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Natural resources and sub-national economic performance: Does sub-national democracy matter?

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ABSTRACT

The differentiation in the impact of resources on economic growth is often explained by the specifics of institutional factors. The aim of this paper is to investigate how sub-national political differences influence the effect of natural resources on economic growth. Using a dataset of Russian regions, this paper demonstrates that sub-national democratization influences the growth effects of resources and considers possible mechanisms for this influence. The paper finds that in Russia, natural resources are only capable of promoting growth in the regions with non-democratic political systems that, at the same time, have an efficient and non-corrupt bureaucracy.

1. Introduction

The influence of the quality of institutions on the economic effect of natural resources has received substantial scholarly attention in both the theoretical and the empirical literature.[1] While most papers focus on the role of the rule of law and property rights protection in this context, there exists a much smaller body of literature on the role of democracy. Collier and Hoeffler (2009: 293), in one of the most recent and highly influential papers in this area, provide a striking result: they find that "in developing countries the combination of high natural resource rents and open democratic systems has been growth-reducing". This effect is primarily caused by intensified political competition and can be offset by the improvement of checks and balances, which are, however, typically very weak in nascent democracies. This argument is consistent with other studies showing that in young democracies, politics is particularly likely to deteriorate into clientelism and corruption (Keefer, 2007; Keefer and Vlaicu, 2008). Eifert et al. (2002), similarly, conclude that while mature democracies outperform all other regimes in terms of resource management, factional democracies, i.e., democratic regimes with weak parties and the strong personalization of politics, have particular problems in this regard, even in comparison with some autocracies.

However, there exists another set of studies in the resource literature that contradicts the conclusions of Collier and Hoeffler. Robinson et al. (2006) suggest that the resource curse can be mitigated by increasing the accountability of the state, which is typically associated with democratization. Cabrales and Hauk (2011) argue that poor political institutions affect the way in which human capital is influenced by resource abundance and, therefore, that they contribute to the resource curse. Bhattacharyya and Holder (2010a, 2010b) argue that resources have a negative impact on financial development and lead to higher corruption in autocracies but not in democracies. Dunning (2010) suggests that the weak incumbents are less inclined to capture resource rents. Dunning (2005) and Wiig and Kolstad (2012) argue that political regimes can influence the incentives for diversification in a resource-rich country and, thus, eventually, economic growth. Bulte and Damania (2008) conclude that autocracy strengthens the curse of natural resources, while democracy has no effect on the way in which resources affect growth (but has a direct negative impact on economic performance). Kolstad (2009) concludes that political institutions have no effect on the resource curse, and the effects of the curse can only be attenuated by improving private sector institutions (i.e., the rule of law). Andersen and Aslaksen (2008) and Boschini et al. (2009) argue that more specific constitutional details

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[1] See, e.g., Brueckner, 2010; Collier and Goderis, 2009; Mehlum et al., 2006; Tornell and Lane, 1999.

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have a greater impact on growth than the level of democracy. Thus, there appears to be no consensus in the literature as to how democratization and resource abundance interact while affecting economic growth.

In this paper, I examine a different dimension of this discussion. While nearly all studies focus on international comparisons, this paper examines *intra-national* variation, i.e., differences between the individual regions in a federal state.[2] There are two arguments in favor of studying the sub-national conditional resource effects: one is technical (data compatibility) and the other is substantial (the need to address sub-national variations in political regimes). On the one hand, by using a sub-national sample, one is able to obtain more compatible data, and this methodology also reduces the potential for selection bias. Sub-national data often come from a single statistical agency that collects its information directly from businesses and households rather than other statistical offices (as is usually the case in international comparisons). Using sub-national data is also a means of reducing the impact of unobserved heterogeneity. The downside of this strategy is the generalization problem: the external validity of the results for other countries is not necessarily a given. However, even in this case, the evidence from the intra-regional comparisons may at least contribute to our understanding of the effects of resources on economic growth.

On the other hand, *sub-national* variations in political institutions constitute an important research topic as such. The turn towards the analysis of "sub-national regimes" has been evident in recent years; a substantial body of research indicates that the *within-country* differences in the political systems of the constituent units of federations can be nearly as large as the between-country variation. There are also substantial discrepancies between political regimes at the federal and regional levels: for example, democratic states can include stable and persistent "isles of autocracy", and non-democratic central governments must contend with more democratic regional administrations. Examples of this sort have been reported not only from the developing world (Mexico, Russia, Brazil, Argentina, and India), but also from several developed countries (see Gervasoni, 2010; Gibson, 2005; McMann, 2006; Sidel, forthcoming). The presence of sub-national differences in political regimes may have a serious impact on the evaluation of the consequences of democratization: it is questionable whether it is possible to make a judgment regarding a nation's political system by considering the central government in isolation. The sub-national variation is even more important for studies on the effect of resources on growth. Because resources are allocated unequally across the territories of most countries, their concentrations in jurisdictions with specific sub-national political regimes that differ from the organization of politics at the national level could result in the mismeasurement of institutions when analyzing conditional resource effects in international comparisons. In addition, sub-national variation may affect the normative analyses of the desirability of decentralizing resource management (Meynen and Doornbos, 2004), which in this case is conditional on the characteristics of sub-national politics.

This paper employs a sample of the regions of the Russian Federation between 2000 and 2006 to study the impact of political institutions on the effect of natural resources on growth, and it focuses on oil and gas extraction. Although Russia has been the subject of discussions on the (potential) resource curse from the perspectives of economic development (see, e.g., Ahrend, 2005) and democracy (see, e.g., Treisman, 2010), I am unaware of any previous studies exploring the variation across Russian regions that account for the interaction between sub-national political institutions and natural resources as determinants of economic growth.[3] The broad consensus in the literature appears to be that in the early 2000s, before the centralization reforms of Vladimir Putin, the Russian regions were characterized by enormous variations in political systems, ranging from outright autocracies to more or less competitive political systems. However, I should also acknowledge that the Russian sample is skewed in the sense that it only includes observations with low level of democracy and hybrid regimes, but no observations with advanced democratic systems. There are several reasons to consider this skewed sample. From a theoretical perspective, as mentioned, nascent democracies or hybrid regimes are considered to differ substantially from mature democracies. From the normative perspective, achieving a highly mature democracy with elaborate checks and balances could possibly be not feasible for developing countries (although it constitutes a different research topic outside the scope of this paper). What these countries could be able to obtain through realistic and feasible reforms are more or less advanced hybrid regimes. Therefore, comparing systems with low and medium levels of democracy could provide additional insights for developing countries in terms of designing institutional reforms than would be provided if one simply compares these cases to countries with advanced democracy.

While the main focus of the paper is, similar to Collier and Hoeffler, to understand whether democratization has an effect on how resources affect economic growth, I also account for another dimension of sub-national politics: the quality of the bureaucracy. Both democracies and autocracies can differ in terms of their capacity for monitoring bureaucrats or their human capital endowment, resulting in different quality sub-national bureaucracies. My results entirely confirm the conclusions of Collier and Hoeffler using sub-national data: I find that resources have a positive effect on economic growth in non-democratic regimes, but not in democracies. However, in addition to the empirical results of Collier and Hoeffler, but also entirely consistent with their theoretical reasoning, I find that oil and gas have a positive effect on economic growth only in non-democratic regions with relatively well-functioning bureaucracies.[4] I confirm my conclusions for both the official statistical data of the Russian statistical authorities, for a wide range of other indicators of development and well-being reported by various development organizations, for household survey data and even for subjective well-being as measured through public opinion surveys. However, growth also appears to be associated with increased inequality.

This paper is organized as follows. The second section presents the main causal relationships investigated in this study. The third section discusses the model and data in greater detail. The fourth section reports the main results. The fifth section discusses the results with respect to my hypotheses. The last section concludes the paper.

2. Russian regions, institutions and oil and gas

2.1. Why Russia?

The country selected to study the conditional growth effect of resources in an intra-national setting should exhibit four main properties. First, natural resources should play an important role for at least a subset of its regions. Second, the regions should differ substantially in terms of natural resource extraction. Third, there should be significant growth differentials between regions. Finally, there must be substantial variations in the political environments across the

[2] Some recent articles exploit sub-national resource variation in various settings (Borge et al., 2012; Caselli and Michaels, 2009; Esanov, 2009; Goldberg et al., 2008; James and Aadland, 2010; James and James, 2011; Johnson, 2006; Michaels, 2011; Papyrakis and Gerlagh, 2007; Papyrakis and Raveh, 2012; Zhan, 2011; forthcoming), although the literature remains extremely scarce. There has been, to my knowledge, no work concerning econometric analyses of the *conditional* resource effect on economic growth influenced by sub-national variations in *political* institutions.

[3] Other papers examining sub-national resource variation in Russia include Desai et al. (2005), Mishura (2010) and Vasilyeva (2012), but they do not consider sub-national democracy.

[4] I also find a significant positive effect of oil and gas extraction on growth for democracies with poor quality of bureaucracy, but, as it will be argued in what follows, this effect is driven by a single outlier.