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Revisiting the Oil Curse: Does Ownership Matter?

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Summary. — A large body of literature finds a negative relationship between oil abundance and economic growth. The existing empirical evidence on the oil curse, however, does not account for variations in the ownership of oil. This article investigates whether the effect of oil abundance on growth varies with ownership structures. It also investigates whether pre-existing institutional conditions influence the effect of oil abundance across different ownership structures. Using a novel database on ownership structures and employing a panel fixed effects estimation method, it analyzes a sample of oil-exporting developing countries during the period 1984–2005. The results show that the effect of oil abundance on growth varies with ownership structures and is also influenced by the quality of pre-existing institutions. Under state ownership and control, oil abundance reduces growth when the institutional quality is poor, but increases growth when the institutional quality is good. Under private ownership, on the other hand, oil abundance increases growth when the institutional quality is poor, but reduces growth when the institutional quality is good. The results suggest that ownership matters and countries can avoid the oil curse by choosing an appropriate ownership structure given their pre-existing institutional circumstances. The policy advice in this article is: adopt state ownership and control if the institutions are strong, if the institutions are weak, transfer ownership to foreign oil companies.

Key words — oil curse, ownership, economic growth, institutional quality

1. INTRODUCTION

Since the seminal work of Sachs and Warner (1995), a large body of literature has developed which suggests that on average resource-rich countries fare worse in terms of economic progress than resource-poor countries (e.g., Auty, 2001; Bulte, Damania, & Deacon, 2005; Frankel, 2012; Gylfason, Herbertsson, & Zoega, 1999; Rosser, 2006). This paradoxical result underpins what is now widely known as the "resource curse" puzzle. While the initial studies in the resource curse literature focused on resource-rich countries in general, subsequent research found that not all resource-rich countries witness slower growth. Only countries which export "point source" resources, most notably oil, suffer from adverse economic effects (e.g., Isham, Woolcock, Pritchett, & Busby, 2005; Sala-i-Martin & Subramanian, 2013).

This finding has been surprising given that oil generates large windfall profits for oil-exporting countries, which should ideally lead them to the path of higher growth and development. This, however, does not seem to be the case. Nigeria, for instance, received around $350 billion (1995 $) from oil exports during 1965–2000. Yet, its per capita output in 2000 was 30% lower than that in 1965 (Deacon & Rode, 2012; Sala-i-Martin & Subramanian, 2013). Similarly, Venezuela, which has been a significant beneficiary of the oil booms of the 1970s, witnessed a decrease of 1.4% per annum in per capita output during 1970–90 (Lane & Tornell, 1996). Iraq's and Gabon's per capita income also decreased by 85% and 45% respectively during 1980–2006 (Ross, 2012, p. 1). The disappointing economic performance of oil-exporting countries has given rise to the contention that oil abundance is detrimental to growth.

Few scholars, however, claim that oil abundance is not responsible for poor economic growth. Rather, it is the presence of state ownership in the oil sector which causes adverse economic effects (Quinn & Conway, 2008; Ross, 1999; Ross, 2012). This claim, however, has not been validated through a systematic quantitative analysis. Most studies on the oil curse overlook ownership—that is, the right to develop oil—as an explanatory variable (e.g., Gelb, 1988; Karl, 1997). The studies which look at natural resources broadly and question the assumption that resource abundance by itself is an economic curse also neglect the issue of ownership. They investigate only the role of institutional quality and claim that institutional quality is decisive for the resource curse. That is, countries which have strong institutions at the time of resource development—low corruption, strong property rights protection, strong rule of law, and effective bureaucracy—benefit from their resource wealth; but those with weak institutions suffer from the curse (e.g., Lane & Tornell, 1996; Mehlum, Moene, & Torvik, 2006a, 2006b; Robinson, Torvik, & Verdier, 2006; Tornell & Lane, 1999).

This article addresses the following questions: Is state ownership really responsible for the worse effect of oil abundance on economic growth? Does a shift away from state ownership lead to better growth outcomes? In the past few decades, many oil-exporting countries—such as Cameroon, Republic of the Congo, and Yemen—have transferred ownership of oil to private companies (particularly foreign companies). Transfer of ownership is mostly done through the signing of concessionary contracts between the state and private companies. Through these contracts, private companies get the exclusive right to develop oil deposits over a tract of land for a limited number of years (generally 20–40 years). In return of this right, they pay royalty and taxes to the state.

Private ownership is expected to become more common in the coming years, as new developments in oil extraction (for instance, deep water offshore drilling) require complex technologies and large investments which are more forthcoming from foreign oil companies. Also many new oil deposits are

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increasingly being discovered in poor countries which do not have the financial and technical capacity to develop oil fields on their own (see Asiedu, 2013; Ross, 2012, pp. 8–9). There is currently no systematic quantitative evidence on how private ownership in the oil sector affects economic growth. The existing evidence is limited to the effect of private versus state ownership on firm-level efficiency and profitability indicators (e.g., Eller, Hartley, & Medlock, 2011; Megginson, Nash, & Van Randenborgh, 1994; Victor, 2007; Wolf, 2009).

The variations in oil-development strategies, however, are not limited to only state and private ownership; there are variations even within state ownership. Luong and Weinthal (2010) find that state leaders, while assuming their ownership, do not always retain control over operations and management. There are many oil-exporting countries—including Angola, Brunei, United Arab Emirates, and Qatar—in which the state has transferred control to foreign oil companies. Transfer of control is usually done through the signing of production sharing contracts between the state and foreign oil companies. Under these contracts, foreign companies develop oil deposits on behalf of the state and in return receive a share of the produced oil as payment. Over the past few decades, state ownership with control vested with foreign companies has become more common than a scenario where states assume both ownership and control. But scholars who predict that state ownership is responsible for lower economic growth do not account for variations within state ownership. This raises the question whether transfer of control to foreign oil companies leads to a differential effect of state ownership on economic growth.

In this article, I investigate whether the effect of oil abundance on economic growth differs across the three ownership structures—that is, state ownership with control, state ownership without control, and private ownership. I also investigate whether pre-existing institutional conditions—which have been found to play a decisive role in the broader resource curse literature—influence the growth effect across different ownership structures. Using a fixed effects panel estimation method, I analyze pooled time-series cross-national data of 20 oil-exporting developing countries during the period 1984–2005. The analysis is based on a novel database developed by Luong and Weinthal (2010) which provides data on oil ownership structures for countries in the developing world.

The estimation results show that the effect of oil abundance on growth differs across ownership structures and is also influenced by the quality of pre-existing institutions. When there is state ownership and control, oil abundance reduces growth when the institutions are weak, but increases growth when the institutions are strong. On the other hand, when there is private ownership, oil abundance increases growth when the institutions are weak, but reduces growth when the institutions are strong. The results also show that under state ownership, oil abundance affects growth only when the state retains control over operations and management; when the state transfers control to foreign oil companies, oil abundance has no significant effect on growth.

The overall results suggest that the type of ownership matters for the growth curse. Also the quality of pre-existing institutions plays a determining role. But it alone is not decisive for the curse as predicted by the existing studies in the resource curse literature. Oil-exporting developing countries, which are the usual suspects of the growth curse, can in fact witness higher growth if they choose an appropriate ownership structure given their pre-existing institutional circumstances. According to estimates in this study, during 1984–2005, Iraq—with extremely weak institutions—could have escaped the growth curse and witnessed 1.1% higher growth from every percent increase in oil production to GDP if it would have chosen private ownership instead of state ownership and control in the oil sector. The policy advice in this article is: adopt state ownership and control if the institutions are strong, if the institutions are weak, transfer ownership to foreign oil companies.

This article takes forward the pioneering work of Luong and Weinthal (2010) on ownership structures. Using five oil-rich countries of the former Soviet Union during 1990–2005, they provide a qualitative analysis of how ownership structures affect taxation and spending policies. They show that oil wealth leads to poor taxation and spending outcomes only when there is state ownership. When private investors have a more prominent role in the oil sector, oil-rich countries witness better fiscal outcomes. This article relates to the work of Brunnschweiler (2009) who did an exploratory analysis of the effect of oil ownership on growth of 27 transition countries of the former Soviet Union, and Central and Eastern Europe during 1990–2006. The author uses the ownership data of Luong and Weinthal and finds that all ownership structures lead to higher growth and that state ownership with control contributes most positively to growth. However, as the author herself suggests, the results are not reliable as the sample consists of only six oil-rich countries which, during the time period examined, have limited variability in the ownership structures adopted by them.

In another study, Brunnschweiler and Valente (2013) investigate whether domestic (both state and private) control in the oil sector has a differential effect on domestic income vis-à-vis foreign control and mixed domestic–foreign control. Analyzing 68 oil-producing countries during 1867–2008, they find that mixed domestic–foreign control generates higher income than foreign and domestic control alone. The study, however, deviates from the focus on state versus private ownership and hence does not address the question whether state ownership is responsible for poor economic growth and whether the shift away from state ownership produces different results. It also uses a very long time series which could be problematic as the oil world has changed significantly since the 1970s and the 1980s (see Ross, 2012 for a detailed discussion). As Andersen and Ross (2013) also discuss, ignoring structural changes and extending datasets backward to pre-1970 era can lead to misleading inferences. Also none of the existing studies on oil ownership investigate the role of pre-existing institutional quality in influencing the effect of ownership structures. They implicitly assume that the effect of ownership is monotonic and independent of the institutional circumstances that prevail in a country. Brunnschweiler and Valente (2013) did account for the effect of political regimes (i.e., whether democracy, autocracy or anocracy) on the relationship between oil control rights and domestic income. However, the type of political regime is not a good indicator of the quality of a country's institutions, that is, the effectiveness of bureaucracy, the rule of law, the incidence of corruption, and the strength of property rights protection. In theory, we expect democratic countries to have strong institutions. However, in reality, there are many democracies which are characterized by poor policies and weak institutions, and many autocracies which have a good institutional environment.

In the next section, I begin by discussing existing arguments on oil and ownership and their limitations. I then provide a more complete explanation of how different ownership structures could affect economic growth and how the effect could vary depending on the pre-existing institutional circumstances