ERF 2020
26TH Annual
Conference

Oil Curse, Islamic Constitutions, and Democracy

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ECONOMIC RESEARCH FORUM
منتدى البحوث الاقتصادية

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Preliminary draft

This version: 4 December 2019

Abstract

There is an ongoing debate on the relationship between Islam, oil wealth and (lack of) democratization. Considerable literature shows that Islam, represented as an informal institution by Muslim population share, has a negative effect on democracy, especially in oil-rich economics. This study examines the effects of formal institutions, specifically constitutions that prescribe *Shari'a* law as a source of legislation, on democracy. We use a newly developed coding of the degree to which Islam is incorporated in constitutions. Our empirical results show the constitutional entrenchment of Islamic supreme values significantly and negatively affects democracy. This relation remains robust when controlling for other variables, including Muslim population share, oil and gas rents, and per capita GDP. We argue that Islamic constitutionalism, and not oil curse, is the reason for democracy deficit in Muslim-majority countries. Instrumental variable regressions support our hypothesis. However, we find no evidence that Islam is inimical to democracy when not entrenched in the constitution.

Keywords: Oil curse, democracy, institutions, Islam, Islamic constitutions.

JEL: O11, P16, P48, Z12

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1. Introduction

Hundreds of studies show that natural resource income significantly affects social, economic, and political outcomes (Ross, 2012). This effect is most apparent in the case of oil-dependent economies, which suffers from a so-called "oil curse" (Ross, 2001; 2012; van der Ploeg, 2011). A particular relationship has received much attention in academic literature is that of oil wealth and autocratic rule, particularly in the Middle East (Beblawi, 1987; Bellin, 1994; Chaudhry, 1997; Vandewalle, 1998).

A large body of empirical literature studies this relationship, starting from the works of Barro (1999) and Ross (2001). The evidence that more oil wealth is associated with less democracy has been replicated many times, using various datasets and more sophisticated methods (Ross, 2015). Recent studies find the relationship robust using country fixed effects (Andersen & Ross, 2013; Aslaksen, 2010; Tsui, 2011) and instrumental variables (Ramsay, 2011; Tsui, 2011). A meta-analysis of the oil–democracy question has been conducted using the results of 29 studies and 246 empirical estimates, finds that oil had a significant negative, nontrivial, and robust effect on democracy (Ahmadov, 2014).

There are two essential arguments in this literature; first, oil allows rulers the luxury of staying in office rather than making progressive policies that increase the chances of economic development and democratization. Second, under rentier state theory, oil, and minerals in general, tends to generate rents and these rents are largely captured by states via export taxes, corporate taxes and state-owned enterprises, while employing relatively little labor. Comparatively, the exports of agricultural commodities will not have consequences on democracy as they do not generate rents, the export revenues usually go directly to private actors, rather than to the state and the agricultural production is more labor intensive, employing a larger fraction of the population (Prichard, Salardi, & Segal, 2018; Ross, 2001; 2012; Ulfelder, 2007). Consequently, it is expected that oil wealth negatively correlates with democracy in the so-called "rentier states".

This relationship seems to be most robust in Middle Eastern Arab countries (El Badawi & Makdisi, 2007; Stepan & Robertson, 2003; Weiffen, 2008). Arabian Gulf countries have been coined the "archetypal candidates" (Niblock & Malik, 2007, p. 15) that together represent the standard "par excellence" of resource-rich rentier states (Beblawi, 1990, p. 89). The absence of

democratic processes and institutions is a direct outcome of 'rentierism' according to a range of observers (Crystal, 1990; Luciani, 1990; Sandbakken, 2006).

Alternatively, other studies show that the real culprit for the lack of democratic institutions in the oil-rich Middle East is Islam and its deep institutional factors that precede the importance of oil (Donno & Russett, 2004; Fish, 2002; 2011; Lust, 2011; Norris, 2013). Numerous studies find that Islam is inherently incompatible with democracy, judging from the (usual) low scores of democracy recorded by Muslim-majority countries (Huntington, 1996; Lewis, 1993; Fukuyama, 1992). It has been a common practice in empirical research examining Islam and democracy to measure Islam by Muslim population share (Barro, 1999; Fish, 2002; Potrafke, 2012; 2013; Hanusch, 2013). Some authors control for the level of religiosity of Muslim population (Ciftci, Wuthrich, & Shamaileh, 2019; Collins & Owen, 2012; Tessler, 2002).

From an institutional perspective, religious belief is usually considered an informal institution (Casson, Della Giusta, & Kambhampati, 2010; Domjahn, 2012; Iyer, 2018; Pejovich, 1999). Yet, religious provisions in constitutions are considered formal institutions (Gouda & Gutmann, 2019), as religion is coded and administrated under constitutional authority. There is hardly any research on the effect of Islam on democracy, when Islam is manifested as a formal institution.

According to Lombardi (2013), many Muslim countries have since 1950 enacted constitutions containing provisions that declare Islam to be a chief source of legislation. The wording of these provisions differs in subtle but consequential ways. Islamic constitutions use multiple terms to describe the extent to which Islamic norms serve as a source of formal state law. Moreover, these constitutions characterize the degree of supremacy of Islam in different ways. Most clauses describe Islamic norms either as "a chief source of legislation" or as "the chief source of legislation".[1]

This study examines the effect of formal institutions, i.e. constitutional provisions, on democracy in societies with a significant share of Muslims. We hypothesize that, regardless of oil wealth, countries in which the supreme values of Islam are entrenched in the constitution tends to have weaker democratic institutions than otherwise comparable countries, as such values not only are declared to be beyond question, but all other goals and values also are subordinated

[1] See Ahmed and Gouda (2015) for a more detailed discussion.

(Bernholz, 1991). We use provisions regarding Islam-source-of-legislation and the degree of supremacy-of-Islam as proxies for the level of 'Islamicity' of constitutions. The study follows previous work by Gouda and Potrafke (2015), as well as Gouda and Gutmann (2019). Both aforementioned studies use Islamic constitutional provisions as their main independent variables. Gouda and Potrafke (2015) shows that discrimination against women is more pronounced in countries where *Shari'a* is the source of legislation, while Gouda and Gutmann (2019) finds that countries in which the supreme values of Islam are embedded in the constitution exhibit more discrimination against religious minorities than otherwise comparable countries.

Our results show that the constitutional entrenchment of Islamic law significantly and negatively affects democracy. The effect is robust when controlling for other variables, including alternative measures of natural resource rents and Muslim population share. Furthermore, the effect is robust to using alternative estimation models and alternative measures of democracy as dependent variable. In contrast to this, we do not find the negative effect of natural resource rents on democracy to be robust.

There are several advantages for our approach; empirical research on Islam and democracy tends to prioritize informal institutions, as demonstrated by religious Muslim population in a given society. In practice, formal and informal rules and norms could be complementary, competing or overlapping (Jütting, Drechsler, Bartsch, & de Soysa, 2007). Our study adds a new important dimension in analyzing Islam and democracy, as we examine Islam as a formal institution represented in constitutions of our given sample.

Second, although many studies claim that constitutions matter in shaping the social, political, and economic outcomes in respective societies (Brennan & Buchanan, 1981; North & Weingast, 1989; Voigt, 2011), our study is the first to analyze the effects of Islamic constitutional provisions on democracy, especially in oil-rich economies. Our approach allows us to evaluate hypotheses like that of Ahmed and Ginsburg (2014), who propose that the constitutional incorporation of Islam, or Islamic constitutionalism, is compatible with the fundamental principles of democracy.

Third, we contribute to the conflicting literature on the effect of oil dependency on democracy in Muslim-majority countries. We show that oil curse may be overly exaggerated and that Islamic formal institutions may be the main reason behind democracy deficit in Muslim countries.

Finally, we add to the small literature on supreme values (Bernholz, 2017) by testing the hypothesis that constitutionally entrenched supreme values – in our case Islamic supreme values – are an essential factor behind the democracy deficit in oil-rich economics.

Section 2 presents our theory and hypotheses. Section 3 describes the data. Section 4 presents the empirical model, regression results and robustness checks. Section 5 concludes.

2. Oil, Islam and democracy

It is noticeable that many of the countries that suffer from oil curse are Muslim-majority countries where Islamic *Shari'a* law is applied. Ahmed and Gouda (2015) construct an Islamic Constitutions Index (ICI), which measures the level of 'Islamicity' in the constitutions of members of organization of Islamic cooperation. They show that Iran and Saudi Arabia are the highest countries in the entrenchment of Islam in their constitutions (2015, p. 52). In fact, all Muslim-majority member countries of the Organization of the Petroleum Exporting Countries (OPEC) have a significantly higher entrenchment of *Shari'a* in their constitutions than those of other Muslim-majority countries.

In an op-ed published in the New York Times, Thomas Friedman (2012) proposes that oil wealth is used a vehicle for political Islam to dominate Muslim-majority countries. Friedman argues that Islam is an obstacle to democracy and political freedom. He states that countries which strictly apply *Shari'a*, namely Iran and Saudi Arabia, "were able to have their ideology and the fruits of modernity, too, because they had vast oil wealth to buy off any contradictions" (2012, p. A27). This observation is backed by several empirical studies (Donno & Russett, 2004; Fish, 2002; 2011; Lust, 2011; Norris, 2013). Rowley and Smith (2009, p. 298) state that democratic deficits in the Muslim world "appear to have something to do with the nature of Islam itself." In fact, several studies point out that oil rich Islamic countries were largely autocratic long before the discovery of oil (Chaney, Democratic change in the Arab world, past and present, 2012; Foley, 2010, pp. 23-24; Rørbæk, 2016).

However, as most empirical studies use Muslim population share as a proxy for Islam, it is not clear how this population share might be transmitted to be of significant and negative effect on democracy in their given societies. The most common argument provided in relevant literature

is that the Islamic cultural tradition, represented by Muslim population, is adversary to democracy (e.g. (Fish, 2002; Donno & Russett, 2004). Nevertheless, these important studies lack a cohesive narrative where the transmission mechanism from Muslim population to lack of democracy is clear and logical. How would the share of Muslim population affect autocratic regimes? How would an increase in the percentage of Muslims in a given society affect governmental policies that might be perceived as autocratic? Is this hypothesized effect true in any society regardless of the type of sect (Sunni or Shiite) and jurisprudence school that Muslims adhere to? These are all questions that are left with no clear and definite answer.

Adding another piece to the puzzle, considerable literature shows that Muslims expresses broad support for democracy (Jamal, 2006; Pew Research Center, 2012; 2013; Rowley & Smith, 2009), and that Muslims attitudes towards democracy minimally differ from non-Muslims (Norris, 1999; Norris & Inglehart, 2003). These findings significantly contradict the findings of empirical literature on Islam and democracy, casting a shadow of doubt over the theoretical framework used previously. To sum up, while we acknowledge the findings of most previous studies, we believe that Muslim culture, and not Islamic law per se, was the suspected cause for democracy deficit so far.

From an institutional perspective, previous literature has been perceiving Islam as an informal institution. Our study, on the contrary, is proposing that Islam plays a significant role as a formal institution, entrenched within the constitutions of Islamic countries. The prevalence and influence of constitutional provisions that declare *Shari'a* to be a source of legislation is supremely important for constitutional design in Muslim countries (Gouda & Gutmann, 2019; Gouda & Potrafke, 2015). Constitutions in Muslim-majority countries use multiple terms to describe the extent to which Islamic norms serve as a source of formal state law. It is expected that constitutions where Islamic *Shari'a* is declared the sole source of legislation, to give way to more "Islamization" of legislation and judication than in constitutions where Islam plays a minor role or even no role at all. An-Na'im (1996; 2009) argues that the strict application of *Shari'a* would have a negative effect on democratic institutions in a given society.

The institutionalization of *Shari'a* in constitutions leads to the entrenchment of Islam as a supreme value. Supreme values refer to an aim or a set of aims lexicographically preferred by people adhering to these aims to all other aims (Bernholz, 2004; Hillman, 2019). An essential feature of supreme values is that they are absolutely true for adherents and are, thus, not open

to question by others (Bernholz, 1991). This features specially manifests in supreme values stemming from religious ideologies. Bernholz (2004, p. 318) adds that supreme values are considered by adherents as self-evident and that those who doubts the absolute truth of supreme values are either sinners or hateful *pagan* enemies.

As for the relationship between supreme values and democracy, Bernholz (2004, p. 326) argues that adherents of supreme values tolerate, and essentially take advantage of, democratic rule and institutions only to fulfill their believed divine commands. Thus, democracy is only desired if it allows the fulfillment of supreme values. In fact, supreme values give way to a totalitarian regime characterized by extensive political repression, absolute control over the economy, restriction of speech, and widespread use of state terrorism (Bernholz, 2017). A totalitarian state recognizes no limits to its authority in any sphere of life, whether it is public or private, secular or spiritual, and which extends that authority to whatever length feasible (Bernholz, 2017, p. 3; Conquest, 2001). A constitution of totalitarianism is not derived from and legitimized by the free choice of sovereign, autonomous citizens. The legitimacy and laws of this constitutions stems from supreme values which transcend individual freedom and individual preferences (Bernholz, 1991).

According to Bernholz (2017, p. 20), Islam is characterized by supreme values that are preferred lexicographically to all other objectives and considered to be absolutely true. Moreover, Islam is characterized by a legal system "deriving its status from supreme values and with a permanent nature of basic rules and thus of a constitutional nature; a definition of members of the community; a different legal status for nonmembers; legal obligations and duties of members in the service of supreme values; a neutral domain, not covered by laws derived from supreme values, within which members are free to take their own decisions" (Bernholz, 2017, p. 54).

Considerable literature argues that the values propagated by political Islam are not conducive to the establishment of the essential institutional pillars of a free and democratic society (Facchini, 2010; Hillman & Potrafke, 2018; Voigt, 2005). Islamic constitutionalism significantly contradicts with foundations of rule of law and democracy (Gouda, 2013; Gutmann & Voigt, The Rule of Law and Constitutionalism in Muslim Countries, 2015). Bernholz (2004, p. 332) states that, "The very values of western democracies contradict the supreme values of Islam, including the idea of a secular, non-theocratic democracy itself, and the freedom of women to participate equally in a society." Bernholz's (2017) depiction of Islamic supreme

values clearly is totalitarian and without considerable merits for democracy from the normative perspective of Western liberalism in general.

Based on the above arguments, we postulate our hypothesis in two versions:
H1a: Regardless of oil wealth, prescribing Islamic law (Sharia) as a source of legislation in the constitution negatively affects democracy in a given society.

H1b: Regardless of oil wealth, granting Islamic law a higher level of supremacy in the constitution negatively affects democracy, when compared to a lower level of supremacy or no constitutional status at all.

3. Data

We use the democracy-dictatorship measure of political regimes, developed by Cheibub et al. (2010), as our dependent variable on democracy, The variable distinguishes between regimes in which executive and legislative offices are filled through contested elections and those in which they are not, assuming the value 1 for the former and zero otherwise. For our analysis, we use the updated datatset by Bjørnskov and Rode (2019). Alternative measures of democracy are used for robustness checks.

We investigate the effect of Islamic constitutions using the two independent variables (i) "Islamic law as a source of legislation" and (ii) "Supremacy of Islamic Law". Both variables are based on the Islamic Constitutions Index developed by Ahmed and Gouda (2015). Using the framework of the Comparative Constitutions Project by Elkins et al. (2009), the Islamic Constitutions Index measures the degree of Islamization of constitutions.[2] "Islamic law as a source of legislation" is a dummy variable that takes on the value one if the constitution identifies Islamic law as a source of legislation, and zero otherwise. The "supremacy of Islamic law" indicator gives more details on the degree of Islamization of constitutions. We use a three-point scale (from zero to two), where higher values reflect a higher level of supremacy of Islamic law, following Gouda and Gutmann's (2019) recoding of the Islamic Constitutions Index.

[2] The Islamic Constitutions Index uses a unique model of an Islamic constitution, developed in 1978 by Al-Azhar University as a benchmark to identify distinctive Islamic characteristics of constitutions. For more details, (see (Gouda, 2013).

Following Ross (2008), we use (the logarithm of) "oil and gas rents per capita" as our independent variable on natural resource rents. It measures a country's total rents from oil and gas divided by its population. For our analysis, we use the updated dataset by Ross and Mahdavi (2015). According to Ross (2008), a per capita measure of oil rents is a better measure than the oil exports over GDP for two reasons. First, it is a more precise measure of the value of oil production, since it subtracts production costs, excludes oil that is imported and then re-exported, and includes the value of oil that is produced and consumed domestically. Second, it avoids endogeneity problems that come from measuring exports instead of production and from using GDP to normalize oil wealth. We use alternative measures of natural resources for robustness checks.

We further control for (the logarithm of) GDP per capita from the World Bank Development Indicators, the degree of Globalization using the KOF Globalization Index of Gygli et al. (2019) and Socialist legal origins using data from La Porta et al. (1999), which could affect the level of democracy. To rule out that estimated effects of Islamic constitutions are only reflecting the effect of Muslim culture as an informal institution, we additionally control for the share of Muslim population in our analysis. All regression models include region and year fixed effects. Variables and data sources are described in Table A1 in the Appendix.

Our data sample consists of 3,827 observations from 160 countries for the period 1990-2014. Table 1 shows descriptive statistics based on our full regression sample on the left-hand side. On the right-hand side, we report descriptive statistics based on the treated sample only, i.e. where Islamic law is the source of legislation. Accordingly, 321 observations from 16 countries are treated. Democracy exists in round 57% of observations of the full sample, whereas only 6% of the observations experience democracy if Islamic law is the source of legislation.

<<< Table 1 about here >>>

Our descriptive statistics further reveal that countries with Islamic constitutions have higher rents from natural resources and obviously a higher share of Muslim population. Economic characteristics, such as per capita GDP and globalization do not largely differ between the two samples. Moreover, no country with an Islamic constitution is of socialist legal origin. In the

next section, we empirically investigate the impact of Islamic constitutions and natural resource rents on democracy using multivariate regression models.

4. Empirical Model and Results

a. Results

We estimate the following model

$$Democracy_{i,t} = \alpha + \beta \times Constitutions_{i,t} + \gamma \times Oil_{i,t} + \delta \times X_{i,t} + \mu_i + \vartheta_t + \varepsilon_{i,t} \qquad (1)$$

where *Constitutions* is one of our potentially endogenous treatment variables on Islamic constitutions, *Oil* is oil and gas rents per capita, *X* is a vector of control variables, and μ and υ are region and year fixed effects. Standard errors are clustered on the country-level.

<<< Table 2 around here >>>

We first estimate equation (1) using OLS. Results are reported in Table 2. We start our analysis in column (1) by using "Islamic law as a source of legislation" as our indicator for Islamic constitutions, controlling for (the logarithm of) oil and gas rents per capita, (the logarithm of) per capita GDP, Socialist legal origin and degree of globalization. Our results show that countries with constitutions mentioning Islamic law as a source of legislation have a lower probability of being democratic by 30 percentage points (pp). The effect is highly robust at 0.001% significance level. We additionally control for the share of Muslim population in column (2) and for Muslim majority in column (3), in order to rule out that estimated effects of Islamic constitutions are only reflecting the effect of Muslim population rather than Islamic law as a formal institution. However, the identified effect of Islamic constitutions remains robust and significant at the 1% level. Neither Muslim population nor the Muslim majority dummy is significant.

We repeat the same strategy in columns (4)-(6), using "Supremacy of Islamic Law" as our indicator for Islamic constitutions. Results show that a one point increase in "supremacy of Islamic law" goes in hand with a lower probability of democracy by 15-17 pp. This indicates that countries with a high supremacy of Islamic law have a lower probability of being democratic by 30-34 percentage points.

As our dependent variable is a binary variable, we run into the problem that OLS could predict variables lower than zero or higher than one. We therefore additionally estimate model (1) using a Probit estimator. Table A.2 in the Appendix presents the marginal effects calculated based on the Probit regression results.[3] The Probit marginal effects show very similar results to our OLS coefficients in Table 2 and confirm our previous findings on the effect of Islamic constitutions.

It could be argued that the lack of democracy leads to the adoption of Islamic constitutions and not the other way. To tackle endogeneity concerns, we estimate 2SLS instrumental variable regressions. Following Gouda and Gutmann (2019), we rely on the following two instrumental variables as exogenous predictors of the Islamization of a country's constitutions: (i) (the logarithm of the) distance of a country's capital from Mecca as proposed by Michalopoulos et al. (2018), and (ii) a measure of Arab conquest by Chaney (2012)[4]. These instruments rely on the hypothesis that countries which are geographically closer to Mecca and countries that were under Muslim rule for centuries are more likely to have adopted Islamic constitutions, which are still in effect today.[5] Our instrumental variable strategy builds on a body of economic literature that uses exogenous geographic and historical variables to explain contemporary institutions (Chaney, 2013; Tabellini, 2010).[6] As the descriptive statistics in Table 1 show, countries with Islamic constitutions tend to be geographically closer to Mecca and are more likely to have been ruled by Muslims for a long period of time.

Table 3 shows the regression results from the second stage from the 2SLS instrumental variable regressions and confirms our findings from Table 1 regarding the negative effect of Islamic constitutions on democracy. In fact, the coefficients of both source and supremacy variables have more than doubled compared to the OLS coefficients. We report diagnostic tests that are relevant for assessing the validity of the IV regression results at the bottom of Table 3. The null hypothesis that the instruments are valid cannot be rejected according to the Hansen's J statistic. Moreover, testing underidentification, we reject the null hypothesis of reduced rank (based on the Kleibergen-Paap rk LM statistic) which implies that the rank condition is satisfied. The Kleibergen-Paap F-tests for weak instruments are larger than the critical value of 10, especially

[3] The table of Probit coefficients is not included for space reasons and is available upon request.

[4] The latter is calculated as the product of the share of a country's landmass in 1100 which was ruled by Muslim dynasties and a dummy variable which equals one if at least half of the country's landmass remained under Muslim rule in 1900.

[5] First stage regression results support this hypothesis and are available upon request.

[6] For more details on both instruments, see Gouda and Gutmann (2019).

in the baseline regressions of columns (1) and (4), which could indicate a problem of weak instruments. However, their values decrease and are mostly smaller than 10 when controlling for Muslim shares in society. Weak instruments would mean that 2SLS estimates are biased towards the OLS estimates. However, since our 2SLS estimates are more than twice the size of OLS estimates, we would be – if at all – underestimating the effect of Islamic constitutions on democracy.

<<< Table 3 around here>>>

Both the negative coefficient for oil and gas rents per capita and the positive globalization coefficient are only significant in Table 2 using OLS regressions but turn insignificant when 2SLS is estimated in Table 3 for all model specifications. Moreover, we do not find support for a positive effect of economic advancement on democracy, as can be seen by the insignificant effect of GDP per capita. Our results further show that countries with socialist legal origins have a lower probability of being democratic.

b. Robustness checks

We conduct several robustness checks. We first use an alternative indicator for natural resource rents, replacing oil and gas rents per capita with the variable on natural resource rents (as percentage of GDP) from the World Development Indicators. Again, the new rents variable is only significant in the OLS model (Table A.3 in the Appendix), but not when an instrumental variable model is estimated (Table A.4).

For further robustness checks, we use two alternative dependent variables to measure democracy; the Polity2 score (rescaled from 0 to 1) and the Support Vector Machines Democracy Index (SVMDI) by Gruendler and Krieger (2016; 2018). Using Polity2 score as dependent variable, Table A.5 in the Appendix reports results of OLS regressions and Table A.6 shows results of instrumental variable regressions of model (1). “Islamic law as source of legislation” is used as an indicator for Islamic constitutions. Oil rents are proxied in columns (1)─(3) by oil and gas rents per capita and in columns (4)─(6) by natural resource rents as % of GDP, as introduced in the previous robustness check. Tables A.7 and A.8 show similar regressions results, taking the SVMDI democracy measure as dependent variable. In all models, constitutions that use Islamic law as a source of legislation show a statistically significant negative effect on democ-

racy. We conclude that the effect is robust to using alternative democracy measures.[7] The negative effect of natural resource rents on democracy is not similarly robust, especially when estimating an instrumental variable model.[8]

For final robustness checks, we add more control variables on the average years of schooling and the level of inequality in a country using the Gini coefficient. Results are reported in Table A.9 in the Appendix. Note that our sample size drops by about 25%. Our results on Islamic constitutions are strongly robust whereas the effect of oil rents is no longer significant in the OLS model (in contrast to Table 2). In all models, the individually insignificant variables are not jointly significant. Our results of Table A.9 are robust to using Polity2 or SVMDI as alternative dependent variables.

To conclude, both variables on entrenching Islamic law in constitutions have a negative and significant effect on democracy in all model specifications. This effect is robust to using alternative estimation models, alternative measures of democracy as dependent variable, alterative measures of natural resource rents, controlling for Muslim populations and additional control variables. In contrast to this, we do not find the negative effect of natural resource rents on democracy to be robust.

5. Conclusion

This paper shows that oil income is not sufficient to explain the democracy gap in Muslim–majority countries. We study, for the first time, Islamic constitutional provisions as a likely determinant of democracy in Muslim-majority countries. Our empirical analysis shows that democracy is significantly less in countries where the status and supremacy of Islamic law is constitutionally entrenched, regardless of dependency on oil.

The study reveals several important findings. First, the level of Islamicity of a country's constitution is significantly associated with authoritarianism. Second, research on oil curse in Muslim-majority countries may be exaggerating the negative effects of oil on democracy by ignoring the formal institutional setup prevailing in these countries.

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[7] Similarly, the effect of Islamic law supremacy is robust to using alternative democracy indicators. Additional tables are not included for space reasons and are available upon request.

[8] We additionally estimate Tobit models as polity2 and SVMDI are right and left censored at zero and one, respectively. Results are similar to OLS and are available upon request. Note, however, that SVMDI has only eight right and eight left censored variables.

Third, after considering the possible entrenchment of Islamic legal principles in the constitution, there is no significant effect anymore of any other measure for the influence of Islam in society on the level of democracy. In other words, the widespread democracy deficit in Muslim societies seems to be a consequence of the design of formal institutions (i.e., especially the constitution) rather than caused directly by the informal norms prevalent among the population. This supports the more general idea that constitutions matter, which has been recently gaining ground in empirical research (e.g., Buchanan 2002; Persson and Tabellini 2003).

Finally, this study demonstrates once more the grave dangers entailed in institutionalizing supreme values. Constitutions that propagate absolute truths and, in disregard of the rule of law, expect these principles to be enforced will most likely lead to a totalitarian regime, the most extreme, violent, and complete form of authoritarianism (Conquest, 2001).

Appendix

Table A1: List of variables and data sources

Variable	Description and data source
Democracy	Dummy variable =1 if executive and legislative offices are filled through contested elections and zero otherwise, as developed by Cheibub et al. (2010). Source: Bjørnskov and Rode (2019)
Polity2*	Level of democracy Polity2, rescaled between zero and one. Source: Polity IV project.
SVMDI*	Support Vector Machines Democracy Index (SVMDI). Source: Gruendler and Krieger (2016, 2018)
Source	Dummy variable =1 if the constitution identifies Islamic law as a source of legislation, and zero otherwise. Source: Ahmed and Gouda (2015).
Supremacy	A three-point scale (from zero to two), where higher values reflect a higher level of supremacy of Islamic law. Supremacy = 0 when Islam is not the source of legislation. Source: Ahmed and Gouda (2015) and Gouda and Gutmann (2019).
Distance	Distance from Mecca, logarithm, own calculation.
Conquest	Arab conquest. Source: Chaney (2012).
Rents per capita	Total oil and gas rents divided by population and measured in constant 2014 dollars, Logarithm. Source: Ross and Mahdavi (2015).
Rents (% GDP)*	Share of total natural resource rents in GDP. Source: World Development Indicators
GDP per capita	GDP per capita, logarithm. Source: World Development Indicators.
Socialist legal origin	Socialist legal origin, source: La Porta et al. (1999).
Globalization	KOF Globalisation Index. Source: Gygli et al. (2018).
Share Muslim	Muslim population share. Source: ARDA's Religious Characteristics of States Dataset.
Muslim Majority	Dummy Variable =1 if Muslim population share larger than 50%, own calculation.

*used for robustness checks

Table A.2: Effect of Islamic constitutions and rents per capita, Probit, Marginal Effects

	(1)	(2)	(3)	(4)	(5)	(6)
Source	-0.260**	-0.211*	-0.220*			
	(0.099)	(0.105)	(0.106)			
Supremacy				-0.172***	-0.145**	-0.151**
				(0.044)	(0.047)	(0.047)
Rents per capita	-0.024**	-0.021*	-0.022*	-0.022*	-0.020*	-0.020*
	(0.009)	(0.009)	(0.010)	(0.009)	(0.009)	(0.009)
GDP per capita	-0.005	-0.013	-0.012	-0.003	-0.011	-0.009
	(0.029)	(0.028)	(0.028)	(0.029)	(0.028)	(0.028)
Socialist legal origin	-0.236**	-0.249**	-0.244**	-0.241**	-0.254**	-0.249**
	(0.085)	(0.082)	(0.082)	(0.084)	(0.081)	(0.081)
Globalization	0.006*	0.006*	0.006*	0.005*	0.006*	0.006*
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Share Muslim		-0.094			-0.090	
		(0.073)			(0.072)	
Majority Muslim			-0.065			-0.062
			(0.060)			(0.059)
Observations	3,827	3,827	3,827	3,827	3,827	3,827
Countries	160	160	160	160	160	160

Notes: Dependent variable is Democracy. Table shows the marginal effects based on Probit regressions of Model (1). All regressions include region- and year-fixed effects; country-clustered standard errors are shown in parentheses: *0.05, **0.01 and ***0.001.

Table A.3: Effect of Islamic constitutions and rents (%GDP), OLS

	(1)	(2)	(3)	(4)	(5)	(6)
Source	-0.299***	-0.221*	-0.230*			
	(0.077)	(0.088)	(0.088)			
Supremacy				-0.171***	-0.131**	-0.135**
				(0.035)	(0.040)	(0.041)
Rents (%GDP)	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
GDP per capita	-0.032	-0.037	-0.035	-0.030	-0.035	-0.033
	(0.029)	(0.027)	(0.028)	(0.029)	(0.027)	(0.027)
Socialist legal origin	-0.242**	-0.245**	-0.239**	-0.245**	-0.249**	-0.243**
	(0.088)	(0.086)	(0.087)	(0.088)	(0.086)	(0.086)
Globalization	0.005	0.005	0.005	0.005	0.005	0.005
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Share Muslim		-0.147			-0.147	
		(0.098)			(0.097)	
Majority Muslim			-0.108			-0.108
			(0.081)			(0.080)
Constant	0.304*	0.373*	0.342*	0.288*	0.359*	0.328*
	(0.146)	(0.146)	(0.144)	(0.145)	(0.144)	(0.143)
Observations	3,896	3,896	3,896	3,896	3,896	3,896
Countries	163	163	163	163	163	163

Notes: Dependent variable is Democracy. All regressions are estimated by OLS. All models include region- and year-fixed effects; country-clustered standard errors are shown in parentheses: *0.05, **0.01 and ***0.001.

Table A.4: Effect of Islamic constitutions and rents (%GDP), 2SLS

	(1)	(2)	(3)	(4)	(5)	(6)
Source	-0.712**	-0.711*	-0.707*			
	(0.230)	(0.342)	(0.307)			
Supremacy				-0.390**	-0.379*	-0.382*
				(0.124)	(0.171)	(0.158)
Rents (%GDP)	-0.004	-0.004	-0.004	-0.003	-0.003	-0.003
	(0.002)	(0.003)	(0.002)	(0.002)	(0.003)	(0.003)
GDP per capita	-0.007	-0.007	-0.007	-0.004	-0.006	-0.005
	(0.035)	(0.040)	(0.038)	(0.036)	(0.038)	(0.037)
Socialist legal origin	-0.303***	-0.301***	-0.301***	-0.307***	-0.304***	-0.304***
	(0.086)	(0.089)	(0.090)	(0.085)	(0.087)	(0.088)
Globalization	0.003	0.003	0.003	0.003	0.003	0.003
	(0.004)	(0.004)	(0.004)	(0.003)	(0.004)	(0.004)
Share Muslim		0.020			-0.003	
		(0.150)			(0.131)	
Majority Muslim			0.018			0.004
			(0.107)			(0.098)
Constant	0.216	0.210	0.214	0.186	0.192	0.189
	(0.164)	(0.195)	(0.175)	(0.168)	(0.197)	(0.181)
Observations	3,896	3,896	3,896	3,896	3,896	3,896
Countries	163	163	163	163	163	163

Notes: Dependent variable is Democracy. All regressions are estimated by 2SLS instrumental variable regressions. Instruments are the log-distance to Mecca and an indicator for Arab conquest. All models include region- and year-fixed effects; country-clustered standard errors are shown in parentheses: *0.05, **0.01 and ***0.001.

Table A.5: Effect of Islamic constitutions and natural resource rents (Dependent Variable: Polity2), OLS

	(1)	(2)	(3)	(4)	(5)	(6)
Source	-0.266***	-0.210**	-0.214**	-0.274***	-0.200**	-0.204**
	(0.068)	(0.073)	(0.071)	(0.070)	(0.073)	(0.071)
Rents per capita	-0.021***	-0.018**	-0.018**			
	(0.006)	(0.006)	(0.006)			
Rents (%GDP)				-0.005***	-0.004***	-0.004***
				(0.001)	(0.001)	(0.001)
GDP per capita	-0.026	-0.034	-0.033	-0.051*	-0.056**	-0.055**
	(0.022)	(0.020)	(0.020)	(0.021)	(0.019)	(0.019)
Socialist legal origin	-0.154*	-0.160**	-0.155*	-0.183**	-0.185**	-0.179**
	(0.061)	(0.060)	(0.060)	(0.060)	(0.059)	(0.059)
Globalization	0.009***	0.009***	0.009***	0.008***	0.009***	0.009***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Share Muslim		-0.122			-0.141*	
		(0.064)			(0.062)	
Majority Muslim			-0.092			-0.108*
			(0.048)			(0.046)
Constant	0.310**	0.383***	0.361***	0.484***	0.551***	0.524***
	(0.102)	(0.103)	(0.101)	(0.089)	(0.087)	(0.087)
Observations	3,710	3,710	3,710	3,729	3,729	3,729
Countries	156	156	156	157	157	157

Notes: Dependent variable is Polity2. All regressions are estimated by OLS. All models include region- and year-fixed effects; country-clustered standard errors are shown in parentheses: *0.05, **0.01 and ***0.001.

Table A.6: Effect of Islamic constitutions and natural resource rents, (Dependent Variable: Polity2), 2SLS

	(1)	(2)	(3)	(1)	(2)	(3)
Source	-0.594***	-0.579**	-0.584***	-0.594***	-0.549**	-0.556**
	(0.142)	(0.184)	(0.176)	(0.147)	(0.188)	(0.180)
Rents per capita	-0.012*	-0.012*	-0.012*			
	(0.006)	(0.006)	(0.006)			
Rents (%GDP)				-0.003	-0.003	-0.003
				(0.002)	(0.001)	(0.001)
GDP per capita	-0.014	-0.015	-0.014	-0.031	-0.034	-0.033
	(0.026)	(0.029)	(0.028)	(0.026)	(0.028)	(0.027)
Socialist legal origin	-0.209***	-0.207***	-0.207***	-0.226***	-0.223***	-0.222***
	(0.062)	(0.062)	(0.062)	(0.061)	(0.061)	(0.061)
Globalization	0.007*	0.007*	0.007*	0.007*	0.007*	0.007*
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Share Muslim		-0.009			-0.028	
		(0.096)			(0.093)	
Majority Muslim			-0.001			-0.018
			(0.068)			(0.065)
Constant	0.304**	0.310**	0.305**	0.410***	0.430***	0.423***
	(0.102)	(0.120)	(0.112)	(0.102)	(0.114)	(0.108)
Observations	3,710	3,710	3,710	3,729	3,729	3,729
Countries	156	156	156	157	157	157

Notes: Dependent variable is Polity2. All regressions are estimated by 2SLS instrumental variable regressions. Instruments are the log-distance to Mecca and an indicator for Arab conquest. All models include region- and year-fixed effects; country-clustered standard errors are shown in parentheses: *0.05, **0.01 and ***0.001.

Table A.7: Effect of Islamic constitutions and natural resource rents, (Dependent variable: SVMDI), OLS

	(1)	(2)	(3)	(4)	(5)	(6)
Source	-0.280***	-0.225**	-0.221**	-0.281***	-0.210*	-0.206*
	(0.075)	(0.081)	(0.079)	(0.078)	(0.083)	(0.079)
Rents per capita	-0.021**	-0.018**	-0.018**			
	(0.006)	(0.006)	(0.006)			
Rents (%GDP)				-0.005***	-0.005***	-0.005***
				(0.001)	(0.001)	(0.001)
GDP per capita	-0.021	-0.028	-0.028	-0.038	-0.042*	-0.041*
	(0.025)	(0.023)	(0.023)	(0.022)	(0.020)	(0.020)
Socialist legal origin	-0.135	-0.142	-0.137	-0.166*	-0.169*	-0.164*
	(0.075)	(0.074)	(0.074)	(0.074)	(0.073)	(0.074)
Globalization	0.008**	0.008**	0.008**	0.006**	0.007**	0.007**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Share Muslim		-0.118			-0.136	
		(0.073)			(0.072)	
Majority Muslim			-0.105			-0.118*
			(0.054)			(0.053)
Constant	0.219	0.288*	0.275*	0.394***	0.458***	0.436***
	(0.122)	(0.124)	(0.121)	(0.105)	(0.104)	(0.102)
Observations	3,827	3,827	3,827	3,896	3,896	3,896
Countries	160	160	160	163	163	163

Notes: Dependent variable is the democracy index SVMDI. All regressions are estimated by OLS. All models include region- and year-fixed effects; country-clustered standard errors are shown in parentheses: *0.05, **0.01 and ***0.001.

Table A.8: Effect of Islamic constitutions and natural resource rents, (Dependent variable: SVMDI), 2SLS

	(1)	(2)	(3)	(4)	(5)	(6)
Source	-0.684***	-0.736**	-0.692**	-0.671***	-0.698**	-0.658**
	(0.182)	(0.253)	(0.236)	(0.186)	(0.268)	(0.248)
Rents per capita	-0.010	-0.011	-0.011			
	(0.007)	(0.007)	(0.007)			
Rents (%GDP)				-0.003	-0.003	-0.003
				(0.002)	(0.002)	(0.002)
GDP per capita	-0.004	0.001	-0.003	-0.014	-0.012	-0.015
	(0.031)	(0.036)	(0.034)	(0.029)	(0.033)	(0.031)
Socialist legal origin	-0.208**	-0.210**	-0.207**	-0.224**	-0.225**	-0.222**
	(0.073)	(0.076)	(0.075)	(0.072)	(0.074)	(0.074)
Globalization	0.005	0.005	0.005	0.004	0.004	0.004
	(0.003)	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)
Share Muslim		0.049			0.030	
		(0.116)			(0.117)	
Majority Muslim			0.014			0.001
			(0.081)			(0.081)
Constant	0.212	0.183	0.205	0.311*	0.295	0.314*
	(0.122)	(0.148)	(0.134)	(0.122)	(0.155)	(0.137)
Observations	3,827	3,827	3,827	3,896	3,896	3,896
Countries	160	160	160	163	163	163

Notes: Dependent variable is the democracy index SVMDI. All regressions are estimated by 2SLS instrumental variable regressions. Instruments are the log-distance to Mecca and an indicator for Arab conquest. All models include region- and year-fixed effects; country-clustered standard errors are shown in parentheses: *0.05, **0.01 and ***0.001.

Table A.9: Effect of Islamic constitutions and rents per capita, OLS, more control variables

	(1)	(2)	(3)	(4)	(5)	(6)
Source	-0.396***	-0.332***	-0.349***			
	(0.066)	(0.093)	(0.092)			
Supremacy				-0.208***	-0.173***	-0.181***
				(0.039)	(0.051)	(0.051)
Rents per capita	-0.019	-0.016	-0.017	-0.020	-0.016	-0.017
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
GDP per capita	-0.029	-0.039	-0.034	-0.027	-0.038	-0.032
	(0.046)	(0.044)	(0.045)	(0.046)	(0.045)	(0.045)
Socialist legal origin	-0.251*	-0.263*	-0.253*	-0.251*	-0.264*	-0.252*
	(0.105)	(0.105)	(0.105)	(0.105)	(0.105)	(0.105)
Globalization	0.002	0.003	0.003	0.002	0.003	0.002
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Years of schooling	0.017	0.014	0.015	0.017	0.013	0.014
	(0.020)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)
Inequality	-0.879	-0.993	-0.940	-0.857	-0.982	-0.927
	(0.503)	(0.521)	(0.509)	(0.503)	(0.522)	(0.510)
Share Muslim		-0.146			-0.156	
		(0.133)			(0.131)	
Majority Muslim			-0.083			-0.092
			(0.107)			(0.106)
Constant	0.715*	0.854*	0.784*	0.698*	0.849*	0.777*
	(0.333)	(0.362)	(0.346)	(0.333)	(0.363)	(0.347)
Observations	2,842	2,842	2,842	2,842	2,842	2,842
Countries	134	134	134	134	134	134

Notes: Dependent variable is Democracy. All regressions are estimated by 2SLS instrumental variable regressions. Instruments are the log-distance to Mecca and an indicator for Arab conquest. All models include region- and year-fixed effects; country-clustered standard errors are shown in parentheses: *0.05, **0.01 and ***0.001.

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Table 1: Descriptive statistics

	Full sample				**Treated sample**			
	mean	sd	min	max	mean	sd	min	max
Democracy	0.57	0.49	0	1	0.06	0.24	0	1
Polity2*	0.67	0.32	0	1	0.23	0.23	0	0.95
SVMDI*	0.66	0.37	0	1	0.19	0.27	0.00	0.94
Supremacy	0.15	0.51	0	2	1.80	0.40	1	2
Source	0.08	0.28	0	1	1.00	0.00	1	1
Distance	1.55	0.69	-0.38	2.75	0.48	0.58	-0.24	1.76
Conquest	0.15	0.34	0.00	1.00	0.80	0.38	0.00	1.00
Rents per capita	2.93	3.07	0.00	10.94	6.32	3.46	0.00	10.94
Rents (% GDP)*	8.63	12.32	0.00	82.59	22.21	15.85	0.00	64.11
GDP per capita	7.88	1.64	4.17	11.54	8.28	1.61	5.55	11.39
Socialist legal origin	0.19	0.40	0	1	0	0	0	0
Globalization	55.69	16.02	19.45	90.67	51.63	11.64	27.31	74.21
Share Muslim	0.26	0.36	0	1.00	0.87	0.14	0.56	1.00
Muslim Majority	0.26	0.44	0	1	1	0	1	1
N (countries)	3827(160)				321 (16)			

*used for robustness checks

Table 2: Effect of Islamic constitutions and rents per capita, OLS

	(1)	(2)	(3)	(4)	(5)	(6)
Source	-0.299***	-0.242**	-0.248**			
	(0.076)	(0.088)	(0.089)			
Supremacy				-0.174***	-0.145***	-0.148***
				(0.033)	(0.040)	(0.040)
Rents per capita	-0.023*	-0.021*	-0.021*	-0.022*	-0.020*	-0.020*
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
GDP per capita	-0.017	-0.024	-0.023	-0.015	-0.022	-0.021
	(0.034)	(0.032)	(0.033)	(0.034)	(0.032)	(0.033)
Socialist legal origin	-0.209*	-0.216*	-0.211*	-0.214*	-0.221*	-0.217*
	(0.089)	(0.086)	(0.087)	(0.089)	(0.086)	(0.087)
Globalization	0.007*	0.007*	0.007*	0.006*	0.007*	0.007*
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Share Muslim		-0.122			-0.121	
		(0.100)			(0.099)	
Majority Muslim			-0.089			-0.088
			(0.083)			(0.082)
Constant	0.113	0.184	0.160	0.105	0.177	0.153
	(0.173)	(0.173)	(0.172)	(0.172)	(0.172)	(0.171)
Observations	3,827	3,827	3,827	3,827	3,827	3,827
Countries	160	160	160	160	160	160

Notes: Dependent variable is Democracy. All regressions are estimated by OLS. All models include region- and year-fixed effects; country-clustered standard errors are shown in parentheses: *0.05, **0.01 and ***0.001.

Table 3: Effect of Islamic constitutions and rents per capita, 2SLS

	(1)	(2)	(3)	(4)	(5)	(6)
Source of legislation	-0.724**	-0.764*	-0.748*			
	(0.233)	(0.336)	(0.301)			
Supremacy				-0.393**	-0.401*	-0.399**
				(0.124)	(0.163)	(0.151)
Rents per capita	-0.012	-0.013	-0.013	-0.011	-0.011	-0.012
	(0.011)	(0.011)	(0.011)	(0.011)	(0.012)	(0.011)
GDP per capita	0.001	0.005	0.004	0.003	0.005	0.005
	(0.039)	(0.043)	(0.042)	(0.038)	(0.041)	(0.040)
Socialist legal origin	-0.286**	-0.286**	-0.285**	-0.290***	-0.290**	-0.289**
	(0.089)	(0.093)	(0.093)	(0.088)	(0.091)	(0.091)
Globalization	0.004	0.004	0.004	0.004	0.004	0.004
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Share Muslim		0.049			0.020	
		(0.149)			(0.126)	
Majority Muslim			0.037			0.020
			(0.107)			(0.095)
Constant	0.106	0.077	0.086	0.089	0.077	0.078
	(0.170)	(0.190)	(0.178)	(0.171)	(0.186)	(0.178)
Underidentification	17.93	10.32	12.14	20.71	13.55	14.44
p-value	(0.000)	(0.006)	(0.002)	(0.000)	(0.001)	(0.001)
Kleibergen-Paap F	13.82	6.58	8.43	15.26	9.46	11.21
Hansen J	0.52	0.92	0.97	0.45	0.69	0.73
p-value	(0.471)	(0.337)	(0.325)	(0.502)	(0.406)	(0.393)
Observations	3,827	3,827	3,827	3,827	3,827	3,827
Countries	160	160	160	160	160	160

Notes: Dependent variable is Democracy. All regressions are estimated by 2SLS instrumental variable regressions. The excludable instruments are the log-distance to Mecca and an indicator for Arab conquest. All models include region- and year-fixed effects; country-clustered standard errors are shown in parentheses: *0.05, **0.01 and ***0.001.