

Concepts, Measures, and Rabbit Holes: Studying Resource Wealth from the Middle East Out

Ben Smith | University of Florida
David Waldner | University of Virginia

Scholars of Middle East politics rightly lamented the relative marginality of their region of focus in political science in the 1990s. Coming off the heels of the collapse of the Soviet Union and East Bloc and the Third Wave, which washed over virtually all of the rest of the world, MENA scholarship remained a comparative backwater. That changed in the period roughly 1997-2001 with Terry Karl's *Paradox of Plenty* and Michael Ross's (2001) econometric exploration of the rentier state and resource curse theories of politics.¹

Since then, a simple Google search of even the restricted term “political resource curse” turns up nearly 1400 articles. Among other things, this burgeoning resource program means a huge need for quantitative data to analyze, and in turn a need to measure “resource wealth” statistically. Unfortunately, not all efforts have relied on solid foundations. In this short contribution, we outline some of our past concerns with concepts and measurements, the problems with them, and some brief best practices.

Concepts and Measures

Broadly speaking, scholars have approached measuring oil wealth in one of three ways: by calculating ratios, by establishing discrete categories of membership or non-membership, or by using continuous measures.² The first approach, which characterized the original scholarship on rentier states, typically took oil income as a share of government revenue, on the intuition that this substitution effect was central to establishing state fiscal autonomy from the population. Later variants included oil export revenues as a share of GDP (Ross 2001; Smith 2004; 2007; Morrison 2009) or of total export revenues (Jensen and Wantchekon 2004). The problem with these ratio indicators is that they induce endogeneity bias: countries with smaller economies or that export less are that way for reasons directly related to their likelihood of being stable and democratic (and negatively). As a result, countries look more “rentierish” not because they are, but because they are poorer and are already likely to suffer from the maladies implied in the resource curse theory family.

More important, as we note elsewhere, “these ratio-based measures tell us little about how oil rents shape the incentives and capacities of rulers, rivals, and citizens” (Smith and Waldner 2021, 31). There is simply not much of a substantive link between these ratios and the processes and outcomes that most interest scholars of resource wealth and politics.

Categorical indicators are worse still: they overwhelmingly rely on arbitrary cut points (such as oil exports comprising 10% or more of exports, per Colgan 2010, 2013), or membership in OPEC (Fish 2002). First, we lack any good theoretical rationale for concluding that oil only begins to exert rentier or curse effects at 10.01% and does not do so at 9.99% or below of exports, GDP, or any other denominator. Moreover, there is no reason

¹ The references for this short contribution are archived at <https://www.benjaminbsmith.net/research.html>.

² This section draws on section 3 of Smith and Waldner (2021).

to think that rulers in a country reliant on oil revenues for 11% of exports would face the same oil-driven incentives as one in which oil comprised 65% of export revenues.

Second, while for a twenty-year period or so in the late 20th century OPEC held some influence in the global oil market, that impact was both ephemeral and overstated at the time. Today, there are nearly 100 countries that produce significant amounts of oil and/or natural gas, and thus close to 90% are not members of OPEC. Presuming that oil does not affect non-members is, to be generous, a challenging assumption. OPEC plays an outsized role in calling another common measure—proven reserves—into question as well. The reason is that OPEC member production quotas are calculated based on proven reserves. Member states thus have a strong incentive to inflate their proven reserves to maximize the quantity allotted to them, and there have been systematic, and sudden recalculations immediately following changes in quotas. Given that members have an incentive to inflate the actual volume of reserves, we incur the risk of endogeneity bias because reserve declarations are shaped by political factors.

The benchmark measure for oil wealth has become oil and gas income per capita, both because it is simple and transparent and because the work done by Paasha Mahdavi and Michael Ross to compile data since 1932 and to archive it publicly has reduced the cost of a quality measure to an internet connection. It is best thought of as a measure of abundance, since it captures directly the revenues, mostly in the hands of state leaders, that can be directed to patronage or coercion per citizen. While this measure, like all measures of oil wealth, is ultimately endogenous in some way to politics, oil and gas income per capita is probably the least compromised. Any scholar using a different measure should really feel the obligation to explain exactly why, with concrete and question-specific theoretical and substantive rationale.

Given that, however we measure oil wealth, we have to worry about endogeneity; scholars have also periodically turned to instrumental variables that are exogenous to domestic politics. Ramsay (2011) employs a statistic for natural disasters in oil producing countries in other regions of the world, reasoning that, for example, an earthquake or major hurricane afflicting Mexico cannot possibly be endogenous to Saudi Arabia's oil wealth or politics but might well cause a spike in oil prices that would both enhance the latter's annual oil income *and* induce political effects too. MENA scholars may be dismayed to learn that Ramsay's results are not robust to excluding their region of study from the statistical analysis, probably because of the ability of Saudi Arabia to increase its own output to compensate for supply disruptions elsewhere.

Readers could be excused at this point for asking, "What about concepts?" When we think theoretically about rentierism, resource wealth, oil export dependence, or any of the cognate constructs that are part of the resource curse lexicon, they each imply different kinds of measurement choices. Oil and gas income per capita, in a country where rulers control most of the oil income, is a conceptually good measure of the fiscal latitude available to them to spend on security forces, social policy, infrastructure, patronage, or anything else, and as such fits nicely with an elite-incentive theory. A measure of oil income as a share of GDP, on the other hand, while endogenous to the overall economy, is a good measure of a country's dependence, as well as being a good rough measure of the leverage that state-controlled oil income has over the average citizen where (as is nearly always true) the state owns the resource sector. To the extent we want to explore theories involving elite time

horizons, reserves may enter the set of appropriate measures. The point is that we should start with the theoretical framework, focus on what we theorize oil to be “doing,” and then think about the array of possible measurement choices, selecting and explaining the choice on concrete grounds.

Middle East Particularity

For scholars of the MENA region, studying rentier states was an integral part of Middle East studies long before it became common elsewhere—witnessing the origins of the paradigm in the 1970s (Mahdavy 1970) and 1980s (Beblawi and Luciani 1987). It was not until Terry Karl’s *Paradox of Plenty* (1997) and Michael Ross’s “Does Oil Hinder Democracy?” that the resource curse began to filter outside of Middle East-focused political science. As we have tried to demonstrate (2021a; 2021b) elsewhere, the problem is that what has come to be understood as global statistical findings are in fact specific to Middle East political dynamics.

The putative findings of the political resource curse, on one hand, turn out to be an artifact of British imperial policy that had the unintended effect of locking in particularly durable forms of hereditary monarchy in the five small Gulf kingdoms. The theory of petro-aggression, on the other, in which oil-rich states are held to be more bellicose when ruled by radical regimes, is in turn entirely dependent on the outsized influence of the Iran-Iraq war. In short, regardless of how we conceptualize and measure oil wealth, some of the key global findings about the resource curse turn out to be limited to the MENA region.

In short, there are two challenges to the cross-national econometric study of oil and politics. The first is that any country’s oil sector is at least somewhat shaped by politics. From the willingness to explore, to the willingness to sign long-term contracts with rulers who are often only minimally accountable to citizens, each step of the oil extraction process depends on calculations made about a country’s domestic politics. As a result, endogeneity concerns are thorny and not easily resolved. Second, recent research suggests that many of the putatively global regularities in the resource ‘curse’ are disproportionately influenced by small numbers of cases in the MENA region. To a large extent, the more careful our collective research becomes, the more it appears to lead us back to where the rentier state thesis stood a quarter-century and half-century ago: predominantly the domain of the Middle East.