and the number of children. Specifically, we categorized individuals into three groups according to their martial status: Single, Married, and Divorced/Widowed, where Divorced/Widowed includes those who are separated. The study uses dummy variable for female, and male. Similarly, we use dummy variable for those who have children.

Jobless: takes the value of 1 if the respondent is unemployed, and zero otherwise.

Religion: religion is a major part of culture; the study uses dummy variables for Islam, and Eastern Orthodoxy& Catholic religions. As the recent waves of revolutions and revolutionary attempts in the region in which most of its citizens are Muslims or Orthodox and Catholics.

Table- 1. Summary Statistics and Description

Variable		Description	Mean	std Dev
Democracy is important For the economy	=	1 if the individual strongly or absolutely agrees that it is important to live in a country that is governed democratically	0.93	0. 259
Rogue Leader is Bad for Governing he economy	=	1 if the individual strongly or absolutely agrees that a strong leader who does not have to bother with parliament and elections is bad or very bad for governing the country	0.74	0.439
Scientific and Technological advance	=	1 if the individual strongly or absolutely agrees that there should be more emphasis On the development of technology	0.78	0.417
Male		Dummy for Males.	0.55	0.497
Female		Dummy for Females	0.45	0.497
Income	=	1 if the individual strongly or absolutely Satisfied with his /or her financial situation	0.34	0.473
Medium and High income		Dummy for medium and high income.	0.20	0.402
Economic Fluctuations	=	1 if the individual strongly or absolutely agrees that to have democracy in any economy it should be prospering	0.86	0.347
Income equality	=	1 If the individual strongly or absolutely agrees that to have democracy in any economy , the government should tax the rich and subsidize the	0.78	0.413

		poor		
Single	=	1 if the individual is single	0.22	0.414
Married	=	1 if the individual is married or living together with a partner	0.69	0.463
Divorced	=	1 if the individual is divorced or widowed	0.09	0.286
Having Children		Dummy for one or more children	0.78	0.417
Low Education	=	1 if the individual hasn't completed or fully completed elementary education or hasn't adequately completed secondary school	0.52	0.500
Middle Education	=	1 if the individual has completed secondary school but not tertiary	0.34	0.474
High Education	=	1 if the individual has completed tertiary education in full or in part	0.14	0.346
Unemployment	=	1 if the individual is unemployed	0.47	0.499
Muslim	=	1 if the individual is Muslim	0.97	0.183
Orthodox or Catholic	=	1 if the individual is Orthodox Or Catholic	0.00	0.042

-Sources of the variables used are from the World Values Survey wave (2005-2008).

- Numbers of non-missing observations for the dependent variables "Democracy is important", "Rogue Leader is bad" are 4844, and 4685, respectively.

3.1. Results

Table 2 displays the marginal effect obtained from estimation of eq.1 using probit regression, standard errors are reported in parentheses.

Column (1) reports the results of the model where the dependent variable is whether the respondent believes that democracy is important for governing the economy. The second column displays the results of the model where the dependent variable is whether the respondent believes that a strong leader who does not bother with parliament and elections is bad or very bad for the country.

Column (1) demonstrates that if the individual aggress that it is good to have more emphasis on the development of technology in the near future is associated with about a 17 percentage point increase in the propensity to declare that democracy is important for the economy. Similarly, column 2 shows that if the individual aggress that it is good to have more emphasis on the development of technology in the near future is associated with about a 31 percentage point increase in the propensity to declare that a rogue leader is bad or very bad for managing the country. Consistent with our expectations, the coefficients of scientific advance in the two models are estimated to be positive and highly significant, indicating that perceptions about the importance of scientific advance and technological development have a positive, and strong impact on perceptions of the effectiveness of democracy.

Individuals who are strongly or absolutely satisfied with their financial position are from almost 11(model 2) to 37(model 1) percentage points likely to reveal positive feelings towards the efficiency of democracy, the coefficients of the satisfaction with financial position are positive and significant in the two models. Also individuals who earn middle or high income are from almost 1 (model 2) to 19(model 1) percentage points likely to reveal positive feelings towards the effectiveness of democracy, coefficients in the two models are also positive and significant.

Individuals who are strongly or absolutely agree that the government should tax the rich and subsidize the poor is important to have democracy in a country display positive feelings towards the effectiveness of democracy, coefficients are almost 12 percentage points in the two models and they are also significant .

The same is true for individuals who are strongly or absolutely agree that it is important for the economy to be prospering to have democracy display positive feelings towards democracy , coefficients are positive and range from 8 to 65 percentage points , the coefficient for this variable is only highly significant in the first model.

Education of the individuals has a significantly negative impact on the propensity to have positive feeling towards democracy. Specifically, those who completed secondary school or attend college are about 16 to 40 percentage points less likely to disagree that democracies are important for the economy in comparison to those who have elementary school education or less, thus all coefficients of education are negative and significant, they are highly significant for low education individuals.

There is interesting result obtained from the Islamic [4], Catholism&, and Orthodoxy religions, the study finds a negative and low significant feelings of Muslims , but positive and low significant feelings of Catholics and orthodox towards democracy , and this may contradict with Huntington (1996), and Treisman (2000), as they argues that Islamic, and Catholicism countries are less susceptible to democracy compared with Protestantism.

Being single or married is correlated with negative and significant feelings toward democracy; the same is true for males, divorced, and unemployed, or having children but without a significant impact. The coefficients of higher education and female are equal to zero in the two models. As will be discussed below their impact will not change direction if the models are estimated for each country.

Table-2. Influence of Scientific Advance on perceptions about performance of Democracy

	Democracy is important for the economy	**Rogue Leader is bad**
Scientific Advance	0.171*** (0.064)	0.307*** (0.046)
Single	-3.443*** (0.173)	-5.959*** (0.110)
Married	-3.262*** (0.106)	-6.181*** (0.070)
Divorced	-3.110 (000)	-6.253 (000)
Having Children	-0.130 (0.133)	-0.019 (0.083)
Satisfaction with Financial position	0.374*** (0.073)	0.106** (0.046)

Income Equality	0.123*	0.122*
	(0.068)	(0.049)
Economic prosperity	0.651***	0.081
	(0.069)	(0.058)
Muslim	-1.382*	0.450
	(0.641)	(0.299)
Catholic & Orthodox	1.321*	0.409
	(0.609)	(0.299)
Male	-0.108	-0.048
	(0.069)	(0.047)
Low Education	-0.472***	-0.266***
	(0.124)	(0.070)
Middle Education	-0.402***	-0.156*
	(0.123)	(0.069)
Jobless	-0.106	-0.035
	(0.069)	(0.047)
Middle and High Income	(0.191)*	0.097*
	(0.078)	(0.054)

The dependent variables, listed at the top of rows 1 and 2, take the value of 1 if the individual strongly or absolutely agrees that democracy is important for governing the economy, and a strong leader is bad or very bad to manage the country respectively. The descriptions of the other variables are presented in Table 1. ***, **,* indicate significance at the 1%, 5%, and 10% levels, respectively. Standards errors are reported in parentheses.

It is plausible that the impact of individuals' perceptions towards the importance of scientific advance and technological development on their beliefs about the effectiveness of democracy is different in countries with high levels of democracy in comparison to countries with a lower level of democracy. Therefore, we estimated the models separately for countries with high levels of democracy countries (Turkey), and for countries that have a lower level of democracy (Egypt, and Morocco). The results are presented in Tables from (3-5).

As Expected there are differences in the results that are obtained from high level of democracy (Turkey), and countries with low levels of democracy (Egypt, and Morocco) with respect to the impact of scientific advance. Scientific Advance has a positive and strong impact on the feelings toward democracy for people in countries where the level of democracy is low (Tables4, and 5). While the scientific and technological development has a positive and weak (or even negative) impact on people's feelings towards the effectiveness of democracy in countries where the level of democracy is higher (Turkey).

There are also interesting contrasts between the results obtained from the two groups of countries. The Islamic religion has almost a positive impact on the feelings towards the effectiveness of democracy for people in the countries with low levels of democracy; it has a weak positive impact in Egypt, while it has some negative impact on people's beliefs toward democracy

in Turkey. The Catholism religion has a negative and insignificant impact on people's beliefs towards democracy in the two groups of countries.

There are some commonalities in the results obtained from education of the individuals in the two groups of countries which has a significantly negative impact on the propensity to have positive feeling towards democracy, we only find a positive and strong impact of middle and low education on the effectiveness of democracy in Turkey (model 2) [5]. The same commonalities could be found with respect to being single or married which is correlated with negative and significant feelings toward democracy; the same is true for those being divorced, and unemployed, or having children but without a significant impact.

Individuals who are Satisfied with their financial position , and those who earn middle or high income have positive and strong beliefs towards the effectiveness of democracy in low level of democracy countries (Egypt, and Morocco). The impact is similar in Turkey but it is slightly weaker. The same result is found with respect to income equality and economic prosperity, more specifically in Egypt, and Morocco people strongly agree that the government should tax the rich and subsidies the poor is an important characteristic of democracy; they also agree that the economic prosperity is an important characteristic of democracy more than in Turkey.

This means that in countries with low level of democracy, positive feelings towards the effectiveness of democracy can only be achieved with an increase in scientific and technological development, with more income equality, economic prosperity, and increase in household income in comparison to countries with higher level of democracy in the region.

Table-3. Influence of Scientific Advance on perceptions about performance of Democracy in Turkey

	Democracy is important for the economy	**Rogue Leader is bad**
Scientific Advance	0.316* (0.132)	-0.012 (0.090)
Single	-3.318*** (0.380)	-5.949*** (0.259)
Married	-3.315*** (0.272)	-5.989*** (0.209)
Divorced	-3.6-7 (000)	-6.016 (000)
Having Children	-0.083 (0.265)	0.068 (0.157)
Satisfaction with Financial position	0.371** (0.140)	0.084 (0.083)
Income Equality	0.150 (0.133)	0.289** (0.089)

Economic prosperity	0.790*** (0.143)	-0.344** (0.122)
Muslim	-4.110 (000)	0.335 (0.367)
Catholic & Orthodox	000 (000)	000 (000)
Male	0.191 (0.148)	-0.0.153* (0.090)
Low Education	-0.527* (0.0.284))	0.381** (0.143)
Middle Education	-0.550* (0.123)	0.392** (0.132)
Jobless	-0.182 (0.156)	-0.240* (0.095)
Middle and High Income	-0.276 (0.170)	0.110 (0.108)
Observations	1215	1073

The dependent variables, listed at the top of rows 1 and 2, take the value of 1 if the individual strongly or absolutely agrees that democracy is important for governing the economy, and a strong leader is bad or very bad to manage the country respectively. The descriptions of the other variables are presented in Table 1. ***, **,* indicate significance at the 1%, 5%, and 10% levels, respectively. Standards errors are reported in parentheses.

Table-4. Influence of Scientific Advance on perceptions about performance of Democracy in Egypt

	Democracy is important for the economy	**Rogue Leader is bad**
Scientific Advance	0.092* (0.087)	0.376*** (0.065)
Single	-3.98* (0.216)	-0.012 (0.165)
Married	-0.137 (0.123)	0.073 (0.087)
Divorced	000 (000)	000 (000)
Having Children	-0.078 (0.162)	-0.205* (0.122)
Satisfaction with Financial position	0.333*** (0.096)	0.167* (0.069)

Income Equality	0.249** (0.097)	0.204** (0.078)
Economic prosperity	0.593*** (0.097)	0.267*** (0.080)
Muslim	0.024* (0.012)	0.009 (0.007)
Catholic & Orthodox	000 (000)	000 (000)
Male	0.095 (0.101)	0.0094 (0.007)
Low Education	-0.467*** (0.0.284)	-0.138 (0.100)
Middle Education	-0.411** (0.146)	-0.063 (0. 097)
Jobless	-0.082 (0.103)	-0.007 (0.076)
Middle and High Income	0.061 (0.546)	0.112 (0.080)
Observations	2966	2923

The dependent variables, listed at the top of rows 1 and 2, take the value of 1 if the individual strongly or absolutely agrees that democracy is important for governing the economy, and a strong leader is bad or very bad to manage the country respectively. The descriptions of the other variables are presented in Table 1. ***, **,* indicate significance at the 1%, 5%, and 10% levels, respectively. Standards errors are reported in parentheses.

Table-5. Influence of Scientific Advance on perceptions about performance of Democracy in Morocco

	Democracy is important for the economy	**Rogue Leader is bad**
Scientific Advance	0.243* (0.145)	0.372*** (0.116)
Single	-1.619* (0.687)	0.233 (0.360)
Married	-0.711* (0.344)	0.149 (0.0.192)
Divorced	000 (000)	000 (000)
Having Children	-0.954 (0.597)	-0.076 (0.299)

Satisfaction with Financial position	0.444* (0.236)	0.198 (0.171)
Income Equality	0.111** (0.156)	0.263** (0.216)
Economic prosperity	0.641*** (0.162)	0.551*** (0.153)
Muslim	3.071 (4.365)	7.596 (000)
Catholic & Orthodox	-3.013 (4.250)	-7.179 (000)
Male	0.052 (0.142)	0.034 (0.111)
Low Education	-5.361*** (0.187)	-0.348 (0.279)
Middle Education	-5.147 (000)	-0.212 (0.291)
Jobless	-0.060 (0.219)	-0.189 (0.168)
Middle and High Income	0.047 (0.162)	0.560*** (0.130)
Observations	665	691

The dependent variables, listed at the top of rows 1 and 2, take the value of 1 if the individual strongly or absolutely agrees that democracy is important for governing the economy, and a strong leader is bad or very bad to manage the country respectively. The descriptions of the other variables are presented in Table 1. ***, **,* indicate significance at the 1%, 5%, and 10% levels, respectively. Standards errors are reported in parentheses.

4. SUMMARY AND CONCLUSIONS

This paper employs micro data on more than 6000 individuals from three countries in the MENA region to investigate the relationship between personal perceptions of the importance of scientific and technological development and personal perceptions towards the effectiveness of democracy.

We find a positive and strong relation between the perceptions regarding the importance of scientific and technological development, and the perceptions regarding the effectiveness of democracy in the whole region. The evidence of such relationship is much stronger in low democratic countries like Egypt, and Morocco than in a higher democratic country like Turkey.

The results underline the importance of science and technology to policy makers in developing countries, especially in MENA region, as nowadays some of these countries are struggling and in their ongoing movements towards democracy. We also find that not only scientific advance and

technological development are very important for the effectiveness of democracy; there are other important determinants of the effectiveness of democracy as household income, income equality, and income prosperity.

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[1] This study employs the same model and methodology applied in Altindag and Mocan (2010) but with some modification to suit the purpose of this study.

[2] The Data on World Value Survey was not available for the other countries in the MENA region such as Saudi Arabia, Iran, Jordan, Algeria, and Iraq.

[3]On the second question the evidence is mixed, for example Barro (1996), argues that a more democratic regime stimulates economic growth when the level of political freedom is low. In the same paper Barro identifies a nonlinear impact of democracy, and democracy hinders growth because it encourages redistribution of income from the rich to the poor and may enhance the power of interest groups.

[4]It is important to note that the Islam-democracy relationship is more complex than what the limited number of arguments presented here suggest. Many Islamic scholars would argue that Islam promotes democracy; the direction of the relationship posited here seems to hold in the data.

[5] The empirical results of the impact of education on the effectiveness of democracy turn out to be different than those results in previous studies. this might be due to the inefficient educational system especially in low democratic countries like Egypt, and Morocco, that needs to be changed and more devoted to the awareness of the importance of democracy.

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