Why do some oil-producing countries succeed in democracy while others fail?

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Abstract:

Empirical studies examining the effect of oil on democracy have shown contradictory results. This paper offers an explanation. In measuring the number of years between the beginning of oil production and the attainment of political independence in oil-producing countries, we found that the greater the number of years, the higher the level of democracy *ceteris paribus*. The types of resources exploited in the colonial period were shown to have influenced institutions' nature and the formation of elite, which acts to prevent subsequent political reforms. This pattern is mitigated in countries that started producing oil far away from their independence.

Keywords: Oil Resources; Economic History; Democracy; Economic Development.

I. Introduction

Democracy is one of the main controversial topics in literature on the resource curse. Indeed, since the work of Ross (2001), demonstrating that oil is negatively correlated with democracy, several studies have tested this hypothesis with mixed, and even contradictory, results.

Studies supporting Ross (2001) include Jensen and Wantchekon (2004), who show that oil and mining countries are the least democratic countries in Africa, Tsui (2010), who exploits the variation in the importance of oil discoveries and finds a negative effect of oil on democracy, and Aslaken (2010), who shows that the negative effect of oil on democracy is robust to the inclusion of fixed effects. However, these studies are contradicted by results from, for example, Herb (2005), who uses counterfactual analysis and finds no oil effect on democracy, and Haber and Menaldo (2011), who use panel co-integration techniques and find no evidence on the negative effect of oil on democracy.

While these differing results are interesting, the key factor, as underlined by Torvik (2009), is not the average performance of a group of countries *per se*, but why particular countries producing the same natural resource succeed as democracies while others fail. Why does a country such as Ecuador exhibit better functioning democratic institutions, while a country such as Qatar remain undemocratic (see Polity IV project, 2012)? The current literature, which consists of studies simply comparing the performance of oil-producing countries with that of non-oil-producing countries, does not provide answers about the differences in institutional performances between these oil-producing countries. This paper attempts to fill this gap.

Thus, for oil exporting countries, this paper highlights one key feature that affects their contemporary democracy level. Current democracy in oil producing countries tends to be positively correlated with the length separating the date of the beginning of oil production from the date of a country's political independence. More explicitly, if T-production is the date of the beginning of oil production in a country, and T-independence is the date of this country's independence, the higher the number of years from T-production to T-independence, the more likely this oil country is democratic in comparison to other oil producing countries *ceteris paribus*.

Our work builds upon Omgba (2014) who found that the aforementioned length of time positively affects export diversification patterns in oil-producing countries. This paper supports the finding that the most important point is not the length *per se*, but rather the institutional dynamics that this length represents. The institutional dynamics investigated in this paper concern the dynamics of political institutions. Indeed, among formal institutions [1], one can distinguish economic institutions from political institutions, with the former defining the rules for human interaction in the economic field (e.g., property rights), and the latter, including democratic institutions, defining these rules in the political arena (Acemoglu et al., 2005).

Among the components of democratic institutions, the accountability of politicians vis-à-vis their constituents and the citizens' ability to participate in selecting the government are accounted for (Acemoglu et al., 2005). The explanations behind the results of this paper might be grounded in these particular components of democracy. Indeed, the paper states that the type of resources used in the colonial period influenced the nature of the political institutions created by settlers, which were maintained after independence because they benefited the national political elites in power in these countries. This pattern is mitigated in countries that

began producing oil much after independence, as citizens developed more competence in mobilizing and representing, which has allowed them to challenge the elite.

Indeed, a major strand of the development literature supports the claim that resource endowment determines the type of colonization (Engerman and Sokoloff, 1997; Acemoglu *et al*., 2001). There are two main types of colonization: settlers' colonies, in which inclusive institutions have been established, and extractive colonies, in which extractive institutions have been transferred. This paper extends this analysis by arguing that the extractive colonies vary depending on the type of exploited natural resource, and that this variance affects the current performance of democracy in oil-producing countries.

The remainder of the paper is organized as follows. Section 2 reviews the literature on resource abundance and institutions and provides theoretical arguments that help to interpret the empirical results presented in Section 3. Finally, section 4 concludes and draws policy implications.

II. Literature review and theoretical arguments

II.1: Resource curse: A curse of Institutions

Early explanations of the resource curse highlight two effects: Dutch disease and the volatility of commodity prices. A boom in a sector producing a natural resource leads to an increase in the price of non-tradable goods. Since the price of tradable goods is determined on the international market, then there is an appreciation of the real exchange rate leading to a loss of competitiveness for the whole economy: this is Dutch disease (Corden and Neary, 1982).

Moreover, resource-dependent economies are more vulnerable to price shocks. These

price shocks induce instability of the latter. This price volatility implies revenue instability and fuels expenditure instability. The instability in spending is even more damaging than the adjustments are asymmetric (*ratchet effect*). Expenditures are easy to breed during the period of rising prices, but they are difficult to adjust during the period of falling prices (Collier and Gunning, 1999). In addition, this instability also affects the investment decisions of private agents, and therefore the growth of the countries. Budina et al. (2007) speak of implicit tax on investments, including fixed capital. Indeed, investments require making irreversible decisions, which are difficult in unpredictable and uncertain environments, such as an environment dominated by instability. In addition, Aghion et al. (2006) note that the effects of instability are much more pronounced in countries with underdeveloped financial systems; this is the case in developing countries. In this context, the hedging risk is insufficient. Consequently, these countries will suffer the brunt of the effects of instability.

However, these explanations in terms of Dutch disease and volatility do not explain the variance in performance of countries with natural resources, since all resource-producing countries do not perform equally when they are subject to similar price shocks (Torvik, 2009).

Indeed, revenues from natural resources may instead be the prey of the predatory elite (voracity effect). The pioneering work of Tornell and Lane (1999) establishes the voracity effect of elites. The authors argue that in a resource-rich country, the presence of several interest groups can reduce growth, as an increase in revenue from exploitation of the resource leads to pressure to increase transfers to each group. This increase in public spending is oriented towards non-productive activities, which further leads to a reduction in the productivity of capital, and ultimately a decrease in growth.

Sala-i-Martin and Subramanian (2003) and Budina et al. (2007) provide empirical evidence for this voracity effect in Nigeria, Africa's largest oil producer. For the authors, even

if the effects of Dutch disease and volatility of oil resources may exist in the Nigerian economy, these effects are exacerbated by the greed of the Nigerian elite. Indeed, the oil boom of the ’60 and ’70s resulted in an increase in demand for direct transfers to elites from different states of Nigeria. Public expenditures of the central government have therefore increased. Rigidity for lowering these expenditures during the period of falling prices led to the formation of a debt burden that was profitable to elites, but fatal to the Nigerian economy (Budina al. 2007). According to Sala-i-Martin and Subramanian (2003), Nigeria should have earned 350 billion U.S. dollars as cumulative net income over the period 1965-2000, but from 336 USD per capita in 1965, Nigeria painfully reached only 440 U.S dollars per capita in 2006 (WDI, 2008). These authors estimate that two-thirds of the amount of public investment has not been realized. The authors claim that this money has been hijacked by the predatory corrupt elite (Sala-i-Martin and Subramanian, 2003). Nigeria, therefore, appears in the literature as an illustration of the collapse of a country with natural resources (Van der Ploeg, 2011).

This predatory behavior from elites does not seem limited only to Nigeria. Zeufack and Gauthier (2011) show that, in the case of Cameroon, only 46% of total oil revenue accruing to the government between 1977 and 2006 may have been transferred to the budget. The remaining 54% are, as yet, unaccounted for.

Thus, institutional deficit and including governance may explain the performance of the economies of resource-rich countries. Even if, on average, natural resource dependent countries have poor economic performance, recent examples of successful development based on natural resources can be found. For example, oil is considered a blessing for Norway, but a curse for Nigeria (Mehlum et al., 2006).

In general, the exploitation of natural resources causes two opposite effects. On the one

hand, it increases the revenues of the country; on the other hand, it causes the displacement of private agents from the most productive sectors of the economy towards natural resource industries. This second point leads to the opportunity for rent-seeking behavior, as agents will therefore be subject to the tradeoff between using their resources for productive activities or using those resources for rent-seeking. The decision to shift from one activity to the other will depend on the profitability of each segment.

Mehlum et al. (2006) suggest that profitability will depend on the quality of institutions in place. Ebeke et al. (2012) show that this reorientation of talent depends largely on the quality of governance. The quality of governance in resource-rich countries affects not only economic outcomes but also, more dramatically, the well-being of its citizens, including the effects of armed conflict (Collier and Hoeffler, 2005).

To this end, one result that has been put forward in the resource curse literature is that resource dependence positively affects the occurrence and the duration of armed conflicts (Collier and Hoeffler, 2000). According to Collier and Hoeffler (2000), in countries with economic growth and low per capita income, the presence of natural resources increases the risk of armed conflicts. The authors explain this regularity by the availability of funding, derived from the exploitation of natural resources and the prospect of the greatest return from the winner, from different groups. Indeed, war is costly; therefore, like any economic action, it is undertaken only in certain conditions, such as improving the welfare of the protagonists. However, groups who take up arms are not motivated by the public interest to alleviate the suffering of the majority; they are more interested in private gain. The availability of natural resources materializes the expected gains and provides these groups the means to launch and maintain armed conflict.

Ineffective governance, particularly lack of transparency, can allow rebels to fantasize about the amount of earnings, which facilitates the recruitment of militiamen. The formation of armed bands is made easier by the corruption of elites. Indeed, in countries with weak governance, money for the provision of public services is often diverted from its allotted use by government officials. This puts people in a position of vulnerability, thus enabling the formation of gangs to launch and maintain conflict (UN, 2001).

Armed conflict is even more likely in countries with weak state structure (Fearon and Latin, 2003). For these authors, it is not the cost-effective nature of the control of natural resources, but weak state structure/capacity, that leads to war. The authors argue that dependence on mineral resources, namely oil, helps maintain low taxation, making the rulers of these countries less accountable. This feature further makes the provision of public goods more dependent on revenues from the exploitation of natural resources, and presents, therefore, the provision of public goods to the risk of adverse price shocks of natural resources. The country can therefore be ablaze after a negative shock (Fearon and Latin, 2003).

An important aspect of state capacity is democracy, and the role of natural resources on democracy is one of the main controversial topics in literature on the resource curse (Ross, 2001). Indeed, many studies in the literature on the resource curse have been supported that resource dependence is negatively correlated with the level of democracy. For Ross (2001), mineral and mining states, oil states especially, are on average less democratic than resource-poor countries. Ross (2001) explains this result by the mechanism of the rentier state, which characterizes the resource countries, a mechanism based mainly on the tax effect. In a rentier state, over time, resource revenues decrease dependence on non-resource taxes and may even end up replacing the existing tax system. This frees governments from citizens' demands for

fiscal transparency and political accountability that come in return of the right of governments to tax the people (Ngodi, 2005). However, relying only on the argument of taxation may not be sufficient. In some cases, governments also carry out a more generous public spending policy: this is the spending effect. The spending policy contributes to awards given to support the most influential groups in the population. This policy can, therefore, reduce pressure on the government in favor of the emergence and consolidation of democracy. Aslaksen (2010) and Tsui (2011) confirm the results of Ross (2001) on different samples and different estimation techniques. However, these studies on democracy are contradicted by results from, for example, Herb (2005), who uses counterfactual analysis and finds no oil effect on democracy, and Haber and Menaldo (2011), who use panel co-integration techniques and find no evidence on the negative effect of oil on democracy

Whatever the case, one main conclusion can be drawn from the above literature: differences in performance in resource-rich countries may depend on institutional quality. However, these studies remain limited in their exploration of the sources of these differences in institutions. While these studies compare the performance of resource-rich countries with that of non-resource countries, they do not provide answers about the differences in the performance of resource-rich countries. They are therefore unable to generate dynamics in institutions in resource-rich countries (Brunnschweiler and Bulte, 2012). In this paper, we argue that a better understanding of the institutional dynamics in oil countries can emerge from the analysis of the type of natural resource that was exploited during the colonial era.

II.2. Institutional dynamics in oil-producing countries: a proposition

Among current oil-producing countries, two types of extractive colonies can be distinguished: those who began to produce oil before independence, and those who did not produce oil under colonial rule and were instead primarily cash crop or plantation colonies,

only becoming oil-producing after independence (Omgba, 2014). However, the development of cash crop colonies would require some unnecessary features in oil extraction colonies. Thus, due to the nature of plantation work, plantation colonies require a labor force able to complete intensive labor. Comparatively, it is recognized that oil is an intensely capitalistic activity. What might be the implications for the process of democratization in these countries?

Kuété (2008) argues that the large workforce in the plantation colonies created the potential effects on contemporary democratization of these countries. Indeed, in African countries, for example, the fact that most cash crops were extended over vast areas necessarily required regional planning and a decentralization of colonial authority. The advantages of decentralization for democracy are well-known, performing a counterweight to prevent abuses made by the central colonial government (Selee, 2004). In contrast, as underlined by Tétreault (2008), oil production is localized, with its technology and capital intensity isolating it from the rest of the country and the population. It is also more easily controllable by governments and multinationals (Mitchell, 2009). Karl (1997) also found that the settlers and local leaders who came after did not expend the same effort to build mineral colonies, as they did in plantation colonies. The extraction of oil rents were confined in enclaves, unlike the extraction of agricultural rents that came from plantation areas spread throughout the country.

Moreover, Kuété (2008) notes that cash crop activities required regulation, which gave rise to a regulatory framework of the State. Of course, as pointed out by Engerman and Sokoloff (1997), this framework did not protect farmers. However, Lange (2010) found, somewhat surprisingly, that many former British plantation colonies are characterized by a high level of democracy (Lange, 2010; Lange, 2004). The author explains this observation by the fact that the colonial regime, by its regulatory framework that was detrimental to the rights

of peasants, gave them a *leitmotiv* that has served as the basis for the establishment of trade unions and other type of associations to claim their rights.

Indeed, in the absence of an industrial base in the colonies, land issues were the focal point of trade union attention. In Africa, for example, Kuété (2008) argues that the African urban elite perceived the risks of agricultural policy under colonial domination at an early stage and firmly opposed a type of settlement that would lead to the development of a ruling class of wealthy farmers on the one hand and exploited peasants on the other. Consequently, the African urban elite cooperated with farmers in order to introduce reforms. Lange (2010) shows that under British rule, there was collaborative agreement between the peasants and small land owners to challenge the power of big farmers. The field of action was therefore quite fertile for unions because the agricultural policy of the colonial administration was not very popular among farmers and other segments of the population.

These unions, by social movements such as strikes, mass mobilization, violence, or civil disobedience, exerted pressure on the colonial government. This forced colonial governments to set up reforms to improve social, economic, and cultural conditions for the peasants and agricultural workers (Lange, 2010; Kuété, 2008). These actions have therefore set up the base for the emergence and consolidation of democracy over time in these countries. When these countries began to exploit oil, the foundations of a democratic society were already built. These developments were highly unlikely to occur in countries that began oil exploitation under colonial rule. Tétreault (2008) noted that oil exploitation was relatively easy to control under colonial rule without the need to mobilize the local workforce, repress local populations, penetrate remote rural areas to control indigenous peoples, or replace local officials, as was the case in plantation colonies. Instead, the extraction of revenues from oil

colonies depended on a combination of coercion and negotiations with central local elites in the capital of the territory (Karl, 1997).

These characteristics of coercion and negotiations, including corruption, would be maintained by local post-colonial leaders, and currently constitute two key arguments claimed by scholars to support the negative correlation between democracy and oil wealth (Ross, 2001). Moreover, given the relatively easy access to oil revenues and their important flow, postcolonial leaders chose to avoid unpopular domestic decisions that would involve taxing their citizens, as was the case in former plantation colonies (Karl, 1997). Therefore, these leaders laid the foundations of the rentier state, which is another key argument used by scholars to explain the lack of democracy in oil countries. Being a rentier state implies the release of links between citiznes and their governments. Governments that do not exercise their prerogative to tax their populations do not seem to face political accountability (Ross, 2001; Ngodi, 2005).

Aside from avoiding the application of unpopular decisions, the significant revenue generated by the exploitation of oil has made the exercise of power attractive and promoted rent-seeking behavior. Thus, in the postcolonial period, the opportunity to capture oil rents by the political elite has led to a resistance to policy and institutional reforms that may threaten the political position of the elite and their share of rents (Isham *et al*., 2005; Acemoglu and Robinson, 2006). Indeed, interest groups emerging from the colonial period coincided with the political elite as the oil resources belong to the State in a majority of countries. Karl (1997) noted that oil revenues are transferred to the States and not to private enterprises. In this case, each new increase in resources, due to a discovery of reserves or a price increase, enlarges the importance of the public sector and the centralization of resources by the executive branch. These revenues controlled by the rulers, in the context of poor history of state building, would likely be used to reinforce or exacerbate undemocratic rules (Karl,

1997). Consequently, one can predict that oil countries that began oil exploitation under colonial rule will be, on average, less democratic than other countries that began to exploit oil long after their political independence.

III. Empirical analysis

III.1 Data

This paper argues that democracy in oil-producing countries tends to be positively correlated with the distance separating the date of the beginning of oil production from the date of the country's independence. The International Peace Research Institute of Oslo (PRIO) provides a unique database listing the dates of the beginning of oil production for countries around the world (when available).[2] We retained all the OPEC countries and all other main oil-producing countries drawn from the US Energy Information Administration.[3] The selection of the data is dictated by the fact that the focus of the study is on net oil exporters, but also by the fact that the study is primarily interested in understanding the variation in the democracy levels for the least industrialized oil countries. The dates of independence are drawn from the World Factbook (2010).

Therefore, the variable of interest for this study is defined as:

$$distance = T\ production - T\ independence \quad (1)$$

where T-production is the date of the beginning of oil production, and T-independence is the date of the country's independence.

The dependent variable is the democracy index of Polity 2, drawn from the Polity IV database of Marshall and Jaggers (2002). Though this paper intends to explain the divergence in the results between the studies that have already used the variable polity 2 (see Tsui, 2010; Menaldo and Haber, 2011), one can note that by definition, institutions are not quantifiable. Therefore, measuring their quality is made on the basis of perceptions, and this is what the database Polity IV tries to make through the Polity2 index, which also includes "constraint on the executive" that characterizes much more democratic regimes, and some authoritarian regime (e.g., China) and monarchies. In addition, the index corrects for situations that interrupt the normal functioning of institutions in a country (e.g., in war, or intense political crisis). That is why the Polity 2 index varies between negative values (-10 (complete autocracy)) and positive ones (+10 ((complete democracy)), contrary to most indexes that measure the quality of institutions.

The preceding paragraph explains why Polity 2 will be the core of the regressions of this paper. However, as robustness checks, we will incorporate other dimensions of democracy, including voice and accountability, civil liberties, and political rights. We follow Tsui (2010), studying the dynamics of institutions long-term by examining the effects of the variable *distance* on contemporary democracy levels in oil-producing countries. Several scholars note that the third wave of democracy ended with the democratic transitions in Africa in the ’90s and the end of the Cold War (see Jensen and Wantchekon, 2004). Thus, in this study, the observations of the democracy variable begin in 1995.

III.2. Methodology

Based on the theoretical arguments presented above, the relationship under examination is:

$$Democracy = f(distance, control\ variables) \quad (2)$$

Where *distance* is the difference between the date of the beginning of oil production and the date of the country's independence. To avoid the issue of omitted variables, we include a set of control variables.

The core regressions will be in cross-section, because the interest variable *distance* is time-invariant. A panel framework would lead to a change in the dependent variable and time-variant covariates over time, while repeating the value of the variable of interest, *distance*. This may drive a bias on the estimates due to the redundancy of the identification. To overcome this potential problem, we apply OLS to the following equation:

$$Democracy_i = a + \gamma distance_i + X_i'\beta + \varepsilon_i \quad (3)$$

where ε is the disturbance term, *i* represents countries, and X is a set of control variables. This study includes a large set of control variables in order to reduce the risk of omitted variable bias. These control variables include GDP per capita (as a logarithm), population (as a logarithm), openness measured by the sum of exports plus imports as percent of GDP, and religion fractionalization. All control variables are drawn from the World Development Indicators database (WDI, 2012), except for religion fractionalization, which is drawn from Alesina et al. (2003).

In order to check the robustness of our results, we also include a set of geographic covariates identified in the literature as correlated with institutional quality, namely latitude, European settlers (from Acemoglu et al., 2001), and disease (malaria) index (from Rodrik et al., 2004). In the same sense, we also control for per-capita oil wealth, which is drawn from the Wealth of Nations dataset of the World Bank (2011), oil endowment, and oil discovery, identified by Tsui (2010) as determinants of democracy in oil-producing countries.

However, the number of countries (35 net oil-exporting countries in the developing world) included in the sample might appear limited. Although the sample size reflects the fact that there is a limited number of oil-producing countries in the developing world, one can argue that the empirical test cannot be convincingly done with a small cross section of countries. In order to tackle this possible concern, we will also use the pooled OLS method on the following equation test:

$$Democracy_{it} = \gamma distance_i + \beta' X_{it} + \varepsilon_{it} \quad (4)$$

III.3. Empirical evidence

In this section, based on the aforementioned estimation method, we will first evaluate whether the difference between the date of the beginning of oil production and the date of a country's independence positively affects contemporary democracy levels in oil-producing countries. We will then analyze the results in terms of alternative explanations of this proposition.

III.3.1. First evidence

In this first step, we use the average of the export concentration index over a period of ten years, 1995-2005, as the dependent variable and evaluate the commonly used covariates in the initial year, i.e., GDP per capita (as a logarithm), population (as a logarithm), openness, and religion fractionalization.

Table 1 presents the results of these estimations. It should be noted that because of the lack of data for some variables, the sample is mathematically reduced in regressions that

contain variables with missing data. Therefore, to ensure that the results are representative, we use alternative specifications.

Column 1 of Table 1 exposes the regression between the variable of interest, *distance*, and the dependent variable, *democracy*. The results highlight a significant and positive correlation between distance and democracy index, suggesting that the greater the difference between the date of the beginning of oil production and the date of independence, the more likely the oil-producing country will be democratic *ceteris paribus*. In successively adding other control variables (Table 1; Column 2 to Column 5), the significance of the main finding remains unchanged.

"Table 1, Here"

II.3.2. Geographic and initial conditions

As this study attempts to explain institutional dynamics in oil-producing countries, it is important to check whether this proposal is robust when controlling for geographic or historical variables that may affect the levels of contemporary democracy in these countries. Table 2 presents the regressions of the effect of the variable of interest, *distance*, on *democracy* when controlling for geographic or historical covariates identified in the literature as being correlated with institutional quality, namely latitude, European settlers (from Acemoglu et al., 2001), and disease (malaria) index (from Rodrik et al., 2004). Results show that *distance* is significantly positive, indicating that this variable affects the quality of contemporary democracy, as assumed in the hypothesis.

This proposition is confirmed when we account for the time spent producing oil. Indeed, it can reasonably be argued that older oil-producing countries will have had more time to strengthen their institutions than those that recently began developing oil exports. To take this point into account, a variable to illustrate the time spent producing oil was created, equivalent to the date when the country started oil production. This variable, $Time$, is the period of time spent producing oil from the first year of oil production until the date of the beginning of the estimations.

Columns 3 and 4 of Table 2 present the results of the regressions controlling for time spent producing oil, $Time$. As can be seen, these results do not invalidate those obtained in the preceding estimations. The variable $Time$ does not show a robust effect on the level of contemporary democracy in oil-producing countries. In contrast, the variable *distance* shows a robust effect on democracy in oil-producing countries. In all the regressions, the results support the assertion that the greater the difference between the date of the beginning of oil production and the date of independence, the more likely the oil country will be democratic *ceteris paribus*.

"Table 2 Here"

II.3.3. Type of rule versus type of extraction

Discussions in the literature primarily center on whether the type of colonization affects the current performance of democracy in former colonies (see Lange, 2004; Laporta et al., 2008; Olsson, 2009). For instance, these scholars argue that former British colonies (indirect

rule, common law tradition) demonstrate more constraints against the executive than former French colonies (direct rule, civil law tradition). In this case, our result may be due to missing key historical and institutional variables in our regressions.

To account for this potential limitation, we introduce the legal origin variable, derived from Laporta *et al*. (2008). Countries in the sample are of either British or French legal origin, which leads to the dummy variable (i.e., *legal = 1* when the legal origin is of French origin, and 0 otherwise).

Table 3 presents the results, which demonstrate that while legal origin does not show a significant effect on the contemporaneous level of democracy in oil-producing countries, our variable *distance* does have a robust effect. Therefore, this result suggests that the democratization process highly depends on the type of resources exploited during the colonial period. Thus, this result provides a basis for an explanation of the apparent paradox between the impact of so-called point resources and diffuse resources present in the literature of the resource curse. While point resources, such as oil, have a negative influence on contemporaneous institutional quality and economic growth, this is not the case for diffuse resources, such as cash crops (Bulte *et al*, 2005). Our analysis shows that the type of resources used in the colonial period influenced the nature of the institutions created by settlers, which were maintained after independence because they benefited the national political elites in power in these countries.

"Table 3 Here"

III.4. Further Robustness Checks

III.4.1. Oil discovery and Oil endowment

A possible limitation of the results of this study could be that the level of democracy heavily depends on level of oil endowment in the country. In previous estimations, we have taken this into account by controlling for per-capita oil reserves (see section II.3.2). However, Tsui (2010) argues that politicians care more about the level of the resource than the per capita value of oil wealth, finding that giant oil discoveries (in the absolute term) affect democracy. To evaluate whether the results of this study are due to the failure of taking this issue into account, regressions that control for oil discovery and oil endowment drawn from Tsui (2010) are performed. The results (see Table 4 and Table 5) demonstrate that the distance variable remains positive and highly significant, which corroborates our previous results.

"Table 4 Here"

"Table 5 Here"

III.4.2. Voice and Accountability

One of the bases of the explanation of these results is that countries that did not start producing oil under colonial rule developed the abilities to organize and to represent themselves. Following Olson (2009), a proxy of democracy is used, voice and accountability, which captures perceptions of the extent to which a country's citizens are able to participate in

selecting their government, as well as freedom of expression, freedom of association, and a free media (see WGI, 2012).

If the story that drives this paper holds up, a positive effect of the variable of interest *distance* on the variable Voice and Accountability should be found. This variable, drawn from the Worldwide Governance Indicators (WGI, 2012) of the World Bank, reports values between -2.5 (corresponding to poor governance outcome) and 2.5 (corresponding to better governance outcome). As can be seen in Table 6, results show that the *distance* variable is significantly positive. Therefore, one can conclude that this variable affects the quality of contemporary institutions, via voice and accountability, as assumed in the hypothesis.

"Table 6 Here"

III.4.3. Cross-section time series estimation techniques

The above regressions in the cross-country framework show that the results of the paper are not driven by a redundancy of the variable of interest, *distance*. However, as noted earlier, the number of countries included in the sample might appear as limited. In order to tackle this possible concern, we use cross-section time series estimation techniques.

Table 7 presents the results using the pooled OLS method and controlling for several determinist (fixed) or geographical variables that may affect contemporaneous level of democracy, including *European settlers, malaria index, latitude,* and *religion.* Time dummy variables are included in all the estimations. While time dummy variables are requisite to the

relevancy of pooled OLS estimations (Wooldrige, 2002), in this study they also allow us to control common shocks in specific years, such as the shock on oil prices.

"Table 7 Here"

The results of Table 7 do not reject the significance of the variable *distance.* In sum, none of the robustness checks reject the hypothesis of the positive influence of the interest variable *distance* on contemporary democracy levels in oil countries, confirming that the higher the number of years between T-production and T-independence, the higher the level of democracy in oil-producing countries *ceteris paribus*.

III.4.4. Interpreting the results

An illustrative case of how a poor history of state building can affect a country that began to produce oil before its independence is Angola. Angola reached its independence in 1975. The presence of abundant natural resources, especially oil, in the Angolan subsoil has been demonstrated as one of the trigger elements that kept the country in an intense civil war over the period 1975-2002 (Collier and Hoeffler, 2000). The agreements between the various groups at the end of the conflict were intended to lay the groundwork for building democracy. However, these intentions did reach fruition; the presence of oil resources in a context which has suffered from a poor history of state building has lead to political patronage and rent-seeking activities (De Carvalho et al, 2013).

Indeed, the beginning of oil production in 1956, meaning 19 years before the country's independence, resulted in a country where two realities co-exist. The first reality is the Angola dominated by oil, registering a growth in exports as well as significant investments, and the second reality is the Angola composed of the rest of the economy, which has been neglected with little or no investment. The dominance of the oil sector was felt even during the years of

the civil war. De Carvalho et al. (2013) reported that even during this period, where the United States supported the rebellion, U.S. oil companies were keen to protect their interests by working and signing contracts with the incumbent government, which fought against the rebellion. This means that the oil industry did not need the rest of the economy to be sustained, local governments did not need to make efforts to penetrate the country in order to leverage the necessary resources to the war effort or the construction of the country, and therefore did not need to face political accountability. In addition, the importance of oil inflows has helped finance high military spending, which clearly impacted the ability of the ruling regime that controlled the oil resources to win the war (De Carvalho et al., 2013).

At the end of the war, this legitimation of power by military force has been accompanied by political patronage and rent-seeking, expressed through an powerful bureaucracy that is used to capture rents and to distribute monies to a corrupt judicial system, a system that clearly is no counterweight to the executive branch (Kolstad and Wiig, 2007; De Carvalho et al., 2013). Consequently, Angola shows poor performance in terms of democracy. The polity 2 index of the polity IV project, described above, ranks Angola as having been a non-democratic country with a score of -2 since 2002.

This poor performance is corroborated by other indicators that relate to other aspects of democracy. Thus, the Freedom House database on democracy (Freedom House, 2013), which is interested in civil liberties and political rights, shows Angola with a status of "Non-Free" out of the three possible statuses of "Free", "Partly free," and "Non-free." In addition, the index of voice and accountability (WGI, 2012), described above, rates Angola at the 17th percentile, meaning that 83% of the countries in the world (of the 215 economies included in the database) are more "democratic" than Angola.

In contrast to Angola's performance is Ecuador, which began oil production 95 years after its independence in 1917. Over the same period, Ecuador has received a score of +5 in the Polity IV democracy index, has been given the status of "Partly Free" in terms of civil liberties and political rights from Freedom House (2013), and has ranked in the 39th percentile of the index of democracy voice and accountability of the World Bank.

This example shows that oil countries vary in their success with regards to performance in democracy. This also suggests that having started the exploitation of oil before or after independence may affect the process of democratization in an oil country. Obviously, this proposal may or may not be verified depending on the specifics of each country. However, several empirical robustness checks undertaken in this paper suggest that the higher the number of years between T-production and T-independence, the higher the level of democracy in oil-producing countries *ceteris paribus*.

Stated this way, the next question may be: what factors support these results?

Since the variable of interest can be negative or positive, there may be a shift at point 0, which does not change the meaning of the results found in this paper, but could add a nuanced interpretation. Indeed, for countries with a negative distance variable, when T-independence is greater than T-production, explorations into the types of products exploited during colonial rule and their affect on the current performance of democracy would be relevant. In contrast, for countries with a positive distance variable, when T-independence is less than T-production, it may become a question of whether the time spent prior to oil production has an influence on the current performance of democracy in an oil country.

This possible interpretation of the results could be tested by future research on a larger sample of data that extends the analysis beyond only oil-producing countries in the developing world. The test would help to distinguish the source of the failure of state building, since the conflict over similar studies (see Mijiyawa, 2011) is whether contemporary

institutions are influenced by the ones which have been set up during the colonial rule, or rather the result of the choices made by post-colonial leaders.

The results of this study tend to corroborate both views. Indeed, empirical results support the arguments of Acemoglu et al. (2001), already well known in the literature, of the better institutional performance of former settlement colonies compared to extractive colonies. However, unlike Acemoglu et al. (2001), this study argues that the type of products exploited during colonization also has an impact. More specifically, the results of this paper indicate that the exploitation of oil before independence fostered more extractive institutions and the formation of an elite, which currently act to prevent subsequent progression towards democracy, even after independence. This has occurred because the elite has no interest in giving up the massive rents generated by oil exploitation. In addition, if it is hypothesized, as defended by Mijiyawa (2011), that the longer the period of oil exploitation in the colonial period lasts, the more the extraction strategy and extractive institutions are likely to persist. Therefore, depending on the variable distance, one can predict that oil-producing countries that have begun to exploit oil before independence will tend to be less democratic compared to other oil-producing countries that began producing oil after independence, *ceteris paribus*.

IV. Conclusion

Regarding the effect of oil production on democracy, empirical studies have shown mixed, and even contradictory, results. However, as underlined by Brunnschweiler and Bulte (2012), if the challenge of development researchers and practitioners is to promote sustainable and peaceful development across Africa and elsewhere, they should endeavor to have a better understanding of the dynamics of institutions.

This paper contributes to this discussion through examining a sample of oil-producing states and demonstrating that the distance between the date of the beginning of oil production and the date of a country's independence is positively correlated with contemporaneous democracy levels in oil countries. Various robustness checks do not reject this proposition.

This result has institutional and political foundations that allow us to better clarify the institutional dynamics in resource-based countries. We argue that the time spent under colonial rule fosters extractive institutions and the formation of elite which act to prevent subsequent political reforms even after independence. Two reasons account for this. First, the elites have no interest in political reforms which would favor the emergence of a powerful opposition that could constitute a threat to them. Second, oil exploitation was relatively easy to control under colonial rule without the necessity of mobilizing local workforce, repressing local populations, or replacing local officials, as was the case in plantation colonies.

References

Acemoglu, D., Johnson, S.,, Robinson, J. (2005). Institutions as the Fundamental Cause of Long-Run Growth. In P. Aghion and S. Durlauf (eds.) *Handbook of Economic Growth*. Amsterdam: North-Holland

Acemoglu, D., Johnson, S.,, Robinson, J. (2001). The Colonial Origins of Comparative Development: An Empirical Investigation, *American Economic Review 91(5):1369–1401. 8, 12.*

Acemoglu, D and Robinson, J. (2006) Economic backwardness in political perspective, *American Political Science Review*, 100, 1, 115-131.

Aghion P., Bacchetta P., Ranciere R. (2006). Exchange Rate Volatility and Productivity Growth: the Role of Financial Development, *NBER WP 12117.*

Aslaksen, S. (2010). Oil and democracy: More than a cross-country correlation?, *Journal of Peace Research* 2010 47: 421.

Alexseev, M and Conrad, R. (2009). Elusive oil curse. *Review of Economics and Statistics. Vol. 91, No. 3, Pages 586-598.*

Alesina, A., Devleeschauwer, A., Easterly,W., Kurlat, S.,Wacziarg, R. (2003). Fractionalization, *Journal of Economic Growth*, 8, 2, 155-194.

Brunnschweiler, C .and Bulte, E. (2012). The on-going debate on natural resources and development, VoxEU.org, May 28 2012.

Budina N., Pang G., Van Wijnbergen S. (2007). Nigeria's Growth Record: Dutch Disease or Debt Overhang?. *World Bank Working Paper 4256.*

Bulte, E., Damania, R., Deacon, R. (2005). Resource intensity, institutions and development. *World Development*, 33(7), 1029-1044

Corden, W., Neary, J. (1982). Booming Sector and De-Industrialisation in a Small Open Economy, *Economic Journal 92 (December): 825–48.*

Collier, P. and Hoeffler, A. (2000). Greed and grievance in civil war. *World Bank Policy Research Paper* 2355. World Bank, Washington.

Collier, P. and Gunning, J. (1999). Explaining African economic performance, *Journal of Economic Literature vol. 37(1), pages 64-111.*

De Carvalho, K., Chianeque, L., Delgado, A., (2013). Inequality in Angola. Publication of Africa portal on inequalities and structural transformation: *http://africainequalities.org/publication/inequality-in-angola/*

Engerman, S and Sokoloff, K. (1997). Factor Endowments, Institutions, and Differential Paths of Growth Among New World Economies: A View from Economic Historians of the United States, in *How Latin America Fell Behind*. Stephen Haber, ed., Stanford: Stanford University Press.

Ebeke, C., Laajaj, R., Omgba, L.D.(2012). On the allocation of talented people in developing countries: the role of oil rents, EconomiX, document de travail 2012-26.

Fearon, J. and Laitin, D. (2003). Ethnicity, insurgency, and civil war. *American Political Science Review* 97, 75-90.

Freedom House. (2013). Freedom in the World. http://www.freedomhouse.org/

Gauthier, B., Zeufack. A. (2011). Governance and Oil Revenues in Cameroon, in Paul Collier and Tony Venables (editors) *Plundered Nations? Successes and Failures in Natural Resource Extraction*, Palgrave MacMilland

Haber, S and & Menaldo, V. (2011). Do natural resources fuel authoritarianism? A reappraisal of the resource curse, *American Political Science Review 105:1 (Feb. 2011), pp. 1-26.*

Herb, M. (2005). No representation without taxation? Rents, development, and democracy. *Comparative Politics 37(3):297–317.*

Isham, J., Woolcock, M.,, Pritchett, L., Busby, G. (2005). The Varieties of Resource Experience: Natural Resource Export Structures and the Political Economy of Economic Growth, *World Bank Economic Review, VOL. 19, NO. 2, pp. 141–174*

Jensen, N and Wantchekon, L. (2004). Resource Wealth and Political Regimes in Africa. *Comparative Political Studies*, 37: 816-841.

Karl,T.(1997). *The Paradox of Plenty: Oil Booms and Petro-States.* Berkeley: University of California Press

Kolstad., I, Wiig, A.(2007). Transparency in oil rich economies. Working Paper U4 Issue 2:2007.

Kuété, M. (2008). Café, caféiculteurs et vie politique dans les hautes terres de l'Ouest-Cameroun , *Les Cahiers d'Outre-Mer*, 243, 285-302.

Lange, M. (2010). Democracy and British Plantation Colonialism, *APSA2010 Annual Meeting paper*.

Lange, M. (2004). British Colonial Legacies and Political Development, *World Development*, 32(6):905-922.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. (2008). The Economic Consequences of Legal Origins *Journal of Economic Literature 2008, 46:2, 285–332*

Lujala, P., Rød, J., Thieme, N. (2007). Fighting over Oil: Introducing A New Dataset, *Conflict Management and Peace Science* 24(3), 239-256.

Marshall, M and Jaggers, K. (2002). Polity IV Project: Political Regime Characteristics and Transitions, 1800–2002, *2012 edition available on* http://www.cidcm.umd.edu/inscr/polity/index.htm

Mehlum H., Moene K., Torviks R. (2006). Insitutions and the Resource Curse, *The Economic Journal*, 116, 1-20.

Mitchell, T. (2009) . Carbon Democracy, *Economy and Society, 38 (3). pp 339-432.*

Mijiyawa, A. (2011). Fighting Inflation in Developing Countries: Does Democracy Help? An Empirical Investigation, *Journal of International Development. 23 (5), pp 656–696*.

Mijiyawa, A. (2010). *Institutions et développement*. These Nouveau Regime, CERDI.

Ngodi, E. (2005). Gestion des ressources pétrolières et développement en Afrique, *Présentation à la 11ème Assemblée générale du CODESRIA*, 6-10 décembre 2005, Maputo, Mozambique

Olsson , O. (2009). On the Democratic Legacy of Colonialism, *Journal of Comparative Economics 37(4), 534-551*.

Omgba, L.D. (2014). Institutional foundations of export diversification patterns in oil-producing countries. *Journal of Comparative Economics, forthcoming. doi: 10.1016/j.jce.2014.02.001*.

Rodrik, D., Subramanian, A., Trebbi, F. (2004). Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development, *Journal of Economic Growth, 9 (2)*.

Ross, M. (2001). Does Oil Hinder Democracy?, *World Politics*, 53, 325-361.

Sachs, J and Warner, A. (1997). Natural Resource Abundance and Economic Growth, *Updated version of 1995 NBER working paper, 5398. Center for International Development and Harvard Institute for International Development, November*

Sala-i-martin, X. and Subraamnian, A. (2003). Adressing the Natural Resource Curse: An Illustration from Nigeria" *NBER Working Paper Series w9804.*

Selee, A. (2004). Exploring the Link between Decentralization and Democratic Governance, *in* Decentralization and Democratic Governance in Latin America. Joseph S. Tulchin and Andrew Selee (eds), Woodrow Wilson International Center for Scholars, Washington, D.C

Tétreault, M. (2008). The Political Economy of Middle Eastern Oil, *in* J. Schwedler and D. Gerner (eds.), Understanding the Contemporary Middle East, pp. 255–279, Lynne Rienner, Boulder, Colorado.

Tornell, A. and Lane, P. (1999), The Voracity Effect, *American Economic Review*, 89, 22-46.

Torvik, R. (2009). Why do some resource-abundant countries succeed while others do not?, *Oxford Review of Economic Policy*, 25 (2) pp.241–256

Tsui, K. (2010). More oil, less democracy? Theory and evidence from crude oil discoveries, *Economic Journal*, 121, 89–115.

UN (2001). *Report of the Panel of Experts on the Illegal Exploitation of Natural Resources and Other Forms of Wealth of the Democratic Republic of the Congo*, New York, USA.

Van der Ploeg, F. (2011). Natural resources: Curse of blessing? *Journal of Economic Literature*, Vol. 49(2): 366–420.

WDI. (2012). *World Development Indicators*, The World Bank, Washington, D.C.

WGI. (2012). *Worldwide Governance Indicators*, www.govindicators.org

Wooldridge Jeffrey, (2002). *Econometric Analysis of Cross Section and Panel Data*. Cambridge, Mass. MIT Press

World Bank. (2011). *The Changing Wealth of Nations*, The World Bank, Washington, D.C.

Table 1 : Intial regressions

VARIABLES	Democracy	Democracy	Democracy	Democracy	Democracy
Distance	0.0167**	0.0124**	0.0121**	0.0121**	0.0135**
	(2.661)	(2.434)	(2.243)	(2.243)	(2.293)
LnGDP_capita		0.946	0.801	0.801	1.027
		(1.136)	(0.921)	(0.921)	(1.203)
Ln (Population)		1.962**	1.827*	1.827*	1.989**
		(2.376)	(1.969)	(1.969)	(2.426)
Openness			-0.0128	-0.0128	-0.0256
			(-0.466)	(-0.466)	(-0.918)
Religion_fractionalization					588.1
					(1.399)
Constant	-2.211**	-42.11**	-37.48*	-37.48*	-43.05**
	(-2.059)	(-2.423)	(-1.826)	(-1.826)	(-2.360)
Observations	33	33	32	32	32
R-squared	0.133	0.277	0.291	0.291	0.336

Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 2 : Geographic and initial conditions

VARIABLES	Democracy	Democracy	Democracy	Democracy
Distance	0.0120**	0.0110**	0.0127**	0.0121**
	(2.066)	(2.206)	(2.589)	(2.558)
Time			0.0518*	0.0345
			(1.822)	(0.938)
LnGDP_capita		-0.360	-0.488	-0.629
		(-0.276)	(-0.373)	(-0.464)
European Settler in 1900	0.231***	0.178***	0.174***	0.212***
	(8.155)	(4.340)	(4.303)	(3.151)
Malaria index	-3.356	-5.976*	-2.802	-3.948
	(-1.644)	(-2.019)	(-0.848)	(-1.052)
Latitude	-25.06***	-24.13***	-17.93**	-17.29**
	(-4.474)	(-3.727)	(-2.483)	(-2.260)
Per capita oil reserves		-4.55e-05	-3.13e-05	-1.97e-05
		(-1.127)	(-0.857)	(-0.490)
Openness				0.0323
				(1.486)
Ln (Population)				0.903
				(1.485)
Religion_fractionalization				207.1
				(0.536)
Constant	2.404	7.602	3.179	-13.23
	(1.367)	(0.710)	(0.284)	(-0.862)
Observations	30	25	25	25
R-squared	0.738	0.793	0.818	0.856

Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 3 : Controlling for Legal origin

VARIABLES	Democracy	Democracy
Distance	0.0170**	0.0138**
	(2.486)	(2.130)
Legal	1.440	1.909
	(0.533)	(0.541)
LnGDP_capita		1.079
		(1.445)
Ln (Population)		2.149**
		(2.259)
Openness		-0.0128
		(-0.327)
Religion_fractionalization		598.5
		(1.361)
Constant	-3.272	-48.53**
	(-1.298)	(-2.302)
Observations	33	32
R-squared	0.143	0.349

Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 4 : Oil endowment

VARIABLES	Democracy	Democracy	Democracy
Distance		0.0156**	0.0106**
		(2.387)	(2.529)
Oil endowment	-0.0287**	-0.0238*	-0.00353
	(-2.091)	(-1.724)	(-0.157)
LnGDP_capita			-0.658
			(-0.634)
European Settler in 1900			0.232***
			(6.642)
Latitude			-23.94***
			(-4.702)
Malaria index			-5.385*
			(-1.941)
Ln (Population)			1.022
			(1.600)
Religion_fractionalization			2.665
			(0.00982)
Openness			0.0264*
			(1.738)
Constant	-0.499	-1.350	-10.68
	(-0.379)	(-1.065)	(-0.634)
Observations	33	33	29
R-squared	0.059	0.173	0.812

Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 5 : Oil discovery

VARIABLES	Democracy	Democracy	Democracy
Distance		0.0172**	0.0126***
		(2.654)	(2.915)
Oil discovery	0.378	1.496	2.057
	(0.188)	(0.776)	(0.719)
LnGDP_capita			-1.014
			(-1.143)
European Settler in 1900			0.231***
			(6.969)
Latitude			-26.41***
			(-4.926)
Malaria index			-6.887**
			(-2.172)
Ln (Population)			0.707
			(1.001)
Religion_fractionalization			56.42
			(0.199)
Openness			0.0240
			(1.432)
Constant	-1.551	-2.517*	-2.265
	(-1.117)	(-1.934)	(-0.128)
Observations	33	33	29
R-squared	0.000	0.138	0.819

Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 6: Voice and Accountability

VARIABLES	Voice and Ac	Voice and Ac	Voice and Ac	Voice and Ac
Distance	0.00180***	0.00140***	0.00137***	0.00160***
	(3.896)	(3.909)	(3.622)	(3.528)
LnGDP_capita		0.279***	0.264***	0.297***
		(3.366)	(3.147)	(3.821)
Ln (Population)		0.130*	0.118	0.139*
		(1.730)	(1.450)	(1.822)
Openness			-0.00119	-0.00310
			(-0.489)	(-1.288)
Religion_fractionalization				86.23**
				(2.149)
Constant	-0.840***	-5.218***	-4.778**	-5.556***
	(-7.890)	(-2.975)	(-2.460)	(-3.141)
Observations	35	35	34	33
R-squared	0.156	0.357	0.366	0.466

Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 7 : Cross section time series

VARIABLES	(1) Democracy	(2) Voice and Accountability
Distance	0.0104***	0.00120***
	(7.571)	(5.993)
Oil endowment	-0.00517	-0.00298***
	(-0.842)	(-5.691)
LnGDP_capita	-0.501	0.221***
	(-1.617)	(5.408)
European Settler in 1900	0.223***	0.0143***
	(17.70)	(7.290)
Latitude	-24.02***	-1.365***
	(-12.91)	(-5.821)
Malaria index	-5.273***	-0.481***
	(-6.353)	(-3.476)
Ln (Population)	1.024***	0.108***
	(4.672)	(4.086)
Religion_fractionalization	11.23	55.39***
	(0.136)	(3.224)
Openness	0.0209***	7.86e-05
	(4.428)	(0.115)
Constant	-12.01**	-4.050***
	(-2.212)	(-5.893)
Time dummy	yes	yes
Observations	308	198
R-squared	0.723	0.696

Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Endnotes

[1] Formal institutions can be defined as all written contracts, political, legal and economic rules, whose execution should be provided by an entity, usually the State or its agencies (Mijiyawa, 2010).

[2] The data are described in Lujala et al (2007).

3 The list of the countries: Algeria (1958-1962) Angola(1956-1975) Argentina (1907-1816) Brazil(1940-1822) Brunei Darussalam (1929-1984) Cameroon(1978-1960) Chad(1975-1960) Colombia(1918-1810) Congo, Rep. (1957-1960) Ecuador (1917-1822) Egypt, Arab Rep.(1910-1922) Gabon (1957-1960) Indonesia (1885-1945) Iran, Islamic Rep. (1912-1925) Iraq (1934-1932) Kazakhstan(1911-1991) Kuwait (1946-1961) Libya(1961-1951) Malaysia (1913-1957) Mexico (1901-1810) Nigeria (1958-1960) Oman (1967-1650) Peru(1883-1821) Qatar (1949-1971) Saudi Arabia (1938-1932) Syrian Arab Republic (1968-1946) Thailand (1959-1238) Trinidad and Tobago (1908-1962) Tunisia(1966-1956) Turkmenistan(1911-1991) United Arab Emirates (1962-1971) Uzbekistan(1945-1991) Venezuela, RB (1917-1811) Vietnam (1986-1945) Yemen, Rep. (1986-1990). Note: the date of the beginning of oil production and the date of the country's independence (T-production - T-independence) are in parentheses. The exclusion of Oman and Thailand, in robustness checks, does not change the significance and the importance of the results.