

Natural Resources and Development

KEVIN M. MORRISON

Abstract

The idea that there is a “resource curse”—that countries with more natural resources tend to do poorly economically and politically—has gained widespread currency in the popular press and elsewhere. Despite the paradoxical nature of the hypothesis, in some ways it seems intuitive because one can look around the world and see many resource-rich countries that are authoritarian or seem to have squandered their wealth. Nevertheless, recent research has cast doubts on whether there is actually a relationship between natural resources and economic growth or democracy, once one has controlled for other factors. And an alternative line of research argues that natural resources do affect these economic and political outcomes, but whether they do so in a positive or negative way depends on the institutions a country has in place. That is, countries with poor economic and political institutions will suffer a “curse,” but countries with better institutions will not. In this entry, I review the foundational works on natural resources and development as well as these more recent responses, analyzing the trajectory of the literature and key issues for future research. Despite two decades of intensive research, we still have much to learn about whether developing countries will suffer or benefit in an era of increasing commodity prices and resource exploration.

INTRODUCTION

The idea that there is a “resource curse”—that countries with more natural resources tend to do poorly economically and politically—has gone beyond the academic world and into the popular press (Friedman, 2006; Naím, 2009), influencing a variety of policy-oriented organizations (Overseas Development Institute, 2006; Oxfam, 2009). As such, it is easy to overlook what a counterintuitive hypothesis it is: that a country “blessed” with richness in its soils should in fact be doomed to suffer because of those resources.

Nevertheless, as reviewed in the next section, that is exactly what the foundational work on this topic has argued, and indeed, when one looks around the world, it is easy to find examples of resource-rich countries that are authoritarian or have squandered their riches, or both. However, more recent work in this area has taken a more nuanced view, either questioning

whether the relationship between natural resources and development holds after one has controlled for other factors, or inquiring about whether countries with good institutions can control the effects of natural resources and use them for the good of their people. A third section reviews these works, followed by a concluding section that discusses important avenues for future research.¹

FOUNDATIONAL RESEARCH

Modern scholarship on the idea that there might be some sort of strongly negative relationship between natural resources and economic and political development began in earnest in the 1980s, with important case studies of countries with these resources.² In these early works, scholars looked at a variety of different country experiences and concluded that the resources provided great challenges for countries' development both economically (Auty, 1990; Gelb and associates, 1988) and politically (Beblawi & Luciani, 1987; Karl, 1997). There are essentially three reasons for this.

The first of these reasons is the appreciation of the real exchange rate that often occurs with the discovery of natural resources, leading to a condition often referred to as "Dutch Disease." The rising exchange rate generally makes exporting other (nonnatural resource) commodities more difficult. And on the flip side, with imports now cheaper, it also becomes difficult for domestic producers to compete in the local market. In addition, as local labor and assets are used by the natural resource sector, their prices increase, making them more expensive for producers in other sectors. The result is a privileging of the natural resource and nontradeable sectors, crowding out the traditional exports in an economy (manufacturing and/or agriculture).

In addition to Dutch Disease, natural resource exporters also face a problem of volatility in revenue. As Humphreys, Sachs, and Stiglitz (2007) have discussed, this volatility has several sources, including resource extraction rates that vary over time, governments' back-loaded contracts with producing companies, world price fluctuations, and pro-cyclical lending that tends to accentuate booms and busts. This volatility creates a problem for fiscal policy: Because there are diminishing marginal benefits to public spending, the social gain from spending more in some years does not make up for the social cost of spending less in others.

The final causal mechanism (or set of mechanisms) linking natural resources to a "curse" focuses on the ability for authoritarian governments

1. This essay uses material from two previously published articles (Morrison, 2012, 2013).

2. "Development" can certainly be conceived of in broader ways (Sen, 1999), but space constraints limit this entry to largely equating economic development with economic growth, and political development with democratization, as has generally been the approach in the literature addressed here.

with natural resource revenue to be unaccountable and stay in power longer. Accountability arguments tend to center on the ability of governments with these revenues to avoid taxing their citizens, which is often thought to have played a key role in the development of Western representative institutions (Tilly, 1990). Similarly, many explanations for the link between natural resources and authoritarian political regimes have focused on revenue (Anderson, 1995; Karl, 1997). These resources simply give political regimes more money with which to pursue their various strategies for staying in power.³

While these theoretical linkages seemed reasonable, the idea that there might be a resource curse did not gain wide traction until scholars systematically compared the experiences of resource-rich countries with countries that did not have these resources. This was the role of the seminal initial studies that examined worldwide data to see if there was a statistically significant correlation between natural resources and various measures of economic and political development. On the economic side, the benchmark work was by Sachs and Warner (1995, 1999), who showed that a high ratio of natural resource exports to GDP was correlated with lower growth, controlling for other factors.⁴ And on the political side, the benchmark work was by Ross (2001), who showed that this same ratio was correlated with less democracy, controlling for other factors.⁵

Essentially, all of the work in this area since the publication of these works has been responding to them, and the newer works will be the focus of the next section.

CUTTING-EDGE RESEARCH

There have been two main types of responses to the benchmark statistical work of Sachs, Warner, and Ross. One has been empirical, and the other has been theoretical.

The empirical response has been to see whether the negative correlation between natural resources and development holds up as statistical techniques improve and as other data on natural resources become available. This part of the response has resulted in important papers that question the original findings, both on the economic side (Alexeev & Conrad, 2009; Brunnschweiler & Bulte, 2008) and the political side (Brückner & Ciccone, 2012; Haber & Menaldo, 2011). These papers tend to show a null result

3. As Jensen and Wantchekon (2004, p. 821) state, "The key mechanism linking authoritarian rule and resource dependence, both in democratic transition and democratic consolidation, is an incumbent's discretion over the distribution of natural resource rents."

4. Other important cross-country work around the same time was that by Leite and Weidmann (2002).

5. Other important works around the same time were those by Jensen and Wantchekon (2004) and Smith (2004).

between measures of natural resources and the phenomenon in question (or sometimes even a “positive” result, as opposed to a curse) when different data or statistical techniques are used. It should be noted that there have also been studies that corroborate the original “curse” hypotheses using newer techniques, both on the economic (Arezki & van der Ploeg, 2011; Brückner, 2010) and political sides (Andersen & Ross, 2014; Ramsay, 2011; Tsui, 2011), so that the current state of the empirical literature might be described as “mixed.”

The second response to the benchmark works has been theoretical, and it has largely consisted of bringing work on natural resources into the broader theoretical work on economic and political development in the fields of economics and political science. As the work on natural resources and development was beginning, there was a sense that resource-rich countries were simply different than other countries, and so many important scholarly works in economics and political science would just exclude them from their analyses of economic growth and democracy (e.g., Levine & Renelt, 1992; Przeworski, Alvarez, Cheibub, & Limongi, 2000). In the meantime, the major thrust of the literature on economic growth and democracy in these fields has been the importance of institutions in determining the trajectory of countries’ political and economic development (Acemoglu, Johnson, & Robinson, 2001; Engerman & Sokoloff, 1994; North, 1990; North & Weingast, 1989). As a result, the role of institutions came relatively late to the literature on the resource curse.

Nevertheless, it has arrived: the theoretical response to the benchmark works on the resource curse has been to explore the possibility that the effects of natural resources are largely determined by the institutional environment in which they are found. Indeed, looking back at the initial reasons discussed earlier for the link between natural resources and poor economic and political performance, one can see why institutions might matter.

Dutch Disease, for example, does not *have* to occur when natural resources are discovered—whether it does depends to a great extent on how the government spends the resulting revenue. As Sachs (2007) has argued, “The real fear of the Dutch Disease, in short, is that the non-oil export sector will be squeezed, thereby squeezing a major source of technological progress in the economy. *But this fear is vastly overblown if the oil proceeds are being properly invested as part of a national development strategy.* If the proceeds from oil are used not for consumption but for public investment, the negative consequences of real exchange rate appreciation can be outweighed” (p. 184, emphasis in original). In other words, a competent government can avoid this aspect of the “resource curse” (also see Van Wijnbergen, 1984).

Indonesia's experience with its oil boom in the late 1970s demonstrates how this might occur in practice. Instead of spending its increased revenue on current spending (as Mexico did, e.g., by mainly promoting its state oil company), the Indonesian government spent the oil revenues on agriculture and industry (the tradable sectors) in order to strengthen production. As Usui (1997) notes, perhaps the most striking aspect of Indonesian policy was its emphasis on agriculture. The Indonesian government used the oil revenues to encourage a boom in rice production, promoting research and extension, investment in irrigation, and subsidizing fertilizer use. The government's procurement agency kept the producer price of rice high and subsidized the use of fertilizer in order to take advantage of new Green Revolution crops. As a result of these incentives to farmers, Indonesia was self-sufficient in rice production by the mid-1980s (Booth, 1988).

Similar to Dutch Disease, the volatility of commodity prices is a problem that can be overcome with a competent government in place—one that can “smooth” spending over a period of time. There are a variety of ways that this can be accomplished, although the most popular option recently has been to set up “natural resource funds,” which (when they function well) store revenues when natural resources are booming and then augment public spending when revenues diminish. For example, Chile established a Copper Stabilization Fund (CSF) in 1985 with the purpose of stabilizing the exchange rate and fiscal revenues in the context of rapidly changing copper revenues. A savings rule transferred resources into the fund, at a rate based on the difference between copper's actual price and the government's estimated long-term copper price. The higher the actual price was in comparison to the long-run price, the more resources were transferred (and vice versa, if the price differential were negative). The fund has generally accomplished its purpose, and budget expenditures have not closely followed revenue variability, as was the case before the CSF (Fasano, 2000).

Finally, the fact that the links between natural resources, accountability, and authoritarian political regimes have focused on revenue, and how these resources give political regimes more money with which to pursue their various strategies for staying in power, also suggests that the effects of this revenue may be contingent on the political institutions in place. It may simply be that this revenue helps regimes and leaders stay in power, using whatever means are dictated by the political institutions in which they find themselves (Bueno de Mesquita & Smith, 2010; Morrison, 2014; Smith, 2008). As I have argued elsewhere (Morrison, 2009), it may be that instead of having “anti-democratic” properties, or even “pro-democratic” properties, what these revenues have are “stabilizing” properties, even being able to stabilize democratic regimes.

One good example of this dynamic is Botswana, a country that has *benefited* from its natural resources economically and politically. Botswana's growth rate has been among the highest in the world over the past 40 years, and it has had freely contested democratic elections since independence. In their analysis of Botswana's success, Acemoglu, Johnson, and Robinson (2003, pp. 105–106) note the critical importance of the existing institutions when diamonds appeared on the scene: "By the time the diamonds came on stream, the country had already started to build a relatively democratic polity and efficient institutions. The surge of wealth likely reinforced this. Because of the breadth of the BDP [Botswana Democratic Party] coalition, diamond rents were widely distributed, and the extent of this wealth increased the opportunity cost of undermining the good institutional path."⁶ By contrast—although through a similar dynamic—when oil prices surged in the 1970s and massive rents accrued to Mexico's authoritarian party, it stabilized that party against strong democratization forces (Magaloni, 2006; Morrison, 2011).

In sum, the various negative effects that have been attributed to natural resources may very well be caused by the revenue that these resources generate and how governments use that revenue. For this reason, it is not surprising that the most recent and important theoretical work on the "resource curse" is highlighting the fact that these resources have very different effects depending on the institutional environment in place in a given country (Bhattacharyya & Hodler, 2009; Hodler, 2006; Mehlum, Moene, & Torvik, 2006; Robinson, Torvik, & Verdier, 2006). In beneficial institutional environments, natural resources have no negative effect and can even have positive economic impacts, while in poor institutional environments these resources have negative effects. Similarly, on the political side, most recent theoretical work has focused on how these resources can stabilize democratic regimes and leaders, and not just authoritarian ones (Dunning, 2008; Goldberg, Wibbels, & Mvukiyehe, 2008; Morrison, 2009; Smith, 2008). And this theoretical turn has been supported by several recent empirical works (Bhattacharyya & Hodler, 2009; Boschini, Pettersson, & Roine 2007; Hodler, 2006; Mehlum *et al.*, 2006).

In sum, the benchmark works establishing negative relationships between natural resources and development have received both an empirical response, showing somewhat mixed empirical support for the initial results, and a theoretical one, arguing that these resources have effects conditional on their institutional environment.

6. For a less sanguine view of Botswana's development path, see Hillbom (2008).

KEY ISSUES FOR FUTURE RESEARCH

Given the preceding section, several issues present themselves as important trajectories for future research. Perhaps most obviously, cross-national statistical work—which forms the overwhelming bulk of the recent research in this area—should work toward resolving which of the following possibilities in the literature are correct: natural resources either have a negative relationship with development, no systematic relationship, or a conditional one. The sense of this reviewer is that the most promising line of inquiry is in the latter area, as even the authors of the benchmark results have suggested in recent work that institutions can change the effects of these resources (Ross, 2012; Sachs, 2007). However, this line of inquiry faces both empirical and theoretical challenges, mainly relating to the specific kind of institutions that matter, and how to measure them for empirical work. This, of course, is not a problem unique to work on natural resources (Woodruff, 2007).

It may be that in this endeavor, experimental work becomes a very useful tool, as it enables the researcher to vary the important variables of interest in a way that scholars cannot do with the observational data that has driven most work on this topic to date. Until recently, there has been almost no experimental work on the resource curse, but that is gradually changing, both on the economic side (Al-Ubaydli, McCabe, & Twieg, 2012) and the political one (Paler, 2013). When done well, experiments can give great insight into the mechanisms that drive the results, and it may be that they will tell us what sorts of institutional characteristics matter for the effects of resources and—just as important—which ones do not.

An additional issue for future research, and one that has increasingly been receiving attention in recent years, is the extent to which natural resource revenues are examples of a broader type of phenomenon. Similar to the dynamic described earlier, in which natural resources have gradually been incorporated into the broader theoretical apparatus in economics and political science, natural resource revenues are increasingly being studied as examples of the broader phenomenon of windfall gains to governments. Indeed, although the benchmark statistical works focused on oil exclusively, it should be noted that early discussions of these revenues made direct analogies to other kinds of largely windfall revenues (Beblawi, 1987).

The principal external revenue with which natural resource revenue has been compared is foreign aid (Bräutigam, 2000; Collier, 2006; Moore, 2001; Morrison, 2007; Smith, 2008; Svensson, 2000; Therkildsen, 2002). As Collier (2006, p. 1483) notes, “both are ‘sovereign rents.’” And in fact, it is striking to note how similar the literatures on the effects of aid and natural resources are in terms of focusing on Dutch disease, volatility, and political effects (Morrison, 2012). However, it is not only to foreign aid that comparisons are made.

Increasingly, there is discussion of how similar the effects of natural resource revenues may be to sovereign borrowing (Bueno de Mesquita & Smith, 2011) and grants from central governments to lower levels of government in federal systems (Brollo, Nannicini, Perotti, & Tabellini, 2013; Gervasoni, 2010).

These comparisons with other revenue sources are important for both empirical and theoretical reasons. On the empirical side, they broaden the domain in which these sorts of dynamics might be examined, opening up the possibility of finding better research designs for studying resource effects that might not otherwise have been possible (Ahmed, 2012; Litschig & Morrison, 2013). And on the theoretical side, they point to potentially important mechanisms linking natural resources and development outcomes, centering on how any effects of natural resources may be due to the way they are translated into revenue for the government. Some recent work has argued, for example, that the ownership structure of the natural resource sector has determining effects for whether or not countries with natural resources advance developmentally (Jones Luong & Weinthal, 2010).

In sum, two decades after the benchmark statistical works built on the existing case study literature to establish a “resource curse,” scholarship on the topic remains extremely active. And indeed, that is as it should be: with commodity prices continuing to rise, and natural resource exploration continuing worldwide, understanding whether or not countries can harness their natural resources for the good of their people remains as urgent a topic as ever.

REFERENCES

- Acemoglu, D., Johnson, S., & Robinson, J. A. (2001). The colonial origins of comparative development: An empirical investigation. *American Economic Review*, 91(5), 1369–1401.
- Acemoglu, D., Johnson, S., & Robinson, J. A. (2003). An African success story: Botswana. In D. Rodrik (Ed.), *In search of prosperity: Analytic narratives on economic growth*. Princeton, NJ: Princeton University Press.
- Ahmed, F. Z. (2012). The perils of unearned income: Aid, remittances, and government survival. *American Political Science Review*, 106(1), 146–165.
- Al-Ubaydli, O., McCabe K., and Twieg P. (2012). Can more be less? An experimental test of the resource curse. Processed: George Mason University.
- Alexeev, M., & Conrad, R. (2009). The elusive curse of oil. *The Review of Economics and Statistics*, 91(3), 586–598.
- Andersen, J. J., & Ross, M. L. (2014). The big oil change: A closer look at the Haber-Menaldo analysis. *Comparative Political Studies*, 47(7), 993–1021.
- Anderson, L. (1995). Peace and democracy in the middle east: The constraints of soft budgets. *Journal of International Affairs*, 49(1), 819–832.
- Arezki, R., & van der Ploeg, F. (2011). Do natural resources depress income per capita. *Review of Development Economics*, 15(3), 504–521.

- Auty, R. M. (1990). *Resource-based industrialization: Sowing the oil in eight developing countries*. New York, NY: Oxford University Press.
- Beblawi, H. (1987). The Rentier state in the Arab world. In H. Beblawi & G. Luciani (Eds.), *The Rentier state* (pp. 49–62). London, England: Croom Helm.
- Beblawi, H., & Luciani, G. (Eds.) (1987). *The Rentier state*. London, England: Croom Helm.
- Bhattacharyya, S., & Hodler, R. (2009). Natural resources, democracy and corruption. *European Economic Review*, 54, 608–621.
- Booth, A. (1988). *Agricultural development in Indonesia*. Sydney, Australia: Allen and Unwin.
- Boschini, A. D., Pettersson, J., & Roine, J. (2007). Resource curse or not: A question of appropriability. *Scandinavian Journal of Economics*, 109(3), 593–617.
- Bräutigam, D. (2000). *Aid dependence and governance*. Stockholm, Sweden: Almqvist & Wiksell International.
- Brollo, F., Nannicini, T., Perotti, R., & Tabellini, G. (2013). The political resource curse. *American Economic Review*, 103, 1759–1796.
- Brückner, M. (2010). Natural resource dependence, non-tradeables, and economic growth. *Journal of Comparative Economics*, 38(4), 461–471.
- Brückner, M., & Ciccone, A. (2012). Oil price shocks, income, and democracy. *Review of Economics and Statistics*, 94(2), 389–399.
- Brunschweiler, C. N., & Bulte, E. H. (2008). The natural resource curse revisited and revised: A tale of paradoxes and red herrings. *Journal of Environmental Economics and Management*, 55(3), 248–264.
- Bueno de Mesquita, B., & Smith, A. (2010). Leader survival, revolutions, and the nature of government finance. *American Journal of Political Science*, 54(4), 936–950.
- Bueno de Mesquita, B., & Smith, A. (2011). *The dictator's handbook: Why bad behavior is almost always good politics*. New York, NY: Public Affairs.
- Collier, P. (2006). Is aid oil? An analysis of whether Africa can absorb more aid. *World Development*, 34(9), 1482–1497.
- Dunning, T. (2008). *Crude democracy: Natural resource wealth and political regimes*. Cambridge, England: Cambridge University Press.
- Engerman, S. L., and Sokoloff K.L. (1994). Factor endowments, institutions, and differential paths of growth among new world economies: A view from economic historians of the United States. NBER Historical Working Paper 66. Cambridge, MA: National Bureau of Economic Research.
- Fasano, U. (2000). Review of the experience with oil stabilization and savings funds in selected countries. IMF Working Paper WP/00/112. Washington, DC: International Monetary Fund.
- Friedman, T. L (2006). The first law of petropolitics. *Foreign Policy* (May/June): 28–36.
- Gelb, A., and associates (1988). *Oil windfalls: Blessing or curse?* Washington, DC: World Bank. http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2003/12/23/000012009_20031223161007/Rendered/PDF/296570paper.pdf

- Gervasoni, C. (2010). A Rentier theory of subnational regimes: Fiscal federalism, democracy, and authoritarianism in the Argentine provinces. *World Politics*, 62(2), 302–340.
- Goldberg, E., Wibbels, E., & Mvukiyehe, E. (2008). Lessons from strange cases: Democracy, development, and the resource curse in the U.S. states. *Comparative Political Studies*, 41(4–5), 477–514.
- Haber, S., & Menaldo, V. (2011). Do natural resource fuel authoritarianism? A reappraisal of the resource curse. *American Political Science Review*, 105(1), 1–26.
- Hillbom, E. (2008). Diamonds or development? A structural assessment of Botswana's forty years of success. *Journal of Modern African Studies*, 46(2), 191–214.
- Hodler, R. (2006). The curse of natural resources in fractionalized countries. *European Economic Review*, 50(6), 1367–1386.
- Humphreys, M., Sachs, J. D., & Stiglitz, J. E. (2007). Introduction: What is the problem with natural resource wealth?. In M. Humphreys, J. D. Sachs & J. E. Stiglitz (Eds.), *Escaping the resource curse*. New York, NY: Columbia University Press.
- Jensen, N., & Wantchekon, L. (2004). Resource wealth and political regimes in Africa. *Comparative Political Studies*, 37(7), 816–841.
- Jones Luong, P., & Weinthal, E. (2010). *Oil is not a curse: Ownership structure and institutions in Soviet successor states*. Cambridge, England: Cambridge University Press.
- Karl, T. L. (1997). *The paradox of plenty: Oil booms and petro-states*. Berkeley: University of California Press.
- Leite, C., & Weidmann, J. (2002). Does mother nature corrupt? Natural resources, corruption, and economic growth. In G. T. Abed & S. Gupta (Eds.), *Governance, corruption, and economic performance* (pp. 159–196). Washington, DC: International Monetary Fund.
- Levine, R., & Renelt, D. (1992). A sensitivity analysis of cross-country growth regressions. *American Economic Review*, 82(4), 942–963.
- Litschig, S., & Morrison, K. M. (2013). The effect of intergovernmental grants on education outcomes and poverty reduction. *American Economic Journal: Applied Economics*, 5(4), 206–240.
- Magaloni, B. (2006). *Voting for autocracy: Hegemonic party survival and its demise in Mexico*. Cambridge, England: Cambridge University Press.
- Mehlum, H., Moene, K., & Torvik, R. (2006). Institutions and the resource curse. *The Economic Journal*, 116(January), 1–20.
- Moore, M. (2001). Political underdevelopment: What causes 'Bad Governance'. *Public Management Review*, 3(3), 385–418.
- Morrison, K. M. (2007). Natural resources, aid, and democratization: A best-case scenario. *Public Choice*, 131(June), 365–386.
- Morrison, K. M. (2009). Oil, nontax revenue, and the redistributive foundations of regime stability. *International Organization*, 63(Winter), 107–138.
- Morrison, K. M. (2011). Nontax revenue, social cleavages, and authoritarian stability in Kenya and Mexico: Internationalization, institutions, and political change revisited. *Comparative Political Studies*, 44(6), 719–746.
- Morrison, K. M. (2012). What can we learn about the 'resource curse' from foreign aid? *World Bank Research Observer*, 27(1), 52–73.

- Morrison, K. M. (2013). Whither the resource curse? *Perspectives on Politics*, 11(4), 1117–1125.
- Morrison, K. M. (2014). *Nontaxation and representation: The fiscal foundations of political stability*. New York, NY: Cambridge University Press.
- Naím, M. (2009). The devil's excrement. *Foreign Policy* (September), 159–160.
- North, D. C. (1990). *Institutions, institutional change, and economic performance*. Cambridge, England: Cambridge University Press.
- North, D. C., & Weingast, B. R. (1989). Constitutions and commitment: The evolution of institutions governing public choice in seventeenth-century England. *Journal of Economic History*, 49, 803–832.
- Overseas Development Institute (2006). *Meeting the challenge of the 'Resource Curse': International experiences in managing the risks and realising the opportunities of non-renewable natural resource revenues*. London, England: Author.
- Oxfam (2009). *Lifting the resource curse: How poor people can and should benefit from the revenues of extractive industries*. Oxfam Briefing Paper 54. Boston: Oxfam America.
- Paler, L. (2013). Keeping the public purse: An experiment in windfalls, taxes, and the incentives to restrain governments. *American Political Science Review*, 107(4), 706–725.
- Przeworski, A., Alvarez, M., Cheibub, J. A., & Limongi, F. (2000). *Democracy and development: Political institutions and well-being in the world, 1950–1990*. New York, NY: Cambridge University Press.
- Ramsay, K. W. (2011). Revisiting the resource curse: Natural disasters, the price of oil, and democracy. *International Organization*, 65(3), 507–529.
- Robinson, J. A., Torvik, R., & Verdier, T. (2006). Political foundations of the resource curse. *Journal of Development Economics*, 79(2), 447–468.
- Ross, M. L. (2001). Does oil hinder democracy? *World Politics*, 53, 325–361.
- Ross, M. L. (2012). *The oil curse: How petroleum wealth shapes the development of nations*. Princeton, NJ: Princeton University Press.
- Sachs, J. D. (2007). How to handle the macroeconomics of oil wealth. In M. Humphreys, J. D. Sachs & J. E. Stiglitz (Eds.), *Escaping the resource curse* (pp. 173–193). New York, NY: Columbia University.
- Sachs, J.D., and Warner A.M. (1995). Natural resource abundance and economic growth. NBER Working Paper 5398. Cambridge: National Bureau of Economic Research.
- Sachs, J. D., & Warner, A. M. (1999). The big rush: Natural resource booms and growth. *Journal of Development Economics*, 59(1), 43–76.
- Sen, A. (1999). *Development as freedom*. New York, NY: Alfred A. Knopf.
- Smith, A. (2008). The perils of unearned income. *Journal of Politics*, 70(3), 1–14.
- Smith, B. (2004). Oil wealth and regime survival in the developing world, 1960–1999. *American Journal of Political Science*, 48(2), 232–246.
- Svensson, J. (2000). Foreign aid and rent-seeking. *Journal of International Economics*, 51(2), 437–461.
- Therkildsen, O. (2002). Keeping the state accountable: Is aid no better than oil? *IDS-Bulletin*, 33(3), 41–50.

- Tilly, C. (1990). *Coercion, capital, and European states, AD 990–1990*. Cambridge, MA: Basil Blackwell.
- Tsui, K. K. (2011). More oil, less democracy: Evidence from worldwide crude oil discoveries. *The Economic Journal*, 121(551), 89–115.
- Usui, N. (1997). Dutch disease and policy adjustments to the oil boom: A comparative study of Indonesia and Mexico. *Resources Policy*, 23(4), 151–162.
- Van Wijnbergen, S. (1984). The ‘Dutch Disease’: A disease after all? *The Economic Journal*, 94(March), 41–55.
- Woodruff, C. (2007). Measuring institutions. In S. Rose-Ackerman (Ed.), *International handbook on the economics of corruption* (pp. 105–126). Northampton, MA: Edward Elgar.

FURTHER READING

- Frankel, J. A. (2010). The natural resource curse: A survey. NBER Working Paper No. 15836. Boston, MA: National Bureau of Economic Research.
- Jones Luong, P., & Weinthal, E. (2006). Rethinking the resource curse: Ownership structure, institutional capacity, and domestic constraints. *Annual Review of Political Science*, 9, 241–263.
- Morrison, K. M. (2012). What can we learn about the ‘Resource Curse’ from foreign aid? *World Bank Research Observer*, 7(1), 52–73.
- van der Ploeg, F. (2011). Natural resources: Curse or blessing? *Journal of Economic Literature*, 49(2), 366–420.

KEVIN M. MORRISON SHORT BIOGRAPHY

Kevin M. Morrison is an Assistant Professor of Public Policy and Political Science at the University of Pittsburgh, where he teaches classes on quantitative methods and the political economy of developing countries. He has previously held positions at Cornell University and Princeton University. His research focuses on nontax revenues in developing countries, such as oil revenues, foreign aid, and intergovernmental grants, and it has been funded by the National Science Foundation and the World Bank among other sources. He is also a principal investigator of the Global Leadership Project, which provides data on government leaders in 162 countries. His work has been published in top journals in both political science and economics, and his article in *International Organization* won the 2009 Robert O. Keohane Award for best paper in that journal by an untenured professor. He has maintained an interest in communicating academic ideas to policy-oriented audiences as a Fellow of the Overseas Development Council, a consultant to the World Bank and Center for Global Development, a Delphi Fellow at bigthink.com, and a member of the Africa Task Force, a group of policymakers and academics

co-directed by Kwesi Botchwey and Joseph Stiglitz at Columbia University's Initiative for Policy Dialogue.

Links: <http://www.pitt.edu/~kmm229/>

<http://www.globalleadershipproject.org/>

RELATED ESSAYS

- Global Economic Networks (*Sociology*), Nina Bandelj *et al.*
The Public Nature of Private Property (*Sociology*), Debbie Becher
Sociological Theory After the End of Nature (*Sociology*), Robert J. Brulle
Cities and Sustainable Development (*Sociology*), Christopher Cusack
Architecture of Markets (*Sociology*), Neil Fligstein and Ryan Calder
Property Rights and Development (*Political Science*), Timothy Frye
Interdependence, Development, and Interstate Conflict (*Political Science*), Erik Gartzke
Modeling Coal and Natural Gas Markets (*Economics*), Franziska Holz
Innovation (*Economics*), Adam B. Jaffe
Technology Diffusion (*Economics*), Adam B. Jaffe
Built Environments and the Anthropology of Space (*Anthropology*), Gary W. McDonogh
Cultural Conflict (*Sociology*), Ian Mullins
Economics of Renewable Energy Production (*Economics*), Gregory F. Nemet
Organizations and the Production of Systemic Risk (*Sociology*), Charles Perrow
The Politics of Disaster Relief (*Political Science*), Alexander J. Oliver and Andrew Reeves
Economics and Culture (*Economics*), Gérard Roland
Sustainability (*Archaeology*), Joseph A. Tainter *et al.*
The Social Science of Sustainability (*Political Science*), Johannes Urpelainen