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Oil and political survival

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ABSTRACT

Political economy theories on the "natural resource curse" predict that natural resource wealth is a determining factor for the length of time political leaderships remain in office. Whether resource wealth leads to longer or shorter durations in political office depends on the political incentives created by the natural resources, which in turn depend on the types of institutions and natural resource. Exploiting a sample of more than 600 political leadership durations in up to 152 countries, we find that both institutions and resource types matter for the effect that natural resource wealth has on political survival: (i) wealth derived from natural resources affects political survival in intermediate and autocratic, but not in democratic, polities; and (ii) while oil and non-lootable diamonds are associated with positive effects on the duration in political office, minerals are associated with negative duration effects.

1. Introduction

Over the last couple of decades, researchers have gathered mounting evidence that wealth derived from natural resources contributes to numerous dysfunctional economic and political outcomes—from poor and uneven economic development, to authoritarianism, corruption, and violent conflict. These findings are commonly referred to as "the resource curse".[1] Lately, increasing attention has been drawn to the political incentives triggered by resource booms. In a paper in this journal, Robinson et al. (2006, p. 447) argue that: "… the political incentives that resource endowments generate are the key to understanding whether or not they are a curse."

In most political economy models on the resource curse, a key incentive of political leaders is to stay in power to harvest not only the current, but also the future rents from natural resource extraction. Moreover, resource rents equip political leaders with funds that can be used to increase their chances of surviving in political office, via different forms of patronage or strategic spending, tax cuts, or political oppression.[2] For these reasons we would expect abundance in natural resources to be associated with longer durations in political office.

However, there may also be counteracting forces at work. For example, resource wealth may motivate oppositional groups to seize power, and certain types of natural resources may provide financing for the activities of rebel factions.[3] Alternatively, the political leadership may consist of different political elites competing over the rents from holding office.[4] If these two latter mechanisms are relevant, natural resources may be expected to destabilize the political leaderships and lead to shorter durations in office. Finally, the political leaderships may be effectively constrained by different types of institutional arrangements. Whether the relationship between natural resource wealth and political survival is positive, neutral, or negative may, thus, generally depend on the value of the resource rents, the type of resources, and the political and institutional environment.

The relationship between resource wealth and the duration of a political leadership remains mainly theoretical.[5] We aim to fill this

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[1] See, e.g., Sachs and Warner (1995) on economic development, Ross (2001) on authoritarianism, Bhattacharyya and Hodler (2010) on corruption, and Collier and Hoeffler (2004) on civil war. Frankel (2010) and Van der Ploeg (2011) offer two recent overviews of the empirical and theoretical research on the resource curse.

[2] See Caselli and Cunningham (2009) for a systematic review over how political leadership incentives may be influenced by natural resources, Robinson and Torvik (2005) and Robinson et al. (2006) for different forms of strategic spending, and Ross (2001, 2008) for an overview of the so-called rentier state theory.

[3] See, e.g., Collier and Hoeffler (2004), or Lujala (2010).

[4] As in, e.g., Acemoglu et al. (2004, 2010), and Caselli (2006).

[5] Some empirical studies on resource wealth and political survival do exist, but these have typically focused on either particular subgroups of countries, or on specific polity and regime types. Cuaresma et al. (2011) analyze the relationship between oil and the duration of dictatorships, and Omgba (2009) analyzes the duration in office of chief executives of 26 African countries. Ross (2008) employs a broader sample of 170 countries from 1960 to 2002, but his main focus is on regime survival (e.g. the survival of "authoritarianism" and "democracy") and not on political survival, as in the present study. In a new and complementary study to ours, Wright et al. (2012) document a positive effect of oil wealth on autocratic regime survival using a different methodology (ordinary and conditional logit) and regime duration variable (from Geddes et al., 2012) than we do.

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gap in the literature by employing the broadest possible sample, given the available data, to investigate this relationship. This leaves us with a sample of up to 152 countries and 617 leadership durations (henceforth LDs).[6] The natural resource variables that we include in our analysis are various measures of oil income and wealth, mineral rents, and indicators for different types of diamond extraction.

Our empirical results are strongly suggestive that resource endowments matter for political survival. Oil wealth is a particularly important determinant, and its association with political survival can even be seen in the raw data. Fig. 1 plots the Kaplan–Meier survival function for oil poor (solid line) and oil rich (dashed line) political leaderships, respectively, and the graph indicates that the average survival rate in political office is higher for the oil rich than for the oil poor political leaderships.[7]

When we investigate this relationship more rigorously, using survival analysis, our baseline estimates suggest that an increase in the value of oil production in a country's GDP by one standard deviation increases the expected duration in political office by approximately 10 months on average. The positive and statistically significant association between oil and political survival is robust to using a range of parametric and non-parametric survival models, and to the inclusion of potentially confounding economic, political, demographic and geopolitical factors.

The graph in Fig. 1 is uninformative about confounding factors, and the baseline estimates may also conceal important nonlinearities in the data. In particular, the theoretical predictions on the political incentives of natural resources are often conditioned on institutional parameters. The political effects of natural resources are expected to be stronger the lower the level of democracy, or, alternatively, the weaker are the constraints on the executive.[8] Additionally, resource type may matter. Because natural resource wealth might facilitate the financing of war, it may make armed conflicts more likely.[9] Moreover, easily accessible and extractable resources, such as minerals and certain types of diamonds, may provide financing for competing elites or rebel groups and thus increase the odds that the incumbent is ousted from political office. Lujala (2010) provides empirical evidence that both the onset and the duration of conflict are positively associated with the accessibility of the resources. The hypothesis that different types of resources may affect social tension and conflict differently is further supported by the finding in Smith (2004) that oil wealth is associated with a lower, not higher, likelihood of civil war and anti-state protests.

Investigating the effects of political institutions and resource types on political survival, both separately and in interaction, we find that both dimensions matter. First, while most of the resource variables are significant determinants of political survival in non-democratic polities, we find no systematic effects within the sample of democratic polities.[10] The pattern in Fig. 1 suggesting a positive relationship between oil and political survival is hence exclusively driven by non-democracies. Second, we find that the type of resource matters. Those resource types that are the least technically appropriable, oil and non-lootable diamonds, are positively related to political survival. On the other hand, those resources that are the most technically appropriable, minerals and lootable diamonds, are found to be negatively associated with survival in office.[11] In the light of the insights from the conflict literature, one might thus hypothesize that conflict should be a main mechanisms by which different resource types affect political survival differently. We therefore run a set of regressions where we include conflict variables among the regressors. As expected, the results from these regressions suggest that conflict is negatively related to political survival. However, the resource effects remain significant and, if anything, stronger. Thus, our main results on the effects of resource type do not appear to be exclusively driven by violent conflict.

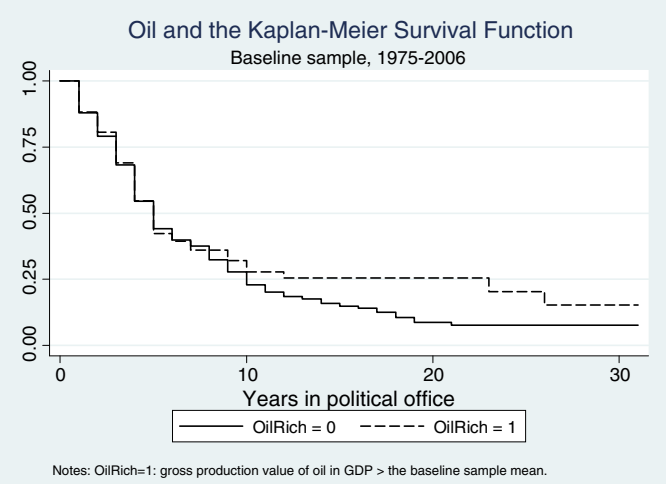

Fig. 1. Oil and political survival in the baseline sample of 138 countries and 500 leadership durations.

Our data do not allow us to investigate all the different mechanisms by which different resource types may have different effects for political survival. However, one straightforward interpretation is that different types of resources may be exploited by different groups in the population. In particular, resources that are less technically appropriable, such offshore oil and most forms of subsoil oil reservoirs, require a high level of technology and large investments which can only be financed by large companies or governments. These types of resources are also examples of "point source" resources that are typically easier for the government to tax than "diffuse" resources.[12] Other examples of point source resources include natural gas and non-lootable diamonds. On the other hand, the appropriation of more diffuse resources, such as several forms of minerals and lootable diamonds, requires less technology and investments and can more easily be exploited by non-elites. These types of resources can also be more difficult for the government to tax. This is consistent with insights from the conflict literature, where only the technically appropriable resources are associated with violent conflict, arguably via the financing of the activities of rebel groups. However, the funds from the appropriation of diffuse resources may not only finance violent conflict, but could also help sustain other types of political activities by oppositional groups. So, while oil and non-lootable diamonds to a larger extent may be exploited by the political leaderships in

[6] We define a leadership duration as the duration in office of the party which has the chief executive, or, in the case where chief executive is not associated with a particular party, the duration in office of the chief executive. The precise definition is provided in Section 3.1.

[7] The Kaplan–Meier survival estimate is the conditional probability of survival beyond time t, given survival up until t: $\hat{S}(t) = \prod_{j|t_j \le t} \left(\frac{n_j - d_j}{n_j}\right)$, where n_j is the number of political leaderships at risk at time t_j and d_j is the number of political failures at time t_j.

[8] As in, e.g., Robinson et al. (2006) and further surveyed in van der Ploeg (2011).

[9] See, e.g., Collier and Hoeffler (2004).

[10] With respect to institutions, we follow the standard approach to institutional categorization and account for both polity types (democracy, intermediate, autocracy), autocratic regime types (military, single party, personalistic regimes, and monarchies), and, in the sample of democratic polities, constitutional features (e.g., the form of government and the electoral rules).

[11] The term "technical appropriability" refers to the physical and economical characteristics of the natural resource. In particular, resources which are easy to extract, very valuable, can be stored, are easily transported, and are easily sold, are characterized as technically appropriable (Boschini et al., 2007).

[12] On the distinction between "point source" resources and "diffuse" resources, see, e.g. Auty (1997) or Boschini et al. (2007). Notice that this distinction is not precise with respect to exactly which types of natural resources belong in which category, and while some types of minerals may be categorized as diffuse resources, others are better defined as point source resources.