

# Oil Wealth and Regime Survival in the Developing World, 1960–1999

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*This article examines contrasting claims made by scholars of oil and politics that oil wealth either tends (1) to undermine regime durability or (2) to enhance it. Using cross-sectional time-series data from 107 developing states between 1960 and 1999, I test the effects of oil wealth on regime failure, political protests, and civil war. I find that oil wealth is robustly associated with increased regime durability, even when controlling for repression, and with lower likelihoods of civil war and antistate protest. I also find that neither the boom nor bust periods exerted any significant effect on regime durability in the states most dependent on exports, even while those states saw more protests during the bust. In short, oil wealth has generally increased the durability of regimes, and repression does not account for this effect. Future research focused on the origins of robust coalitions in oil-rich states is most likely to provide fruitful explanations to this puzzle.*

The global oil market and its associated booms and busts have generated a large literature in political science. One contention in this literature is that political instability is a near-certain, long-term outcome of oil wealth. Another line of argument maintains just the opposite, that oil makes authoritarian regimes stronger by funding patronage and repressive apparatuses. In this article, I conduct the first cross-national tests of these arguments and investigate the effects of oil wealth and the oil booms and busts on political stability. Drawing on data from 107 developing countries between 1960 and 1999, I estimate the effects of oil wealth on regime failure, antistate social protest, and domestic armed conflict. Thus, as a first goal this article addresses an analytic shortcoming in previous studies by separating regime survival empirically from both economic policy and regime *type* (democratic or authoritarian) and by focusing on the direct effects of oil wealth on several measures of political stability. I address the relationship between oil wealth and these outcomes both by comparing exporters to the rest of the developing world and by comparing oil-rich states across pre-boom, boom, and bust periods.

The results indicate that oil wealth is robustly associated with more durable regimes and significantly related to lower levels of protest and civil war. Moreover,

the collapse of oil prices in 1986 exerted no significant negative effect on regime viability or civil conflict among oil exporters even though regimes in the most oil export-dependent states faced significantly higher levels of antistate protest. Finally, oil's strengthening effect does not appear to be a function of repression. These findings suggest in turn that political scientists have some serious rethinking to do in the study of the effects of resource wealth on the viability of regimes. Where Beblawi and Luciani, Karl, and others argue that oil rents can create a long-lived but shallow stability in an otherwise weak state, I suggest that the persistence of authoritarian regimes in oil-rich states long after the bust of the 1980s—after access to patronage rents had dropped off dramatically—suggests that leaders in many of these states invested their windfall revenues in building state institutions and political organizations that could carry them through hard times. In short, I ask why, given the sudden collapse in 1986 of potential patronage rents by more than two-thirds, few of these regimes faced serious challenges.

The article proceeds as follows. First, I draw on major works on the politics of oil wealth to derive a number of testable hypotheses about stability and regime durability in oil-rich states. Second, I take up in order the questions of (1) whether oil-rich states are indeed prone to greater

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instability than nonexporters and of (2) whether oil states experienced greater instability during the booms or bust than they did before 1974, the year of the first oil boom. Third, I offer some conclusions based on the results estimated here, arguing that in fact current theories explain considerably less about how oil affects regime viability than they have been given credit for and that future studies should look beyond patronage and coercion to explain the fortitude of so many regimes in oil-rich countries.

## **Oil Export Dependence and the “Three R’s”: Rentier States, Repression, and Rent-Seeking**

Most recent work on oil and stability falls into three broad categories of causal explanation: (1) the “rentier state,” (2) repression, and (3) rent-seeking theses. In this section I detail these theses and use them to generate a set of hypotheses that I subject to broad tests in the next section. While scholars approach the political economy of oil from diverse methodological origins, the theoretical arguments about the structures and nature of the rentier state flow from the state’s access to externally obtained revenues from the sale of oil. Moreover, the different approaches highlight many of the same weaknesses of exporting states, based on their susceptibility to the pitfalls discussed below. Below I outline the major arguments by which oil wealth is argued to produce political crises.

### **The Rentier State Thesis**

As oil revenues increase to the point at which they dominate a government’s revenue sources, the government evolves from an extractive state into a distributive one: “the bulk of the internal activities of the state are concerned with distribution” (Delacroix 1980, 18). For the most part this line of argument draws on the logic of the extractive state and reasons that, compared with the taxing states of early Western Europe, a government that does not rely on domestic extraction for the bulk of its revenue must lack a crucial capacity. Beyond the collection of fiscal resources, the information generated by a robust tax bureaucracy weighs heavily on the viability of the state itself. In contrast to a tax-dependent state that must devote so much energy to extracting its operating revenues from society, a distributive state simply must decide which social groups are to be the favored recipients of oil rents. Beblawi and Luciani note that oil revenues enable the state to “buy off political consensus” (1987, 7).

A corollary to the rentier state thesis is that, because state leaders have no need to extract, they have no need to represent either. As a result, the kinds of iterated

and multifaceted interactions between rulers and ruled that provide both public participation in policymaking and a means by which rulers keep an eye on the public tend to be weak if they exist at all (Najmabadi 1987; Vandewalle 1998). Chaudhry (1997, 143–47) discusses the rapid dismemberment of the tax bureaucracy in Saudi Arabia during the oil boom, using the microstudy of Saudi state extractive agencies to advance a more general argument about the decline of state capacity. In the rentier state thesis, oil is posited to obviate extractive bureaucracies and the relations with social groups necessary to collect taxes effectively. Skocpol (1982) argues that reliance on oil wealth made it possible for the Pahlavi regime in Iran to maintain an impressive degree of autonomy from its society, although the autonomy proved shallow in the face of mass-based mobilization against the state in the late 1970s. Together these effects produce weak state-society linkages and ought to produce subsequent instability when: (1) during booms politicians are likely to flood the domestic economy with revenues, spending unwisely and spurring destabilizing inflation and (2) bust periods make it impossible to continue patronage and the weakness of state institutions makes it impossible to extract revenues from domestic sources.

Other rentier state theorists of oil argue that externally derived rents can actually prolong authoritarian regimes (Beblawi and Luciani 1987). Karl’s (1997) wide-ranging study of Venezuela and several other large “petro-states” is the most ambitious comparative analysis of rentier states and exemplary of the weak state theory of oil wealth. She asserts that by distorting property rights regimes, the power of interest groups, and the role of the state in the market, oil wealth “creates incentives that pervasively influence the organization of political and economic life and shape government preferences with respect to public policies” (Karl 1997, 7). However, while revenues remain stable, Karl argues that oil wealth may contribute to long periods of stability (Karl 1997, 20–21) and that oil-based rent seeking can actually strengthen regimes.

During boom periods, the ability of the state to placate important social groups by paying them off with oil revenues should allow regimes to survive long after they would otherwise be able to, despite the inherent weakness of rentier state institutions (Chaudhry 1997; Crystal 1990). In addition, the vesting of groups in the continuity of the regime contributes a social base to the rentier regime bargain, provided the money does not run out and that the economy remains fairly stable (Karl 1997, 57–58; Beblawi and Luciani 1987, 7). This line of argument suggests that oil-dependent regimes should evince significantly greater levels of stability during pre-boom and boom periods and greater instability during the bust of the late 1980s. On the other hand, the phenomenon

of Dutch disease, in which booming sectors such as oil raise a currency's value and discourage agricultural and manufacturing exports by raising their prices on international markets, ought plausibly to create the basis for political crisis by damaging the viability of key nonoil sectors (Davis 1995, 1768; Gelb et al. 1988, 87–89). Thus, the economics of Dutch disease might well provoke political crises during boom periods, despite a growth in patronage revenues. In addition, the magnitude of rent seeking leaves regimes in rentier states extremely dependent on economic performance and thus vulnerable during both boom and bust periods.

### The Repression Thesis

Ross (2001a, 349–51) suggests that oil revenues make it possible for regimes in exporting states to invest in repressive apparatuses that can keep them in power despite social opposition. His analysis suggests that oil wealth is correlated with military spending, which is in turn associated with authoritarianism. This analysis, however, finds an uncertain relationship between oil and another measure, the number of military personnel.<sup>1</sup> Bellin (2002b) takes up the repression question and develops a causal argument related to the strategic value of oil for superpowers. Superpower interests in access to oil, combined with the frequent presence of oil wealth in Muslim-majority countries,<sup>2</sup> renders regimes in these countries less vulnerable to external pressure to liberalize or at least not to repress. Subsequently, the ability and will of rulers to repress contributes to what Bellin terms the “robustness of authoritarianism.” A testable implication of this theory is that highly repressive regimes that confront opposition during a crisis are more likely to survive. In practical terms, if oil wealth bolsters authoritarian longevity by funding repression, then including a measure for repression ought to reduce the effect of oil wealth in regression models.

### Oil Rent-Seeking, Distributional Inequity, and Greed-Motivated Rebellion

The “oil-as-spoils” thesis maintains that the presence of oil revenues or other extracted natural resources in a country

<sup>1</sup>No empirical connection between military expenditure and repression is established, raising the question of whether many oil states might simply invest in their militaries to protect themselves from potential external threats. Below, I explain my own attempt to assess the repression effect using a proxy for state repression derived from *Polity's* Autocracy measure.

<sup>2</sup>Ross (2001a, 338–39) finds a simple bivariate correlation of .44 between oil exports as a share of GDP and Muslims as a share of a country's population.

cause political instability by (1) presenting an attractive set of spoils to potential rebels or state-breakers and/or (2) by creating resentment over unequal distribution of oil rents that can spill over into conflict over the pattern of distribution. This thesis holds, first, that easily captured revenue sources such as oil present an attractive target to potential rebels and, all else equal, raise the risk of civil war. de Soysa (2000) counters scarcity-driven theories of civil war by arguing that greed-driven rebellion is more likely and that it is significantly more likely in resource-rich states. Collier and Hoeffler (1998) confirm this finding, but it is important to note that the independent effects of oil wealth are not tested in either analysis. Second, the unequal distribution of rents can cause conflict when left-out groups attempt to force redistribution by resorting to violence, which can destabilize democratic and authoritarian governments alike.

Wantchekon (1999) does not directly test this instability hypothesis but argues that instability is a causal mechanism tying resource wealth to nondemocratic rule. In his model, resentment over unequal distribution of resource rents promotes conflict, creating the instability that tends to undermine democratic government.<sup>3</sup> It also can be a source of instability in authoritarian settings, as Okruhlik (1999) argues with reference to Saudi Arabia. An observable implication of both of these theories is that both social protest and civil war ought to be more likely in oil-rich states than in other developing countries, even more so during boom-bust cycles that create economic crises.

To summarize the hypotheses of the rentier state and resource curse literatures for political stability:

*H<sub>1</sub>: Dependence on oil exports subjects states to wide fluctuations in the major source of revenues and to the rentier state effect. Because of these effects, oil wealth is likely to be associated with greater likelihood of regime failure.*

*H<sub>2</sub>: The capacity to invest oil revenues in repressive apparatuses and in extensive patronage should counteract these destabilizing effects. As a result, highly repressive oil-rich states should fail less often than others.*

*H<sub>3</sub>: The incentives for greed-motivated rebellion make the risk of civil war greater in oil-rich states. Distributional inequities generated by the political uses of oil rents suggest that oil wealth ought to be associated with increased antistate protest.*

<sup>3</sup>It is important to note that, other than the experience of Nigeria from which the instability mechanism is induced, the effect of resource wealth on stability is not tested in Wantchekon's analysis.

*H<sub>4</sub>: Boom and bust cycles tend to generate economic crises in oil export-dependent states. As a result, regime failure, civil war, and antistate protest should all be more likely during oil boom and bust periods.*

In the next section I test these hypotheses in order. First, I compare oil-exporting states to other developing countries, testing the hypotheses that the former should be less stable across time. Second, I deal specifically with the effects of dependence on the export of a commodity whose prices have fluctuated dramatically since 1970. I test these by isolating the independent effects of the boom and bust years, respectively, and discuss my strategies for doing so in the next section.

## Data, Methodology, and Models

The analyses discussed below focus on the effects of oil wealth on regime failure, antistate social protest, and armed domestic conflict. The data are drawn from 107 developing countries between 1960 and 1999, for 4,280 possible country-year observations (see Appendix B). They allow for two types of analysis of oil states that have not yet been conducted. First, despite frequent assertions of the effects of oil wealth on stability, no large-N analysis has compared oil exporters to other developing nations in terms of relative regime durability. Second, small-N studies of oil states during and after the booms of the 1970s often focus exclusively on those periods. They have generally failed to ask whether such states were in fact less stable after the first boom than they were before it, seeking instead to point out simply that some were unstable during the 1980s and early 1990s. The data cover 14 years before the first oil boom of 1974 and 13 years after the collapse of oil prices in 1986. In addition to allowing for a greater number of yearly observations than if the analysis were limited to the 1970s and 1980s, the longer time period also makes it possible to see if, all else equal, the population of oil states was prone to greater instability during and after the oil booms than before them.

### Dependent Variables

While I am primarily interested in regime durability, it is important to recognize that political instability can take other forms. Two countries in which regimes survived might have very different levels of antistate protest or internal conflict; in such cases, regime durability data might obscure underlying instability. To obtain a more nuanced view of the effects of oil wealth, I use two additional de-

pendent variables to measure political stability in each nation. The dependent variables thus include regime failure, antistate protest, and internal conflicts in a given country year. First, I measure it as regime failure (*REGIMEFALL*). I derive this variable from the Polity98 data set (Marshall and Jaggers 2000) and code it “1” for each year that is given a value of “0” in the regime durability variable, or each intervening year between a change of 3 or more on Polity’s regime type index. Second, I test the effects of oil wealth on antistate protest, measuring protest as the sum of peaceful demonstrations, riots, and strikes in a country in any given year (Banks 1998).<sup>4</sup> Third, to assess the civil war/conflict hypotheses of the resource curse literature, I test the effects of oil wealth on internal conflicts on a country’s soil in any given year. *CIVILWAR* is coded, following Gleditsch et al. (2002), from “0” to “3”: 0 indicates no armed domestic conflict, “1” indicates a conflict with at least 25 battle-related deaths per year and fewer than 1,000 during the course of the conflict; “2” an intermediate conflict with at least 25 battle-related deaths each year and an accumulated total of at least 1,000 deaths, but fewer than 1,000 in any given year; and “3” a war with at least 1,000 battle-related deaths each year. The use of this measure, rather than a binary one, allows for testing of oil’s effects on both the presence and magnitude of internal conflict.<sup>5</sup>

### Independent Variables

The primary explanatory variables in this study are related to oil exports and to the booms and bust of the 1970s and 1980s. The oil dependence variable (*OIL/GDP*) is a measure of the ratio of the value of oil exports to gross domestic product in a given year (World Bank

<sup>4</sup>Given the possibility that oil wealth might affect these three types of protests differently, I estimated the protest models using each separate measure as a dependent variable. Across strikes, riots, and antigovernment demonstrations, oil wealth has a consistently negative effect on their frequency, although in the case of strikes oil’s effect falls narrowly outside the  $p < .05$  significance range at  $p < .051$  ( $z$ -score = 1.95). There are also problems of reliability with Banks’ data for these events. While the Cross-National Time-Series data archive contains the most extensive cross-national coverage of protest events currently available, the protest results presented in the next section should be taken as preliminary findings pending the accumulation of further data.

<sup>5</sup>Employing an ordinate measure of civil war also mitigates a problem with using only a binary measure, such as that used in the Correlates of War (CoW) project, alongside the Polity regime scores. The problem emerges with a binary measure because the Polity coding scheme takes intense domestic conflict into account when scoring levels of representation; subsequently civil war, measured dichotomously, can be a partial cause of an independent variable that is subsequently used to predict it.

2001).<sup>6</sup> It highlights both the role of oil as a source of export revenues and its importance in the domestic economy.<sup>7</sup> Its explanatory role is to assess whether, once other factors are accounted for, oil-exporting states tend to differ from nonexporters.

Another plausible conclusion from the rentier state hypothesis, however, is that the oil wealth that flooded the population of exporters in the 1970s, and the price collapse of the mid-1980s, may have caused a negative shift in their overall level of stability. I test this hypothesis—that the boom-bust cycle of the 1970s and 1980s made oil states less stable over time—by incorporating two interrupted time-series variables to account for the independent effects of boom and bust periods. I employ a strategy suggested by Lewis-Beck (1986) for testing the effects of crucial events in time-series data. The first variable (*BOOMEFFECT*) is the product of *OIL/GDP* multiplied by a dummy variable, *BOOM*, which counts upward from “1” beginning in 1974 and ends in 1985 in any country that depended on oil exports for 10% or more of GDP for at least five years between 1974 and 1999.<sup>8</sup> All other country years are coded “0.”

The second, *BUSTEFFECT*, is the product of oil exports as a share of GDP multiplied by a dummy variable for the bust (*BUST*) which counts upward from “1” beginning in 1986 in the same states given nonzero values for the boom effect. All other country years are coded “0.” The rationale for constructing the variables this way—with ascending values rather than constant ones—is that scholars generally agree that the political effects of the boom and bust built over time. The boom-and-bust-effect variables take into account the highest levels of dependency on oil exports, the variation among those 19 highly dependent states and the accumulated effects of the booms and bust.<sup>9</sup> By constructing the variables this way, it is possible to as-

<sup>6</sup>Measuring oil dependence in this way, rather than as a share of exports, overcomes the question of gauging the overall importance of exports to a given country’s economy. However, to investigate the possible effect of oil revenues as a share of exports, I estimated each of the models using the ratio of oil exports to total exports instead of to GDP. In all cases, the impact of Oil/Exports was insignificant.

<sup>7</sup>This measure does not take into account oil consumed domestically by exporting nations. This type of oil production revenue raises many interesting questions, and I thank one anonymous reviewer for bringing this to my attention.

<sup>8</sup>They are: Algeria, Bahrain, Congo (Brazzaville), Ecuador, Egypt, Gabon, Indonesia, Iran, Kuwait, Libya, Mexico, Nigeria, Oman, Saudi Arabia, Syria, Trinidad and Tobago, Tunisia, the United Arab Emirates, and Venezuela. Three exporting states—Angola, Iraq, and Qatar—do not appear on this list for reasons of data availability.

<sup>9</sup>The oil wealth variable is also included in the boom models and captures the effects of lower levels of oil dependence.

sess both the hypothesis that the boom’s and bust’s political effects built over time and the argument that more dependent states suffered more than less dependent ones from the fluctuations in oil prices and in their domestic economies.

## Control Variables

In addition to these variables, I incorporate a number of economic controls that are commonly held to affect regime durability and political stability in order to highlight the independent effects of oil wealth once these factors are accounted for. Per capita income, measured here as the natural log of per capita GDP (*Gdppcln*) in constant 1995 US dollars, was included in early iterations of the models and was predicted to negatively affect the likelihood of protest, civil war, and regime failure. I also included inflation (*Inflation*), measured as the annual percent change in consumer prices (World Bank 2001), to account for its plausible positive effects on protest activity and rebellions that could lead to civil war.<sup>10</sup> Finally, rates of economic growth (*Gdpgrowth*) are included, with the prediction being that growth should increase the longevity of regimes and decrease the likelihood of civil war and antistate protest (on economic causes of regime collapse, see Gasiorowski 1995; Haggard and Kaufman 1995; Remmer 1999; and Warwick 1992; on civil war, Fearon and Laitin 2003).<sup>11</sup>

I also include a number of social and political indicators. First, I control for regime type using a score (*Democracy*), taken from the Polity98 data set (Marshall and Jaggers 2000) and calculated by subtracting the autocracy score from the democracy score in each country year, for a range between –10 and 10. I expect that higher democracy scores should lower the likelihood of regime failure. Given that many democratic developing states have become democratic during the “Third Wave” (Huntington 1991), however, democracy in this sample of mostly newly democratized and unconsolidated states might be positively related to the likelihood of civil war. I also include the square of the democracy score (*Democracy*<sup>2</sup>) as a proxy for regime coherence, following a strategy utilized by Hegre et al. (2002) to account for the empirically established U-curve relationship between democracy and conflict and for the effect of regime coherence apart from

<sup>10</sup>These two economic controls were insignificant and were thus excluded from the final set of estimations.

<sup>11</sup>I also included unemployment and the ratio of government debt to GDP in initial estimations of the models. They were insignificant predictors of all three dependent variables and were subsequently excluded from the final models.

that of regime *type*.<sup>12</sup> Second, ethnolinguistic fractionalization (*ELF85*), measured here as the likelihood that in 1985 two randomly chosen individuals in a country would not speak the same language (Roeder 2001), is commonly asserted as a contributor to political instability (see, for instance, Horowitz 1985 and Huntington 1996). Third, the rate of urbanization (*Urbangrowth*) has been theorized to produce instability when it happens too quickly (Huntington 1968). For instance, the new (and largely unemployed) urban poor that poured into Iranian cities during the late 1960s and 1970s are argued to have been a major factor in the Iranian revolution.<sup>13</sup>

Many of the cases chosen to illustrate how oil destabilizes domestic politics are either Middle East or sub-Saharan African states—witness the heavy attention paid to Iran, Algeria, and Nigeria. One might reasonably infer that these regions are more prone to regime failure and civil war than others. To assess whether there is in fact something to this lumping of cases, I investigate a possible regional effect by using dummy variables for the Middle East (*MEAST*) and Sub-Saharan Africa (*SSAFR*), coded “1” for each country that is included in these respective groupings by the World Bank (2001) and “0” otherwise.<sup>14</sup> I also include variables to account both for the population (*LOGPOPTOTAL*) and for the land area (*LOGAREA*) of individual countries, as well as for population density (*LOGPOPDENSITY*).<sup>15</sup> Larger populations should plausibly prove harder for regimes to control; Fearon and Laitin (2003) show that large populations tend to increase the likelihood of civil war, and Herbst (2000) shows compellingly the difficulties state leaders in Africa have had in extending their authority over large areas. Population density should plausibly raise the potential for collective social action, but it might also make things easier for rulers seeking to control their populations. I take the natural logarithm of all three of these variables for inclusion in the models.

<sup>12</sup>As I discuss below, I also conducted tests in which I replaced *Democracy*<sup>2</sup> with a dummy variable for highly repressive regimes to separate the effects of coherent regimes from those of repression.

<sup>13</sup>That assertion has since been challenged by increasing evidence that the urban poor played a minor role in the uprisings of 1977–1979.

<sup>14</sup>There is one exception. The World Bank codes Turkey as a European country; I include it in the Middle East.

<sup>15</sup>Controlling for population served mainly to check the possibility of larger countries naturally experiencing more protests than smaller ones. Population was a significant predictor of aggregate protest levels, but it was highly collinear with population density and did not otherwise change the results except for squeezing out land area; thus, population is excluded from these models.

Finally, many scholars point to individual countries’ unique political histories as a factor in regime durability. Whether it is couched in terms of historical legacies or of repertoires of contention, the argument goes that nations with a history of instability or with many past transitions may be more prone to instability and subsequent regimes more likely to fail. I construct this past transitions variable (*PASTFAIL*), as the sum of all previous regime failure years according to Polity98 for each country year.

Recognizing that each of the dependent variables could be highly dependent on past values, I employ lagged dependent variables in all of the models. A problem, however, as Achen (2000) notes, is that this strategy can make any outcomes overwhelmingly a function of values from the year before and can sometimes suppress the effects of substantive variables (in this case, like oil dependence, ethnic diversity, past political history, and so on) The possibility of temporal relation among observations in models with binary dependent variables (such as the regime failure models used here) raises similar concerns. To mitigate this tendency, I followed a strategy suggested by Beck, Katz, and Tucker (1998) and included dummy variables for each regime year of the data set, minus one, in the regime failure models. None of the year dummies were significant, the results did not change significantly, and the slight improvement in model fit was outweighed by the loss of degrees of freedom (Beck, Katz, and Tucker 1998, 39). Thus, I estimated the models with one- and five-year lagged dependent variables and also estimated the regime failure and civil war models with a trend dummy variable that begins at “1” and counts upward by one per year in each panel. As I discuss below, this strategy had the effect of correcting for temporal relations among observations while retaining the significant impacts of the substantive variables and increasing the degrees of freedom. In all cases, however, I present data below from the models that include a one-year lagged dependent variable; as I discuss, that more strenuous test has no significant effect except in the case of civil war, in which oil’s effect falls just outside the .05 range of significance.

## Results

In this section, I discuss the results of three sets of analyses, which focused on the effects of oil wealth and the booms and bust on regime failure, civil war, and antistate protest, respectively. I estimated all models with Stata 7.0. I used Stata’s VIF command to test for multicollinearity, and in no cases did independent variables exhibit significant collinearity except in the above-mentioned cases of population and population density. In nearly all cases, the

results have surprising implications: regimes in oil-rich states face a lower risk of breakdown and confront fewer civil wars and antistate protests than regimes in oil-poor states. Moreover, as I detail below, this effect appears to be independent of repression.

### Oil Wealth and Regime Failure

Addressing the question of how oil influences the durability of political regimes in developing states, the first model estimates the determinants of regime failure across 107 developing countries. Table 1 provides the results of the model using logistic regression. In these models, a negative coefficient indicates that a variable's effect is to lessen the likelihood of failure, where *REGIMEFAIL* takes a value of "1." To recall the hypotheses, the more common prediction from rentier state and resource curse theories is that increasing oil-dependence should be associated with a higher likelihood of regime failure. The results contradict this hypothesis. Oil dependence exerts a robust and significant negative effect on the likelihood of regime failure, suggesting that longer-lived regimes in oil exporting states appear to be the representative cases. It is important to note that, even when the models include a one-year lagged dependent variable, the positive effect of oil wealth on regime durability remains robust.

Democracy's effect is insignificant, as are ethnolinguistic fractionalization and economic growth. However, democracy's quadratic negatively affects the chances of regime failure in any given year, providing further confirmation of the U-curve relationship between regime coherence and conflict and suggesting that its reach extends beyond civil war to regime failure. As expected, past regime failures boost the likelihood of future ones. Interestingly, the Sub-Saharan Africa dummy variable significantly decreases the expected likelihood of regime failure, while the Middle East dummy variable is insignificant. A number of demographic factors play a significant role in determining the viability of regimes. Urban growth is robustly associated with a greater risk of regime failure, providing some support to the instability thesis advanced by revisionist modernization scholars (Huntington 1968, for example).

To summarize, regimes in oil-rich states enjoy a boost in longevity as a result of their access to oil rents when compared to other developing countries. Oil dependence is a positive predictor of durability, but at the same time is negatively related to democracy, another positive predictor. This relationship hints at a different set of mechanisms keeping democracies and oil-rich autocracies in power. One possibility, investigated by Ross (2001a) is

**TABLE 1 Oil Wealth and Regime Failure, 1960–1999**

Independent Variable	Model 1	Model 2
Constant	−2.575*** (.517)	−1.427** (.561)
Oil/GDP	−3.011** (1.528)	−3.199** (1.590)
Democracy	−.024 (.020)	.007 (.021)
Democracy <sup>2</sup>	−.019*** (.004)	−.021*** (.004)
ELF85	.169 (.468)	.249 (.464)
Sub-Saharan Africa	−.933*** (.315)	−.913*** (.313)
Middle East	−.150 (.449)	.262 (.448)
Urban Growth	.124** (.063)	.133** (.061)
GDP Growth	−.030 (.020)	−.038* (.020)
Past Regime Failure	.242*** (.044)	.391*** (.049)
Population Density <sub>ln</sub>	−.137 (.085)	−.144* (.084)
Regime Failure <sub>(t−1)</sub>	1.791*** (.226)	—
Trend	—	−.058*** (.014)
N	1961	1925
Pseudo R <sup>2</sup>	.198	.162
Log Likelihood	−362.11383	−371.7088
Likelihood Ratio $\chi^2$	178.77	144.11

Analysis is by logistic regression. Entries are unstandardized coefficients. Standard errors in parentheses. \*\*\*, \*\*, and \* indicate significance at the .01, .05, and .10 levels, respectively.

that repression helps to maintain oil-rich regimes through crises. To examine this possibility, I replaced *Democracy*<sup>2</sup> with a dummy variable for highly authoritarian regimes, coded "1" if the democracy score was between −6 and −10. Negative scores indicate not just an absence of political freedoms but also the regular use of coercion, and thus help to fill in the causal gap between repression and regime outcomes. The effect of repression was to decrease significantly the risk of regime failure; the coefficient for the variable was −1.370 with a standard error of .342. Repression did not, however, reduce the effect of oil wealth, suggesting that factors other than spending on

**TABLE 2 Oil Booms, Oil Busts, and Regime Failure**

Independent Variable	Model 1	Model 2
Constant	-2.572*** (.515)	-1.390** (.560)
Oil/GDP	-6.606** (3.113)	-5.346** (2.562)
Boom Effect	.4378 (.433)	.373 (.386)
Bust Effect	.577* (.328)	.531 (.328)
Democracy	-.023 (.020)	.008 (.020)
Democracy <sup>2</sup>	-.019*** (.004)	-.021*** (.004)
ELF85	.225 (.468)	.262 (.464)
Sub-Saharan Africa	-1.017*** (.321)	-.962*** (.316)
Middle East	-.214 (.448)	.224 (.445)
Urban Growth	.142** (.065)	.144** (.062)
GDP Growth	-.029 (.020)	-.038* (.020)
Past Regime Failures	.237*** (.044)	.394*** (.050)
Population Density <sub>ln</sub>	-.149* (.086)	-.153* (.085)
Regime Failure <sub>(t-1)</sub>	1.764*** (.226)	—
Trend	—	-.060*** (.014)
N	1961	1925
Pseudo R <sup>2</sup>	.201	.165
Log Likelihood	-360.375	-370.445
Likelihood Ratio $\chi^2$	182.24	146.63

Analysis is by logistic regression. Entries are unstandardized coefficients. Standard errors in parentheses. \*\*\*, \*\*, and \* indicate significance at .01, .05, and .10 levels, respectively.

coercion are at work in the robust relationship between oil wealth and regime durability.

Table 2 presents the results for the effects of the booms and bust of the 1970s and 1980s. To recall, the boom and bust variables account for the consequences of high levels of oil export dependency during sudden price fluctuations. While oil wealth continues to decrease significantly the likelihood of regime failure, the pernicious economic effects of the booms and bust do not seem to

have had an effect on regime viability in either direction. The same controls that were significant in the first set of models—democracy-squared, the sub-Saharan Africa dummy, urban growth, past political history, and population density—remain significant here, but regimes in the 19 most dependent states do not seem to have suffered politically, even though for many of them the price of a commodity providing more than half the GDP shrank by two-thirds in just a year.

### Oil Wealth and Civil War

Table 3 estimates the effects of oil dependence on the likelihood of civil war using ordered logistic regression. As with the regime failure models, negative logistic coefficients suggest a negative impact on the likelihood of an

**TABLE 3 Oil Wealth and the Intensity of Civil War, 1960–1999**

Independent Variable	Model 2	Model 3
Oil/GDP	-1.519 (1.028)	-3.283*** (.863)
Democracy	.0199 (.013)	.029*** (.011)
Democracy <sup>2</sup>	-.010*** (.003)	-.013*** (.002)
ELF85	.760* (.398)	1.957*** (.331)
Sub-Saharan Africa	-.215 (.263)	-.895*** (.215)
Middle East	.562** (.270)	1.313*** (.216)
GDP Growth	-.037** (.017)	-.067*** (.014)
Land Area <sub>ln</sub>	.199*** (.059)	.260*** (.047)
Population Density <sub>ln</sub>	.225*** (.079)	.399*** (.066)
Civil War <sub>(t-1)</sub>	3.095*** (.125)	—
Civil War <sub>(t-5)</sub>	—	1.142*** (.064)
N	1961	1926
Pseudo R <sup>2</sup>	.553	.262
Log Likelihood	-644.93718	-1053.97
Likelihood Ratio $\chi^2$	1598.21	748.77

Analysis is by ordered logistic regression. Entries are unstandardized coefficients. Standard errors in parentheses. \*\*\*, \*\*, and \* indicate significance at the .01, .05, and .10 levels, respectively.



event, in this case civil war. Included in Table 3 are the results of models containing a one-year lagged dependent variable (column 1) and a less dominant five-year lagged dependent variable (column 2). Oil wealth only exerts a significant negative effect on the intensity of civil war in a given year in the model that includes a five-year rather than one-year lagged dependent variable. This finding contradicts the “oil-as-spoils” thesis in which greater resource wealth is held to provide an incentive for rebels to launch rebellion aimed at seizing production facilities. It also contradicts recent findings by scholars of civil war who find a positive relationship between oil wealth and civil war onset, a different measure than the one I use here (see for instance Fearon and Laitin 2003; de Soysa 2002).

Ethnic diversity increases significantly the estimated likelihood of civil war, as predicted,<sup>16</sup> and in one model (see column 2) democracy also exerts positive pressure on the likelihood of civil war. Although democracy is not a significant predictor in the model with a one-year lag, it is significant in the five-year lag model. That democracy is positively related to civil war seems counterintuitive until it is noted that most of the democracies in the developing world have made the transition from authoritarianism in the last quarter-century. A number of studies (see, for instance, Hegre et al. 2001 and de Soysa 2002) have shown that semi democracies are more likely to suffer civil wars. Given this, it is unsurprising that, in the developing world, early democracies are among the most at risk of civil war. Democracy’s quadratic is robustly and negatively related to the likelihood and intensity of civil war, as it is with regime failure.

Interestingly, the sub-Saharan Africa dummy variable exerts a significant negative effect on the likelihood of civil war in the five-year lagged civil war model, suggesting as was the case in the regime durability models that the nearly 50 states in that region may be poorly represented by a handful of states in which civil conflict has been endemic. However, location in the Middle East (including North Africa) raises the expected likelihood and intensity of civil war. Economic growth, unlike its effects on regime failure, exerts a significant negative effect on the outbreak and intensity of civil war. Finally, geographic and demographic factors such as total land area and population density continue to be important predictors of conflict: both area and density increase the likelihood and magnitude of armed domestic conflict.

Table 4 estimates the effects of the booms and bust on civil war. In short, as with regime failure, the economic

**TABLE 4 Oil Booms, Oil Busts, and Civil War**

Independent Variable	Model 1	Model 2
Oil/GDP	−1.450 (1.575)	−5.065*** (1.573)
Boom Effect	−.092 (.274)	.1941 (.227)
Bust Effect	.077 (.230)	.365* (.189)
Democracy	.019 (.013)	.029*** (.011)
Democracy <sup>2</sup>	−.010*** (.003)	−.013*** (.002)
ELF85	.767* (.398)	1.974*** (.331)
Sub-Saharan Africa	−.221 (.263)	−.912*** (.214)
Middle East	.546** (.272)	1.276*** (.217)
GDP Growth	−.037** (.017)	−.066*** (.014)
Land Area <sub>ln</sub>	.198*** (.060)	.255*** (.047)
Population Density <sub>ln</sub>	.224*** (.080)	.383*** (.066)
Civil War <sub>(t−1)</sub>	3.096*** (.125)	—
Civil War <sub>(t−5)</sub>	—	1.145*** (.065)
N	1961	1926
Pseudo R <sup>2</sup>	.553	.263
Log Likelihood	−644.727	−1052.081
Likelihood Ratio $\chi^2$	1598.63	752.54

Analysis is by ordered logistic regression. Entries are unstandardized coefficients. Standard errors in parentheses.\*\*\*, \*\*, and \* indicate significance at the .01, .05, and .10 levels, respectively.

turbulence of the late 1970s and 1980s does not seem to have affected adversely the likelihood or intensity of civil war in oil-rich states.<sup>17</sup> Oil wealth continues to lower the likelihood and scope of armed domestic conflict, although its effect is significant only in the five-year lag model. In the model that uses a five-year lagged dependent variable, the bust effect is marginally significant at .10, but in the one-year lag model it is not significant. In neither model is the boom effect significant.

<sup>16</sup>This finding also runs counter to what Fearon and Laitin (2003) find, and suggests that results may be partially dependent on how “civil war” is measured.

<sup>17</sup>As mentioned above, Angola and Iraq are missing from the sample of highly dependent states. It is plausible that, were data available, their inclusion might affect the findings since both states have been prone to armed domestic conflict since the 1970s.

As with the previous model, ethnolinguistic fractionalization and democracy (albeit only in the five-year lag model), the Middle East dummy variable, land area, and population density exert a positive and significant effect on civil war. Democracy squared, the African dummy variable, and economic growth all lessen the likelihood of civil war significantly. Again, not even the economic unrest caused by oil price fluctuations produced any broad trends toward greater domestic conflict, suggesting that (a) regimes might well have been able to cope politically better than assumed and (b) oil wealth has political effects that differ considerably from other kinds of resource wealth.

### Oil Wealth and Social Protest

Tables 5 and 6 present the results of Poisson regressions estimating the effects that oil wealth and the booms and bust had on relative levels of antistate political protest. Again, oil wealth, as shown in Table 5, is a powerful predictor of increased stability and lowers the expected level of protest significantly. One plausible conclusion from this finding is that repression is behind the lower levels of protest in oil-rich states, especially since democracy appears to increase relative levels of protest. To investigate the independent effects of repression, I replaced democracy's quadratic with the dummy for highly authoritarian regimes and reestimated the models. Highly authoritarian regimes actually experienced considerably higher levels of protest than did others, and repression lowered the expected number of protests. However, it did not reduce the effect of oil wealth; this result is discussed in more detail in Table 5. In any case, it appears that mechanisms other than repression drive the relative respite from protest that oil-rich states enjoy.

The Africa dummy, urban growth, economic growth, and democracy-squared all exert significant negative effects on expected protest activity. Interestingly, urban growth raises the likelihood of regime failure while lowering the level of antistate protest; this may be a two-stage effect in which urbanization produces pressure for democratization (contributing to authoritarian breakdown) and, once democracy is consolidated but not highly coherent, maintains higher levels of social protest. Democracy, land area, and population density all exert significant positive effects on expected protest levels, although the land area effect is plausibly a function of larger countries having larger populations, all else equal.

In one of the most interesting findings of all of these models, the most oil-rich states in the sample tended to face significantly higher levels of social protest during the bust period. However, regimes in these states did not gen-

**TABLE 5 Oil Wealth and Social Protest, 1960–1999**

Independent Variable	Model 1	Model 2
Constant	−3.686*** (.230)	−4.797*** (.232)
Oil/GDP	−1.829*** (.301)	−2.248*** (.327)
Democracy	.017*** (.003)	.020*** (.004)
Democracy <sup>2a</sup>	−.002** (.001)	−.001* (.001)
Sub-Saharan Africa	−.429*** (.068)	−.427*** (.071)
Middle East	.099 (.079)	.113 (.081)
Urban Growth	−.142*** (.018)	−.143*** (.018)
GDP Growth	−.036*** (.004)	−.044*** (.004)
Past Regime Failure	.009 (.008)	−.013* (.008)
Land Area <sub>ln</sub>	.286*** (.014)	.355*** (.014)
Population Density <sub>ln</sub>	.317*** (.020)	.431*** (.020)
Social Protest <sub>(t−1)</sub>	.057*** (.002)	—
Social Protest <sub>(t−5)</sub>	—	.023*** (.003)
N	1681	1553
Pseudo R <sup>2</sup>	.311	.269
Log Likelihood	−3348.830	−3391.064
Likelihood Ratio $\chi^2$	3024.94	2497.02

Analysis is by Poisson regression. Entries are unstandardized coefficients. Standard errors in parentheses.\*\*\*, \*\*, and \* indicate significance at the .01, .05, and .10 levels, respectively.

<sup>a</sup>I re-estimated the models in Tables 5 and 6 and included a dummy variable for highly authoritarian states instead of democracy squared, coding it "1" if the democracy score was between −6 and −10. Interestingly, it was a highly significant *positive* predictor of protest even when accounting for the boom and bust effects (its coefficient was .393 and the standard error was .099 with significance at  $p < .01$ ). Given these results, the coefficient of democracy squared here is properly interpreted as indicating that only highly democratic, rather than both highly authoritarian and highly democratic, polities experience lower levels of social protest. The simple bivariate correlation between highly authoritarian government and regime failure is −0.096.

erally suffer during this period in oil-rich states. Nor was civil war any more likely. Moreover, controlling for coercion showed that more repressive regimes actually faced *more* protest than regimes in other oil-rich states. It would

**TABLE 6 Social Protest During Oil Booms and Oil Busts**

Independent Variable	Model 1	Model 2
Constant	-3.684*** (.231)	-4.790*** (.233)
Oil/GDP	-2.205*** (.484)	-2.849*** (.566)
Boom Effect	-.046 (.084)	-.037 (.091)
Bust Effect	.215*** (.081)	.276*** (.089)
Democracy	.017*** (.003)	.020*** (.004)
Democracy <sup>2</sup>	-.002** (.001)	-.001* (.001)
Sub-Saharan Africa	-.435*** (.069)	-.432*** (.071)
Middle East	.082 (.080)	.092 (.081)
Urban Growth	-.138*** (.018)	-.137*** (.018)
GDP Growth	-.036*** (.004)	-.044*** (.004)
Past Regime Failure	.008 (.008)	-.014* (.008)
Land Area <sub>ln</sub>	.286*** (.014)	.354*** (.014)
Population Density <sub>ln</sub>	.316*** (.020)	.429*** (.020)
Social Protest <sub>(t-1)</sub>	.057*** (.002)	—
Social Protest <sub>(t-5)</sub>	—	.023*** (.003)
N	1681	1553
Pseudo R <sup>2</sup>	.312	.271
Log Likelihood	-3343.4264	-3383.7611
Likelihood Ratio $\chi^2$	3035.74	2511.63

Analysis is by Poisson regression. Entries are unstandardized coefficients. Standard errors in parentheses. \*\*\*, \*\*, and \* indicate significance at the .01, .05, and .10 levels, respectively.

be tempting to point to rent patronage as the answer to this puzzle, but by definition the bust period was one in which the oil revenues previously doled out in huge volumes shrank dramatically. In short, the explanatory failure of repression or continued patronage suggests that scholars of oil and politics ought to look to other means by which regimes in these oil-rich countries maintained themselves through the tough times of the late 1980s and early 1990s.

## Conclusions and Implications for Future Research

The first implication of the results presented here is that durable regimes in oil-rich states are not the outliers that both rentier state and resource curse theory have made them out to be. Rather, regimes like Suharto's in Indonesia, which lasted 32 years, Saddam Hussein's Ba'athist regime in Iraq, which lasted 35 years,<sup>18</sup> and the long-lived monarchies of the Persian Gulf appear to be more representative of broad trends of regime durability than do the favorite cases of Iran, Nigeria, Algeria, and Venezuela—the “big four.”<sup>19</sup> More importantly, despite what Beblawi and Luciani (1987) and others have argued, the durability effect appears to have been independent of consistent access to rents with which regimes can buy legitimacy, since the busts created no trend toward regime crisis or instability in exporting states.

This trend of regime durability, its robustness throughout the oil bust period, and the fact that repression does not account for the result, suggests that there is more to the durability of regimes in oil-rich states than patronage and coercion. Even when access to oil rents dropped dramatically, regimes in these states do not appear to have suffered much. Repression similarly fails to provide a full account of how it was that regimes in oil-rich states managed to lose much of the discretionary windfalls of the 1970s, face more protests, and still fall considerably less often than did regimes in other developing countries. The most important conclusion reached here is that longevity—even through volatile price shocks—is the dominant trend among oil exporters. This conclusion is bolstered by the significantly lower likelihood of civil war and volume of antigovernment political protest in oil-rich states.

That regimes in oil-rich states (1) tend to fare better than others despite the volatility of their revenue base and (2) that they even fared well during the oil bust of 1986 and beyond suggests two plausible mechanisms of regime maintenance that belie the weak-state assumptions associated with oil wealth. First, many of these regimes may have had robust social coalitions that went much deeper than the simple purchase of legitimacy. Studies focused on investigating the origins of strong coalitions underlying the resilience of regimes in Syria, Iraq, Egypt,

<sup>18</sup>Saddam Hussein officially became the president of Iraq only in 1979, but he became the de facto ruler in 1968. It is also worth noting that the regime ended only after a full-scale U.S.-British invasion in March and April 2003.

<sup>19</sup>At least one critic has questioned Karl's categorization of Venezuela as an example of an unstable petro-state, noting that by most measures it was one of the most stable states in Latin America through the 1990s. See Ross (1999).

and Indonesia among others (see for example Smith n.d.) are particularly promising agendas for future research. Second, regimes such as these may have built institutions that could provide nonrepressive, as well as repressive, responses to organized opposition. In short, such regimes may well have avoided the substitution of oil for statecraft, and there is little to guide scholarship in the study of how oil wealth and strong institutions might mix. Theories to explain, and studies to trace, the processes through which many regimes in oil-rich countries might have indeed built strong states, are currently in short supply and future research in this direction is likely to be extremely fruitful.

While oil wealth appears to have had a generally positive effect on the prospects for regime maintenance in exporting countries (from the point of view of rulers who want to stay in power), it might well be the case that oil wealth has a significant impact in provoking interstate conflict, either by exporters during bust periods or by greed-driven neighbors. Parasiliti (2003), for instance, advances both of these arguments to explain Iraq's invasion of Kuwait in 1990. A number of other major exporters have, at times during their histories become involved in foreign wars, and the robustness of oil's influence on regime durability suggests that it might very well be important to explaining the onset and duration of external conflict as well.<sup>20</sup>

Methodologically speaking, the fact that most theories draw heavily from the experiences of the big four suggests that scholars should throw their nets more widely and devote more comparative attention to cases that, while less politically exciting, may help us to understand better the dynamics of oil wealth and political stability. As Karl (1997, 19) notes, many such states account for a much smaller share of the world's oil supplies than do the big four. This, however, is insufficient justification for excluding them. If the goal is to explain the effects of oil on domestic politics, it makes more sense to select cases based on the role of oil in the domestic political economies of exporting states, rather than on their clout on the global market. In addition to bringing in a larger number of exporting states, orienting studies in this direction should help to alleviate selection bias problems.

Nonetheless, despite aggregate tendencies toward stability among the population of oil exporters when compared to nondependent states, it is clear from the continued scholarly attention given the big four that oil wealth *can* help to undermine political stability and undercut regimes in exporting states. Richly detailed case studies show clearly that oil has been significant in perpetuating weak institutions or stymieing reform in a number of exporting states, and because they appear to be outliers is

<sup>20</sup>I am grateful to an anonymous reviewer for bringing this point, and Parasiliti's article, to my attention.

no reason to discard them. In concert with broad trends that belie the experience of these apparent outliers, the wide variation in levels of stability in oil dependent states suggests that oil wealth might exert varying effects on regime durability and domestic conflict.<sup>21</sup> Large-N statistical analysis is unlikely to provide an answer to this question as it seems more useful in this case for prediction than for explanation, and case studies focused on the commonalities of unstable states have done little more to help us understand the nuances of oil politics.

I believe that a major part of this problem has been in the way that scholars have conceptualized oil. It has been conceptualized as a structural variable willfully exerting its own effects. Despite wide variation in their approaches to the study of oil politics, both statistical and small-N or case study methodologists have underplayed the importance of agency and timing. A number of recent works (Bellin 1994; Herb 1999; Lowi 2000; Okruhlik 1999) have hinted at this, but none yet have provided a theory to explain how oil revenues might "do" different things depending on the context in which they do them. What these works do provide is a crucial reminder: oil revenues are filtered into domestic political settings by politicians with their own interests at stake, and those interests might be shaped in different ways depending on the timing of oil's entry into a political economy.

Several states that rely on oil revenues now, or that relied heavily on them during the 1980s and 1990s, were oil-poor when they had to consolidate. The recently departed Suharto regime in Indonesia, Mahathir's government in Malaysia, Mubarak's Egypt, and several others have combined oil wealth with impressive durability and the ability to deal adeptly with numerous crises. Thus, one avenue of research that looks especially promising is the analysis of regime consolidation in states in which oil wealth came along after rulers had already had to hand out other resources—power and influence among them—in order to survive. The late arrival of oil to such settings may have added a layer of substantial patronage rents to an already robust regime project, helping to explain the extraordinary durability of some regimes in major exporting countries. The incorporation of regimes such as these into the broader study of oil wealth and politics is likely to advance our understanding of the importance of timing and other factors relevant to regime consolidation. A broader focus on the conditions under which oil revenues become available to political leaders is a promising first step toward constructing theories of oil and politics in which politics remains important.

<sup>21</sup>Herb (2002) makes this observation with regard to oil's effect on democracy, noting that it is argued simultaneously to have made Venezuela's pacted transition to democracy possible and to have stifled democracy elsewhere.

## Appendix A

### Summary of Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
oilgdp	2159	.0759178	.1626896	0	1.219637
civilwar	3998	.3764382	.8664168	0	3
democracy	3666	-2.36743	6.844403	-10	10
tprotest	3392	1.147111	3.317007	0	49
elf85	4240	.5297925	.2633405	.003	.984
urbangro	4240	4.676197	2.700443	-44.15816	23.41692
gdpgrow	3507	4.058124	6.714938	-50.6	81.88776
boomeffect	2248	.170217	.7927611	0	10.8226
busteffect	2248	.1304891	.6521709	0	8.291536
pastfail	3887	2.284024	2.939099	0	26
trend	4173	20	11.25598	1	39
regimefail	3887	.1155132	.3196815	0	1
logpoptotal	4280	15.51183	1.722056	10.71442	20.94928
logarea	4141	12.15344	1.989721	6.063785	16.04847
democracy <sup>2</sup>	3666	52.43781	27.70497	0	100
logpopdensity	4141	3.357724	1.523284	-.4648309	8.776274

## Appendix B

### Country List for the Data Set

1. Afghanistan
2. Algeria
3. Angola
4. Argentina
5. The Bahamas
6. Bahrain
7. Bangladesh
8. Barbados
9. Belize
10. Benin
11. Bhutan
12. Bolivia
13. Botswana
14. Brazil
15. Brunei
16. Burundi
17. Cambodia
18. Cameroon
19. Central African Republic
20. Chad
21. Chile
22. China (PRC)
23. Colombia
24. Congo, Democratic Republic (Kinshasa)
25. Congo, Republic (Brazzaville)
26. Costa Rica
27. Cote d'Ivoire
28. Cuba
29. Djibouti
30. Dominican Republic
31. Ecuador
32. Egypt, Arab Republic
33. El Salvador
34. Equatorial Guinea
35. Ethiopia
36. Gabon
37. Gambia
38. Ghana
39. Guatemala
40. Guinea
41. Guinea-Bissau
42. Guyana
43. Haiti
44. Honduras
45. India
46. Indonesia
47. Iran
48. Iraq
49. Israel
50. Jamaica
51. Jordan
52. Kenya
53. South Korea

54. Kuwait
55. Laos
56. Lebanon
57. Lesotho
58. Liberia
59. Libya
60. Madagascar
61. Malawi
62. Malaysia
63. Mali
64. Mauritania
65. Mauritius
66. Mexico
67. Mongolia
68. Morocco
69. Mozambique
70. Myanmar
71. Namibia
72. Nepal
73. Nicaragua
74. Niger
75. Nigeria
76. Oman
77. Pakistan
78. Panama
79. Papua New Guinea
80. Paraguay
81. Peru
82. Philippines
83. Qatar
84. Rwanda
85. Saudi Arabia
86. Senegal
87. Sierra Leone
88. Singapore
89. Somalia
90. South Africa
91. Sri Lanka
92. Sudan
93. Swaziland
94. Syria
95. Tanzania
96. Thailand
97. Togo
98. Trinidad and Tobago
99. Tunisia
100. Turkey
101. Uganda
102. United Arab Emirates
103. Uruguay
104. Venezuela
105. Yemen Arab Republic

106. Zambia
107. Zimbabwe

## References

- Achen, Christopher. 2000. Why Lagged Dependent Variables Can Suppress the Explanatory Power of Other Independent Variables. Presented at the Annual Meeting of the Political Methodology Section of the American Political Science Association.
- Banks, Arthur S. 1996. *Cross-National Time Series Data Archive*. Binghamton, NY: Center for Social Analysis, State University of New York at Binghamton.
- Beblawi, Hazem, and Giacomo Luciani. 1987. Introduction. In *The Rentier State*, ed. Hazem Beblawi and Giacomo Luciani. London: Croom Helm, pp. 1–21.
- Beck, Nathaniel, Jonathan N. Katz, and Richard Tucker. 1998. Taking Time Seriously: Time-Series Cross Section Analysis with a Binary Dependent Variable. *American Journal of Political Science* 42(4):1260–88.
- Bellin, Eva. 1994. The Politics of Profit in Tunisia: Utility of the Rentier Paradigm? *World Development* 22(3):427–36.
- Bellin, Eva. 2002. “The Robustness of Authoritarianism in the Middle East: A Comparative Perspective.” Presented at the annual meeting of the American Political Science Association.
- Chaudhry, Kiren Aziz. 1997. *The Price of Wealth: Economies and Institutions in the Middle East*. Ithaca: Cornell University Press.
- Collier, Paul, and Anke Hoeffler. 1998. On Economic Causes of Civil War. *Oxford Economic Articles* 50(4):563–73.
- Crystal, Jill. 1989. Coalitions in Oil Monarchies: Kuwait and Qatar. *Comparative Politics* 21(4):427–44.
- Davis, Graham. 1995. Learning to Love the Dutch Disease: Evidence From the Mineral Economies. *World Development* 23(10):1765–79.
- Delacroix, Jacques. 1980. The Distributive State in the World System. *Studies in Comparative International Development* 15(3):3–20.
- Fearon, James D., and David D. Laitin. 2003. Ethnicity, Insurgency, and Civil War. *American Political Science Review* 97(1):75–90.
- Gasiorowski, Mark. 1995. Economic Crisis and Political Regime Change: An Event History Analysis. *American Political Science Review* 89(4):882–97.
- Gelb, Alan et al. 1988. *Oil Windfalls: Blessing or Curse?* New York: Oxford University Press.
- Gleditsch, Nils Petter, Peter Wallensteen, Mikael Eriksson, Margareta Sollenberg, and Havard Strand. 2002. Armed Conflict 1946–2001: A New Dataset. *Journal of Peace Research* 39(5):615–37.
- Gurr, Ted Robert. 1994. Peoples Against States: Ethnopolitical Conflict and the Changing World System. *International Studies Quarterly* 38(3):347–477.
- Haggard, Stephan, and Robert R. Kaufman. 1995. *The Political Economy of Democratic Transitions*. Princeton: Princeton University Press.

- Herb, Michael. 1999. *All in the Family: Absolutism, Revolution, and Democracy in the Middle Eastern Monarchies*. Albany: State University of New York Press.
- Herbst, Jeffrey. 2000. *States and Power in Africa: Comparative Lessons in Authority and Control*. Princeton: Princeton University Press.
- Hegre, Havard, Tanja Ellingsen, Scott Gates, and Nils Petter Gleditsch. 2001. "Toward a Democratic Civil Peace? Democracy, Political Change, and Civil War, 1816–1992." *American Political Science Review* 95(1):33–48.
- Horowitz, Donald L. 1985. *Ethnic Groups in Conflict*. Berkeley: University of California Press.
- Huntington, Samuel P. 1968. *Political Order In Changing Societies*. New Haven: Yale University Press.
- Huntington, Samuel P. 1991. *The Third Wave: Democratization in the Late Twentieth Century*. Norman, OK: University of Oklahoma Press.
- Huntington, Samuel P. 1996. *The Clash of Civilizations and the Remaking of World Order*. New York: Simon and Schuster.
- Karl, Terry. 1997. *The Paradox of Plenty: Oil Booms and Petro-States*. Berkeley: University of California Press.
- Lewis-Beck, Michael. 1986. Interrupted Time Series. In *New Tools for Social Scientists*, ed. William Berry and Michael Lewis-Beck. Beverly Hills: Sage Publications, pp. 209–40.
- Marshall, Monty G. and Keith Jagers. 2000. Polity IV Project: Political Regime Characteristics and Transitions, 1800–1999. <[www.bsos.umd.edu/cidcm/polity](http://www.bsos.umd.edu/cidcm/polity)> (September 26, 2002).
- Najmabadi, Afsaneh. 1987. Depoliticisation of a Rentier State: the case of Pahlavi Iran. In *The Rentier State*, ed. Hazem Beblawi and Giacomo Luciani. London: Croom Helm, pp. 211–27.
- Okruhlik, Gwenn. 1999. Rentier Wealth, Unruly Law, and the Rise of Opposition: The Political Economy of Oil States. *Comparative Politics* 31(3):295–315.
- Parasiliti, Andrew. 2003. The Causes and Timing of Iraq's Wars: A Power Cycle Assessment. *International Political Science Review* 24(1):151–66.
- Remmer, Karen L. 1999. Regime Sustainability in the Latin Caribbean, 1944–1994. *The Journal of Developing Areas* 33(3):331–54.
- Roeder, Philip G. 2001. "Ethnolinguistic Fractionalization (ELF) Indices, 1961 and 1985." February 16. <<http://weber.ucsd.edu/~proeder/elf.htm>>. (November 15, 2001).
- Ross, Michael L. 1999. "The Political Economy of the Resource Curse." *World Politics* 51(1):279–322.
- Ross, Michael L. 2001a. "Does Oil Hinder Democracy?" *World Politics* 53(3):325–61.
- Ross, Michael L. 2001b. *Timber Booms and Institutional Breakdown in Southeast Asia*. New York: Cambridge University Press.
- Skocpol, Theda. 1982. Rentier State and Shi'a Islam in the Iranian Revolution. *Theory and Society* 11(3):265–82.
- Smith, Benjamin n.d. *Hard Times in the Land of Plenty: Oil, Opposition, and Late Development*. Unpublished manuscript, Harvard University.
- de Soysa, Indra. 2000. The Resource Curse: Are Civil Wars Driven by Rapacity or Paucity? In *Greed & Grievance: Economic Agendas in Civil Wars*, ed. Mats Berdal and David Malone. Boulder: Lynne Rienner, pp. 113–35.
- Vandewalle, Dirk. 1998. *Libya Since Independence: Oil and State Building*. Ithaca: Cornell University Press.
- Wantchekon, Leonard. 1999. *Why do Resource Dependent Countries Have Authoritarian Governments?* (Leitner Working Article 1999–11). New Haven: Yale Center for International and Area Studies.
- Warwick, Paul. 1992. Economic Trends and Government Survival in West European Parliamentary Democracies. *American Political Science Review* 86(4):875–87.
- World Bank. 2001. World Development Indicators. CD-ROM. Washington: World Bank.