

DOES RENTIERISM PREVENT DEMOCRACY?

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Abstract

The rentier state theory asserts that governments whose revenues consist largely of rent are unlikely to be democratic. In this paper I test the theory using a cross-regional dataset. Previous studies of the correlates of democracy have shown that the level of economic development (usually measured by per capita GDP) has an important effect on a country's level of democracy. Rentier income often dramatically raises per capita GDP figures. My findings suggest that, unless we assume that rentier wealth has the same positive effect on democracy as other sorts of wealth, the statistical relationship between rentierism and authoritarianism is weak and perhaps absent.

Introduction

Exporting natural resources, it is widely thought, is not such a good thing. This is particularly true when these exports compose a large share of GDP, or profits from these exports make up much of government revenues. The economies of natural resource exporters, it is said, are beset by a “resource curse” that retards growth. In politics, there can be “no representation without taxation,” and thus democracy is well nigh impossible. This article challenges the prevailing view concerning the effects of natural resource dependence on democracy. I do not argue that natural resources are an unmixed blessing: sometimes they are a blight and rarely do they deliver on their initial promise. But, at least in the realm of politics, their negative effects are overstated, in no small part because the political outcomes of natural resource exporters are often compared not to outcomes in otherwise similar countries, but instead to those of richer countries.

The rentier state theory argues that authoritarianism prevails where profits from natural resource exports displace taxes in government revenues: it is often summed up in the aphorism “no representation without taxation” (Luciani 1990, 77). Ross, in the only published large-*n*, cross-regional test of the theory, finds that “the oil-impedes-democracy claim is both valid and statistically robust, ... oil does hurt democracy.” This, he says, helps to “vindicate” the rentier state theory (Ross 2001a, 356-7). Barro, while he does not mention the rentier state theory, also finds that oil exporters are less likely to be democratic. He interprets his results, however, differently: “the high level of per capita GDP associated with oil production does not have the usual positive linkage with democracy.” Oil exporters are predicted to have sharply lower democracy scores, but he adds that this is only true “for given values of per capita GDP” (Barro 1999, 167; also Helliwell 1994). This is a crucial qualification: the per capita GDP figures that are used to correct for level of development in these models are often highly inflated by the effects of natural resource exports. When we take this into account there is no statistically significant evidence that, on balance, oil or rentierism harm democracy.

This is an important finding in light of the existing literature on the topic, in which it is widely – though not universally – held that rentierism has a profoundly negative effect on the prospects for democratization (skeptics include Okruhlik 1999; Waterbury 1997, 153). The rentier state theory is the most influential theoretic paradigm in the study of the comparative politics of the eastern Arab world, and it has increasingly been applied to the study of natural resource exporters in other regions. The failure of the theory to receive support in a cross-regional test suggests that we would do well to focus on factors other than oil in our efforts to explain the democratic deficit in the Arab world, and that we should reevaluate the possible consequences of natural resource wealth for prospective new exporters, such as Chad or Bangladesh. The discussion here is also directly relevant to those who examine the correlates of democracy: oil exporters are the subject of some head-scratching in this literature. While I do not offer any easy solutions to the problems that these countries pose in quantitative analyses, this article does provide a better understanding of just what the problems are.

The article is in four parts. I start with a brief discussion of the rentier state theory. The second section discusses how countries become rentier states, and gives an overview of their experience with democracy. In the third section I test the theory using time-series cross-section (TSCS) data with panel corrected standard errors. A conclusion follows.

The rentier state literature and the effects of wealth on democracy

Beblawi's 1987 definition lucidly captures the central idea of what makes a state a rentier. For Beblawi, in a rentier state (1) the rents come from abroad, (2) the rents accrue to the government directly and, (3) "only a few are engaged in the generation of this rent (wealth), the majority being only involved in the distribution or utilisation of it" (Beblawi 1990, 87-88). It is the third point that makes the use of the term 'rent' appropriate. The concept in some ways resembles the usage of the term in classical political economy: rents are not generated by productive human activity, but instead by the scarcity value of

natural endowments.¹ A rentier state should not be confused with a state in which rent-seeking predominates among economic and political elites. Such rent-seeking may indeed be endemic in a rentier state (or it may not), but it is no way an aspect of the definition (Chaudhry 1997, 188; Ross 2001b, 33).

While there is a close relationship between rentierism and natural resource dependence, they are not the same thing. The usual measure of natural resource dependence is natural resource exports as a percentage of GDP: this measure is typically used in discussions of the economic consequences of exporting natural resources. Rentierism, by contrast, focuses on rents in government finances, and is the measure preferred in the rentier state theory. In practice, dependence on oil exports is almost always accompanied by rentierism.

The core claim of the rentier state theory is that rentierism is bad for democracy: the argument has been advanced in a number of case studies and theoretic pieces by, among others, Lisa Anderson (1987), Jill Crystal (1990), Dirk Vandewalle (1998) and Giacomo Luciani (1990). The causal mechanisms underlying the theory are of three sorts (see also Ross 2001a). The first concerns how the state collects revenue: it is argued, for example, that the absence of taxation “release[s] the state from the accountability ordinarily exacted by domestic appropriation of surplus.... [T]he state may be virtually completely autonomous from its society, winning popular acquiescence through distribution rather than support through taxation and representation” (Anderson 1987, 10). As Ross points out, this argument draws heavily on the lessons of European history, in which it is widely thought that taxation had a major role in the development of democratic institutions (Ross 2001a, 332; Tilly 1990; Bates and Lien 1985). In Luciani’s version, the lack of taxation undercuts the organization of citizens based on economic interests, and makes religion and cultural organizations paramount (1990). The second causal mechanism concerns how the state spends revenues: rentierism, it is argued, increases the capacity of the state to both buy off, and to repress,

¹ For Ricardo rent is compensation paid to the owners of land “for the use of its original and indestructible powers.” “Original” here means not taking into account any human improvements to the land. Oil resources, of course, are not indestructible (Ricardo 1921, 54-5).

opposition. These two mechanisms, together, often are thought to produce a “rentier social contract” in which “the state provides goods and services to society ... while society provides state officials with a degree of autonomy in decision-making” (Wiktorowicz 1999, 608). A third set of arguments in the literature holds that rentier wealth distorts social structure, preventing changes that promote democracy when countries follow a more standard development trajectory. While the first two mechanisms are state-centered, the third focuses on how rents affect society, and thus is more about natural resource dependence than rentierism specifically.

At first glance, the rentier state theory appears to be eminently testable: rentierism, the theory predicts, harms democracy. But there is an important ambiguity in the theory. Rentierism often makes otherwise poor countries rich. Wealth (or development) is associated with democracy: this is the Lipset thesis, and it is one of the most durable empirical findings of comparative politics (Lipset 1959; Burkhart & Lewis-Beck 1994; Przeworski et al, 2000). Thus, does the rentier state theory predict that rentiers will be less democratic than they would have been without natural resource exports? Or does it predict that rentiers will be less democratic than countries which are not rentiers, but which have similar levels of wealth and “development”? The difference is important: if we compare Kuwait to Yemen we are likely to get a different answer to our question than if we compare Kuwait to Canada.

This issue is little discussed in the rentier state literature. We find an exception, however, in John Clark’s discussion of oil and democracy in Congo Brazzaville (Clark 1997). He writes that,

the significant petroleum income that Congo has enjoyed since 1973 has had mixed consequences for the prospects for democracy there. On the positive side of the ledger ... oil revenues have improved overall social well-being and encouraged the development of an active civic culture. What brought down Sassou-Nguesso's regime was large and sophisticated urban groups-- including intellectuals, managers and entrepreneurs, and workers. These groups, in turn, owe their size and influence largely to the country's oil wealth (1997, 74).

At the same time, however, Clark also notes oil’s negative effects: "Oil revenues played their part in

maintaining the Sassou-Nguesso regime beyond what might have been its 'natural' life span." He then weighs the two effects of oil and concludes that "[o]n the whole, [Congo's] oil wealth slightly increases its chances of becoming democratic" (1997, 75). Clearly, for Clark, the issue of the rentier state theory is whether or not rentier states are less democratic than they would have been in the absence of rentier wealth.

More typically in the rentier state literature the characteristics of rentier states are described in comparison to non-rentiers as a group, without distinguishing between successful and less successful non-rentiers.² The emphasis is squarely on the negative effects of rents on democracy: the idea of balancing positive and negative effects of rentierism is rarely broached, nor would it fit into the line of argument in most works on the rentier state theory, in which the effects of rentierism on democracy are seen as wholly negative. The most commonly cited factor that might alleviate these affects is a fall in rent income, not rent income itself (Brynen 1992, 96; Vandewalle 1998, 179).³ Thus, although there is little said explicitly about this issue in the literature, on balance the rentier state theory seems to predict that rentiers will be less democratic than they would have been without rent wealth, not less democratic than other richer countries.

An effort to test the rentier state theory using quantitative methods brings this issue to the fore, but it is also crucial for non-quantitative evaluations of the theory as well: it is not possible to select comparison cases without clarifying this ambiguity. Indeed, this point applies to the wider literature on the effects of natural resource wealth: if there is a "resource curse" we need to know whether this curse makes countries

² Crystal's comparison of Kuwait before and after oil is a notable exception (Crystal 1990, but also Herb 1999, 69), as is Shambayati's comparison of Iran and Turkey (1994). Chaudhry, in the wider literature on the effects of oil wealth, discusses Yemen and Saudi Arabia, an apt pairing of cases (Chaudhry 1997).

³ This argument is hard to distinguish from the theory that authoritarian regimes (or regimes in general) are susceptible to economic crisis.

worse off than they would have been without the resource (which is what seems to be implied by “curse”) or whether it is simply that the opportunities seemingly offered by oil wealth – for economic, social and political development – are often squandered.

What states are rentiers?

Table 1 lists rentier states, and democratic episodes in these states, in the period between 1972 and 1999.

Both rentierism and democracy are defined dichotomously here: following Luciani, a rentier state is a country whose government typically receives at least 40% of its revenues in the form of rent (1990, 72).

In the next section I will use a more refined measure of rentierism in the multivariate regressions. Table 1, apart from its value as an inventory (few efforts have been made along these lines in the literature), brings to the fore two analytic issues.⁴ First, it helps to us to understand how it is that countries *become* rentier states, which is not entirely due to happy accidents of geology. Second, it illustrates the degree to which democracy is not incompatible with rentierism, contra much of the literature.

[Table 1 here]

Many of the rentiers are in the Arab world, and all of these are authoritarian. But democracy is a rare thing in the Arab world anyways: there were virtually none in the period between 1972 and 1999 (brief periods in Sudan and Lebanon are the exceptions). In other regions of the world – regions that are more democratic – we do find rentier democracies, in Latin America, Africa and Oceania. In short, rentierism is no insuperable obstacle to democracy. Further, and contrary to what we might expect, there are few cases of democratic failure among the rentiers. The only two cases are in countries that also became democratic while they were rentiers. All of the countries in Table 1 that were democracies in 1972 were still

⁴ In Table 1 income data for Iraq is for 1987. Democratic episodes are drawn primarily from Bernhard, Nordstrom & Reenock (2001). After 1995 democratic periods are assumed to continue unless rated Not Free by Freedom House; Nauru and Kiribati have always been rated Free by Freedom House.

democracies in 1999. Clearly rentierism, if it has an effect on democracy, does so by preventing already authoritarian countries from becoming democratic, not by killing off existing democracies. Finally, it is striking the degree to which rentiers tend to resemble other countries in their own regions. Charts 1 through 3 show rent against democracy scores for the Arab world, Sub-Saharan Africa, and Latin America. Lines were calculated using OLS.⁵ Following convention I combined the Freedom House scores for Political Freedom and Civil Liberties to yield a 13 point scale from 0 to 12. I reverse the scale so that higher scores are more – not less – democratic, which accords with most people’s natural inclinations when looking at charts and estimation results for these data. Oceania and Southeast Asia are not shown, because there is not much precise data for the known rentiers: despite this, it is clear that in Oceania rentiers are more democratic than other countries, and in Southeast Asia, less so.

[Charts 1-3 here]

Table 1 also helps to illustrate several complex issues of just how it is that a country becomes a rentier in the first place. There are no Western democracies in Table 1, and indeed there are no countries that, absent oil, could be described as developed. This is a direct consequence of the definition of rentierism itself, which results in the selection of rentiers in a non-random way from among the world’s countries.

Following the literature, rentierism is rent revenue as a percentage of total government revenues:

$$\text{Rentierism} = \frac{\text{Rent revenues}}{\text{All other revenues} + \text{Rent revenues}} \quad (1)$$

The equation used to measure of natural resource dependency is similar (Sachs and Warner 1995, 8):

$$\text{Oil export dependence} = \frac{\text{Net oil exports}}{\text{GDP}} \quad (2)$$

The denominator is crucial in these equations. The effect of a rent windfall on the proportion of rents in

⁵ Since some data points are in essentially the same place in the charts, a random process was used to slightly vary the placement of each data point. This is the “jitter” option in STATA.

government revenue is mostly a function of a country's level of development: in a poor country a relatively minor sum of rent can come to dominate government revenues. Similarly, oil exports are much more likely to make up a very large percentage of GDP if the economy produces little else than oil. In 1996 Angola's government received a modest \$127 per capita in oil rents, but these constituted fully 86% of all government revenues. In the same year, by contrast, the Norwegian government received, per capita, *19 times* more oil revenue than did Angola, but this oil wealth amounted to only 13% of all government revenues.⁶ Indeed, it is virtually impossible that a rich, productive country of any substantial size could become a rentier. In a real sense, poverty causes rentierism. Since wealth is correlated with democracy, we have reason to think that, in the absence of rent wealth, most rentiers would be poor and authoritarian.

It is, however, more complicated than this: it is often argued that dependence on natural resource exports causes poverty, in the form of slower growth rates and the strangling of the remaining export sector (Sachs and Warner 1995; Auty and Mikesell 1998). Thus there may be a vicious circle at work: poor economies are more likely to be dominated by a single natural resource, and this in turn erodes the remaining economy, further increasing the economic importance of the resource. On balance, however, it is likely that poverty does more to cause rentierism than the other way around: most rentiers are in parts of the world where economic growth in non-rentier states has been anemic. Further, in regions where economic growth is common, such as Southeast Asia, some rentiers have grown out of rentierism. Both rentierism and oil export dependence are the products, in one way or another, of state policy choices (Barro 1999, 167). These choices can be changed: in the mid-1980s Indonesia reformed its tax system, and this helped it to move away from advanced rentierism (Hill 1996, 47-52). The "natural resource trap" may really be an Africa and Middle East trap.

⁶ International Monetary Fund, *Staff Country Reports*

The model

Any effort to test the rentier state theory runs directly into the problem that rentierism confounds all available measures of level of development, such as per capita GDP. I will discuss this issue in detail in interpreting the results of my model: before doing this, however, it is useful to have the model – and its results – in front of us. The basic regression model is:

$$\begin{aligned} \text{Democracy Score}_{i,t} = & a_1 + b_1(\text{Democracy Score}_{i,t-1}) + b_2(\text{Rentierism}_{i,t-1}) \\ & + b_3(\text{natural log of per capita GDP}_{i,t-1}) \\ & + b_4(\text{Muslim share of population}_i) \\ & + b_5(\text{Mean democracy score for other countries in region}_{i,t-1}) \end{aligned} \quad (3)$$

The dependent variable is Freedom House's democracy score: the data series starts in 1972 and I used data through 1999. The Freedom House data have 4746 observations, representing virtually the entire universe of sovereign states in the period. There was missing data for other variables, resulting in significantly fewer observations in the regressions. Again, the Freedom House scale was reversed so that higher values indicated more democracy.

[Table 2 here]

There are no existing data sets that directly measure rentierism, so I consulted a number of readily available sources to construct my own, guided by Beblawi's definition of rentierism. I did not count as rent proceeds from anything not marketable to more than one buyer. Thus grants are excluded (though they are included in the denominator, as government revenue). The underlying idea of the rentier state theory is that power follows money: rentier rulers receive money with no strings attached, and this is said to increase their autocratic potential. The strings attached to grants can affect regime type. For more details on the rentierism data, see Appendix A. I check my results using a second variable, net oil exports as a percentage of GDP.⁷ This variable measures the most important form of natural resource dependence,

⁷ The oil export dependence measure is similar to Ross's *Oil* variable: it was constructed by subtracting

and thus gets at a very closely related issue via an entirely different collection of data. As it turns out, rentierism and dependence on oil exports are highly correlated, with an adjusted R-squared of .82. I do not use the IMF's figures for nontax revenue as a percentage of current revenues, as these data are an inferior measure of rentierism.⁸

Per capita GDP data is from the Penn World Tables and is in constant 1985 US dollars. I used World Bank data (from the 2001 World Development Indicators CD-ROM) to extrapolate the PWT figures forward into the 1990s, and in some cases backwards in time as well. Previous studies of democracy have found that regional dummy variables or other controls for region are significantly correlated with democracy or its absence (Burkhart and Lewis-Beck 1994; Londregan and Poole 1996; Przeworski et al 2000, 83 note 4). I follow Gasiorowski (1995) in constructing a measure of regional influences. For each country in each year, I calculated the mean democracy score of all other countries in the same region in that year: the democracy score of the country itself, of course, was excluded. This measure has several virtues: it avoids a proliferation of dummy variables, it reflects changes over time, and it includes information on countries not otherwise included in the regressions as a result of missing data for other

oil imports from oil exports, then calculating the balance as a percentage of GDP. Negative values (indicating net oil imports) were set to zero. This made further adjustments for oil re-exporters unnecessary. Twenty data points were dropped because they were manifestly in error, for the Bahamas, the UAE, Oman and Kuwait. Data is from the World Bank's *World Development Indicators* CD-ROM, 1999 and 2001.

⁸ Rentier profits often appear in government accounts as tax revenue from oil and mineral companies, particularly outside the Middle East. Nontax revenue often includes all sorts of things that are not rent, such as revenues from state owned enterprises. The correlation between my measure of rentierism and nontax income is modest: the R-squared is 0.46; the correlation between net oil exports as a percentage of GDP and nontax revenue is 0.42. The nontax revenue data can be found on the *World Development Indicators* CD-ROM.

variables. I calculated regional averages using six regions: the Middle East, Europe and English-speaking North America, Latin American and the Caribbean, South Asia, East Asia, and Oceania.⁹

The percentage of Muslims in countries' populations changes little over time, and I used 1990 figures in most cases (Barrett, Kurian & Johnson, 2001). Previous studies have found Islam to be correlated with democracy, and there are theoretical reasons to suppose that it might be. While I do not think that there is an immutable authoritarian or democratic "essence" to Islam, the ideological and cultural currents that are common to the Islamic world may well have an effect on democracy scores.¹⁰

I use OLS to estimate coefficients and panel-corrected standard errors (PCSEs) for tests of significance. In this I follow Beck and Katz's 1995 and 1996 articles. In the latter article they reanalyze Burkhart and Lewis-Beck's study of the effect of development on democracy. Burkhart and Lewis-Beck's study resembles mine in several important respects: most notably, they use the same dataset for their dependent variable, albeit with fewer years of data. Beck and Katz argue that TSCS data suffer from three problems: serial correlation, panel heteroscedasticity, and contemporary correlation (1996, 4-5). A lagged dependent variable, they argue, almost always deals adequately with the problem of serial correlation, and further fixes of remaining serial correlation are generally worse than the illness.¹¹ Beck and Katz's PCSEs deal

⁹ Israel was included in the European region: the regional influence variable is meant to measure the effect of common culture, ideological currents, and so forth, and not mere geographic propinquity. Asian countries that were formerly Soviet republics lack income data from the Penn World tables, and are thus not in any of the regressions: they compose a seventh region.

¹⁰ When the models were run without this variable, rentierism and oil export dependency achieved significance in models 1, 2, 5 & 6 in Table 3. The adjusted R-squared of the rentierism measure correlated with the Muslim population percentage is .17, and for the measure of oil export dependency is .16. Catholic and Protestant population shares were not significant, and were not included in the model.

¹¹ A Lagrange multiplier test showed that the lagged dependent variable did not remove all serial

with the problems of panel heteroscedasticity and contemporary correlation. A test for panel heteroscedasticity in the pooled data was positive, as we would expect, suggesting that use of PCSEs is appropriate.

Results

The oil export dependence variable, which resembles the measure that Ross uses (and is inspired by it) is significant, in line with Ross's findings (model 5, table 3). The direct measure of rentierism, however, is not (model 1). The divergent results are partly due to the patterns of missing and available data in the two measures. Simply dropping Botswana - a democratic diamond exporter - from model 1 made the measure of rentierism (barely) statistically significant. When the regressions are run on only those observations for which there is data for both measures (2108 observations) there is substantially less difference in the results. Per capita GDP is significant in both models, as we would expect, as is the Muslim share of population, the regional democracy score mean and the lagged dependent variable. Of these (and apart from the lagged dependent variable), the regional variable does the best job of predicting democracy scores.

[Table 3 here]

The model uses standard per capita GDP figures to correct for the effect of level of development on democracy. In many cases, rentier wealth itself has a profound effect on per capita GDP figures, inflating them far beyond what they would be in the absence of rentier income. The model, however, makes no distinction whatsoever between wealth received from windfalls and wealth generated in a productive

correlation from the basic model (equation 3). The results of the test, however, were comparable to those found by Beck and Katz in their reanalysis of Burkhart and Lewis-Beck: the coefficient was the same, the standard error was slightly smaller. In these circumstances, Beck and Katz recommend no further transformation of the data.

economy: the coefficients and standard errors are calculated with no regard to what sort of wealth underlies the per capita GDP figures. *Thus the model assumes that rentier wealth has the same effect on democracy as other sorts of wealth.* If we accept this assumption (and use the model with the oil export dependence variable) the results can be interpreted as follows (see also Ross 2001a, 342):

The positive effects of oil wealth on democracy are counterbalanced by the negative effects of dependence on oil exports. The overall result depends on (1) the impact of oil wealth on per capita GDP and (2) the size of the non-oil economy relative to oil wealth.¹²

If we do not make this assumption – that is, if we do not assume that oil wealth has the same positive effects on democracy as other forms of wealth - we have reasons to suspect that the results of the model are misleading. The democracy scores of the rich rentiers are sharply at odds with the democracy scores of other countries with similar levels of per capita GDP: the failure of per capita GDP to predict these countries' democracy scores might increase the fit of the rentierism or oil export dependency variables in the model.

I made several modifications to the basic model to see whether or not this suspicion is well-founded.

These modifications are diagnostic: it is not possible to separate rentier wealth from non-rentier wealth in the GDP figures for rentiers. Rentier wealth (or oil wealth) is transformative, not additive. There is no “non-oil” economy left to be measured in a country like Kuwait or Saudi Arabia. Oil exports might make up, for instance, 45% of GDP, but the remaining 55% is not somehow independent of oil, nor could the

¹² As Ross observes, the logarithmic transformation of per capita GDP introduces additional complications. Further, the impact of oil wealth on per capita GDP cannot be calculated through simple addition. Oil exports accounted for about 33% of Qatar's GDP in 1989, leaving a very substantial remainder (about \$11,000 per capita): this is the effect of saved oil wealth from previous years (including infrastructure investments), and probably a process by which oil wealth, as it filters through the economy, has a multiplicative effect.

sum of wealth per capita that this translates to exist in the absence of oil exports, including those of past years.

I adjusted per capita GDP figures by capping rentier states' per capita GDP figures at various sums. Models 2 and 6 report the results for a cap of \$4500, in constant 1985 dollars using purchasing power parity: I set per capita GDP to \$4500 for any country in any year in which rents made up 40% or more of government revenue and per capita GDP was greater than \$4500. For the oil export dependence model, I capped per capita GDP for countries in which oil exports made up 20% or more of GDP (this produces a comparable set of countries). Fully two thirds of the remaining observations in the data have per capita GDP *below* \$4500, and this amount is very substantially higher than what we might expect the per capita GDP of the rentiers to be in the absence of oil: a \$4500 cap still includes a substantial amount of rentier wealth. If the inclusion of unadjusted per capita GDP figures in the model is responsible for the relatively high coefficients for the rentierism and oil export dependence variables, we would expect these coefficients to fall if we adjust per capita income for the richer rentiers downwards. This is what happens. Standard errors shrink, but coefficients shrink more (models 2 and 6). I used the same procedure to cap per capita GDP at various levels from \$15,000 to \$1,600 (two thirds of the observations for non-rentiers are above \$1600).¹³ In every instance, a lower per capita GDP cap yielded less significance for the measures of rentierism and oil export dependence and, except at some higher income caps, more significance for the measure of per capita income. This latter point is keeping with an expectation that inflated per capita income figures for the richer rentiers distort the underlying relationship between level of development and democracy, a relationship which applies only (or only in full) to countries that produce their own wealth. The lowest cap - \$1600 – is quite low for rentiers in somewhat wealthier parts of the world, where we might expect substantial non-oil economies to exist alongside the oil economy. In

¹³ Per capita GDP was capped at \$4500 for 170 observations, for Bahrain, Gabon, Iran, Kuwait, Oman, Qatar, Saudi Arabia, Trinidad, the United Arab Emirates, and Venezuela. For higher caps, fewer countries were affected, for lower caps, more.

models 3 and 7, I set the richer rentiers' per capita GDP figures to the means of non-rentier neighbors, or non-rentier regional averages, thus accounting for regional variations: rentierism and oil export dependence are far from statistical significance.¹⁴

Finally, I simply dropped per capita GDP from the model. The measures of rentierism and oil export dependence are statistically irrelevant. This, with the results above, suggests that these two variables gain whatever association they have with democracy scores only by explaining variance that is introduced into the model by per capita income. Since rentiers tend to be drawn from countries with poorer productive economies, this suggests that any statistical significance achieved (or approached) by the measures of rentierism or oil export dependence are caused by the inflation of per capita GDP figures by oil wealth. At the same time, in none of the models (or, indeed, in any of the other regressions discussed in this article) did the coefficient for the measures of rentierism or oil export dependence change signs and become positive (though the confidence intervals frequently include zero). Thus there is no evidence that rentier wealth has, on balance, a positive effect on democracy scores.

I checked the robustness of these results in several ways. First, I used the POLITY measure found in the Polity IV dataset in place of the Freedom House democracy scores. Even though the index is biased against 20th century monarchies, the measures of rentierism move farther from statistical significance, while the measure of oil export dependence moves closer, achieving significance in model 6.¹⁵ Second, I

¹⁴ It is possible to run models 3, 4, 7 and 8 with additional observations. These results are not reported, as the point is to show how lower per capita GDP values for the richer rentiers affect the results of models 1 and 5. Adding these additional observations does not substantively affect the results.

¹⁵ This hostility to monarchies is found in the construction of the composite POLITY index and not (or not only) in the coding choices for the underlying components of the index. The POLITY measure deducts one point if a country is a monarchy (except some constitutional monarchies). Thus *only monarchies* can receive the lowest score in the POLITY measure: Qatar in 1999 is scored as more authoritarian than Hitler's Germany, which is simply bizarre. Second, a distinction is drawn between

used OLS standard errors rather than PCSEs: the P-values for the rentierism measure fall in all four rentierism models, and the measure achieves significance in models 1 and 2; there is little change in the oil export dependence models. Third, I ran the models at three year intervals (starting in 1975) using a three year lag for all of the lagged independent variables, including the lagged dependent variable. Rentierism and oil export dependence did not achieve statistical significance for the models which use regional means to adjust per capita GDP or for the models which lack per capita GDP altogether. Fourth, I separately added three additional variables: two measures of ethno-linguistic fragmentation in 1985, and the natural log of population. All three did a very poor job of predicting democracy scores and, given the absence of compelling theoretical reasons to include them, were dropped from the regression models.¹⁶ Finally, Barro uses a dummy variable for oil exporters, instead of a continuous measure. I also did this: the models using standard per capita GDP, and with the \$4500 cap, showed statistical significance for the measures of rentierism and oil export dependence, while the other models did not.¹⁷ These alterations

authoritarian regimes with regulated transfers of power and those that “occur through forceful seizures of power.” The former (and not the latter) are punished with a deduction of two points (see Marshall and Jaggers 2000, pages 18 & 14, for the consequences of XRCOMP=’0’). This disproportionately affects rentier states, because many are monarchies, and monarchies have regulated succession mechanisms. On the treatment of monarchies in measures of democracy see also Bollen and Paxton 2000.

¹⁶ It is difficult indeed to decide what identity differences merit inclusion in a measure of ethno-linguistic fragmentation - viz., are Jordanian Arabs one group, or several? Philip G. Roeder (whose data I use) offers three indicators based on three different answers, and these give very different results for some countries. Roeder’s indicators are inspired by Taylor and Hudson’s (1972) but include more countries. Data downloaded from weber.ucsd.edu/~proeder/elf.htm on February 20, 2002.

¹⁷ The rentier dummy variable is set to one for all rentier periods in rentier states in Table 1, except Angola, Nigeria, Equatorial Guinea, Yemen, Indonesia and Bolivia. Limiting the oil dummy to the six Gulf monarchies (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, the UAE) produced similar results.

were run on all four models for the measures of rentierism and oil export dependence, and in all instances the statistical significance of rentierism and oil export dependence declined as per capita GDP figures were progressively adjusted downwards, from the \$4500 cap, to regional means, to no per capita GDP at all.

We can conclude that the results of the original model depend crucially on the assumption that rentier wealth has the same positive effect on democracy as does non-rentier wealth. If we do not think that this assumption is warranted, the coefficients and standard errors of the models using unadjusted per capita GDP figures are wrong. The degree to which they are wrong depends on how well, or how poorly, one thinks that per capita GDP measures the actual positive effects of rentier wealth on democracy in the rentiers. It should be emphasized that there are no grounds here for making an “as if” assumption that rentier wealth does have a positive effect on democracy equal to that of non-rentier wealth, so that we can use the model to assess the negative effects of rentierism. If we are not sure that rentier wealth pushes democracy scores up, we cannot conclude that rentierism pushes them back down again.

Much thus depends on whether or not we think it is reasonable to assume that rentier wealth has the same pro-democratic effects as non-rentier wealth. The anomalous combination of wealth and autocracy in the richer rentiers has puzzled scholars who have attempted to fit them into larger theories of democracy.

Throughout the rentier state literature and the literature on the correlates of democracy, however, I am not aware of any explicit defense of the idea that rent wealth has the same democracy-promoting effects as wealth generated in a productive economy. Huntington’s response is typical: he writes that “...broad-based economic development involving significant industrialization may contribute to democratization but wealth resulting from the sale of oil (and, probably, other natural resources) does not” (1991, 65).

Inglehart, similarly, writes that “only so far as [wealth] brings appropriate changes in social structure and political culture does it enhance the viability of democratic institutions. ... [S]uch nations as Saudi Arabia, Kuwait and [Libya] are quite wealthy, but neither their social structures nor their political cultures seem favorable to democracy” (1988, 1219). Lipset himself notes that the increase in per capita incomes

caused by oil wealth is not accompanied by other changes that promote democracy (Lipset et al. 1993, 166). Following directly on this logic, it is a common (though not universal) practice to drop the richer rentiers from studies of democracy and development (Przeworski et al. 2001; Lipset et al. 1993).

There are good reasons, in theory, to suppose that rentier wealth does not have the same positive effects on democracy as other sorts of wealth, though there are also countervailing reasons to suppose that this wealth should not be inert, democracy-wise. I will take Kuwait as an example: oil wealth has enabled the spread of literacy, education, the mass media, and exposure to the wider world, all to a degree that is hard to imagine in a Kuwait without oil. We can add to these the growth of a large middle class, the creation of an occupational structure heavily weighted toward services, and little employment in agriculture (see Table 4).¹⁸ These factors, according to various renditions of the Lipset thesis (and other theories), should promote democracy. In other ways, however, Kuwait is sharply different from highly productive economies. A substantial white collar middle class exists, but a middle class work ethic is lacking. Virtually all Kuwaitis who work for a wage work for the state and not for private businesses (though some *own* businesses, or work in a family business). Most important, but perhaps most difficult to quantify, Kuwait simply does not have a very productive economy. Whatever changes that are necessary for an economy (and society) to achieve the startlingly high levels of productivity that are common today in rich countries have not been required of Kuwait. On balance it would be surprising if rentier wealth had no positive effects on democracy, but these effects are almost certainly not as large as they are in countries like Canada, Switzerland or Singapore. I will not attempt to quantify the effects: it is sufficient for my argument to observe that there are very good reasons to think that the effects of rentier wealth on

¹⁸ Data for Table 4 is from World Bank, *World Development Indicators CD-ROM, 2001* and from UNESCO *World Education Indicators 2000*. For female literacy figures for rich countries, I used data for “more developed regions and countries in transition” from the latter source, at www.unesco.org/education/information/wer/htmlENG/tablesmenu.htm. Accessed March 4, 2002.

democracy are less than those of other sorts of wealth.¹⁹ If we think this, the test does not support the theory that rentierism causes authoritarianism.

[Table 4 here]

While my main concern is with the rentier state theory, my findings have implications for studies of the correlates of democracy. If rentier wealth differs, in terms of democracy, from non-rentier wealth, using standard per capita GDP figures for a measure of development overestimates the positive effects of rentier wealth and underestimates the positive effects of the sort of wealth generated in a productive economy. In this article I have adjusted per capita GDP figures, but only to show that it matters: doing the same thing when the focus is on per capita GDP requires that the analyst provide a solid theoretical basis for determining per capita GDP figures that are appropriate for rentiers – that is, that correctly measure the influence of rentier wealth on democracy. This is no easy task. Two other alternatives are much more straightforward: rentiers can be dropped altogether, or a dummy variable for rentiers can be added to the model. Table 5 shows results for each of these alternatives. In models 2 and 4 all richer rentiers were coded as “1” in the dummy variable, or dropped. In models 3 and 5 only the six Gulf monarchies were affected.²⁰ In all cases the coefficient and t-ratios for per capita GDP increase (coefficients for the models reported in table 3 are higher, but this is due to the smaller dataset used in these regressions). It appears that using a dummy variable for the six richest rentiers, or for all rentiers, is perhaps the best strategy: the dummy variable accounts for the variation in the type of income received by these rentiers, it produces a better coefficient for the measure of per capita GDP, and it retains the rentiers in the model. Of course, the

¹⁹ I also do not propose that some other statistic be used as an alternate measure of development: virtually everything measurable in societies like those of Kuwait or Saudi Arabia is affected by oil.

²⁰ Brunei would have been included as well, but there is no income data for Brunei in the Penn World Tables. See footnote 17 for more on the rentier dummy variable. In models 5 and 6, regional democracy means were calculated for entire universe of states, including the dropped rentiers.

dummy variable's statistical significance should be interpreted with care.

[Table 5 here]

Conclusions

Rentier wealth might make countries less democratic than they otherwise would have been without windfall wealth. Or rent wealth might be an enormous wasted opportunity, failing to have the same beneficial effects as other sorts of wealth. There is evidence here for the second proposition: oil export dependence is associated with lower democracy scores, in a model that includes oil wealth in per capita GDP. We can interpret this to mean that oil wealth pushes democracy scores up and that rentierism pushes them back down or, much more plausibly, we can conclude that oil wealth simply fails to have the hoped-for positive effects. Either way, oil wealth is disappointing. But this is not really what the rentier state theory is about: the theory argues that rentier wealth does harm, not only that it fails to do good. For this notion, we find no support.

This flies in the face of an imposing body of theory that suggests that rentierism in fact does cause countries to be less democratic than they would have been without rentier wealth. That this study's findings are to the contrary might suggest, to many, not that the rentier state theory is wrong, but that my effort to quantify and to test a messy empirical reality has gone awry. I do not think that this is the case: three factors (apart from the test itself) lend credence to the findings here. First, only a handful of studies of rentier states have been constructed with attention given to the careful construction of research designs that would test the theory; and there is only one published large-n, cross-regional test of the theory, the results of which - I argue here - do not support the theory. Second, Table 1 - and the charts in the same section - give us little indication that there is a solid relationship between rentierism and autocracy that the test is somehow missing. Rentier states are disproportionately located in authoritarian neighborhoods, especially the Arab world. Where they are not (in Latin America and Oceania), some rentiers are democracies. Where oil wealth exists in rich parts of the world, there are no rentiers precisely because

rentierism is well nigh impossible in really prosperous countries. Third, while there are no published critiques of the broad array of causal mechanisms found in the rentier state theory – and this is not the place for one – there is room for such a critique. This is particularly true of the rentier state theory's supposition that taxation is at the center of relations between rulers and ruled, and that its absence either prevents citizens from wanting democracy, or enables rulers to ignore their citizens' wishes. Citizens have other reasons for demanding accountability, and they have other resources to draw on in making their demands.

Perhaps the most trenchant criticism of the plausibility of my results, however, is the observation that, in specific rentier states, rentier wealth has had a profound effect on politics. The political systems of countries like Saudi Arabia and Venezuela are not what they would have been in the absence of oil. Many have concluded from this that there is a *common pattern* of political outcomes that are the consequence of rentier wealth, across regions. Crystal writes that “[o]il elicited a particular configuration of regime building and state building. Oil produced a patterned response [in Saudi Arabia, Venezuela, Indonesia, and Iran] and will reproduce that response wherever it occurs” (Crystal 1995, 196; also Karl 1997, xv, 237; Vandewalle 1998, 190). It is, however, also quite possible that while oil has profound effects on politics, these effects vary across different countries, influenced and patterned by all of the other variables that affect politics: existing institutions, ideology, social structure and customs, international influences, and so forth. When the mediating effect of these factors are taken into account, the effects of rentier wealth may be manifested in a way that produces no single direction of impact on democracy (Clark 1997, 75). There is evidence for this view: in Venezuela, oil revenues underwrote the pact that secured the survival of Venezuelan democracy in a period in which its neighbors were largely authoritarian (Karl 1986, 197). In the Gulf, oil helped to create particularly durable monarchical regimes. In Libya – otherwise quite similar - oil did not have this effect and the monarchy failed (Herb 1999). In Norway, oddly, there is little apparent effect on politics at all, in broad comparative terms, nor apparently in

Botswana (Du Toit 1995).²¹ And oil is often blamed for many of Nigeria's political ills (Diamond 1997, 473). In short, there is no clear common thread in terms of the effect of oil on regime type. This does not, of course, close the matter: but if a common set of effects are to be identified, an argument for them can only be made via carefully constructed comparative case studies that include non-rentiers (or countries before and after they became rentiers) and which explicitly entertain the likely possibility that, in the absence of rentier wealth, rentiers would have been as authoritarian as they are with rents, though perhaps in different ways.

The problem that has driven the rentier state literature, in the end, is the persistence of authoritarianism in the Middle East. The best explanation of this, as the cross-regional analysis here makes clear is not oil, but instead the factors that make the region as a whole – rentier states and non-rentiers alike – authoritarian (see also Ross 2001a, 346). In this, the economic determinism of the rentier state theory serves mostly to distract from more promising avenues of explanation. Worse yet, it discourages research into exactly how it is that rentier states might be encouraged to democratize by inducing an overdone pessimism and by facilitating a too easy dismissal of the prospects for any sort of democratization in countries like Kuwait and Saudi Arabia.

Appendix: measuring rentierism

I constructed the rentierism measure from several readily available sources. The IMF publishes Staff Country Reports for most sovereign states, and these cover most of the 1990s. Where rentier income is important, the IMF reports generally break it out in government revenues in a separate category. These reports can be found at www.imf.org/external/country/index.htm. The Economist Intelligence Unit sometimes details major sources of government revenue in its Country Profiles and its earlier Quarterly

²¹ It is sometimes argued that rentier wealth has negative effects only if state-building does not precede oil (Vandewalle 1998, 12; Karl 1997, 213). The effect of this is to further exclude from consideration countries in which positive outcomes are likely.

Economic Reviews. In some cases the EIU gives budget figures rather than outturns. The IMF's *Government Finance Statistics* also provides some useful data. Fourth, I consulted some electronic publications issued by national governments, when they were linked from the IMF's Web site. Finally, in a few cases information was gathered from readily available books on various countries.

In constructing the dataset, countries first were examined for any plausible source of rentier income. In this, I consulted the IMF's Country Reports; statistics on mineral and oil exports and statistics on the share of nontax revenue in total revenues from the World Bank's *World Development Indicators*; the United States Geologic Survey's Minerals Yearbook (online at <http://minerals.usgs.gov/minerals/pubs/country/>); and United States Energy Information Administration statistics. Countries with no obvious source of rentier income in these and other sources were presumptively coded as having no rentier income at all. In most cases this was done only after looking at IMF Staff Country Reports: small poor countries received more attention than populous rich countries. A more extensive examination was done for countries with a potential source of rentier income. Where it seemed clear that there was a substantial amount of rentier income (or might be), but no specific figures could be found, observations were left blank. Missing observations were filled in with data from the immediately adjacent year, if available. Data on rentierism was not collected for countries for which data on per capita income was not available.

In practice, it appears that rentier income derives from a limited number of sources: petroleum; minerals (especially diamonds, phosphates and copper); investment income from previous years' exports of oil or minerals; fishing license revenue when paid by foreign vessels or countries; and canal passage fees. Oil is most important, by far. Mineral exports are often less profitable: mineral exports appear to sometimes compose a substantial part of the economy while generating substantial rents for the government only sporadically, if at all. There were a few other assorted sources of rentier wealth, mostly from the exploitation of sovereign prerogatives by states with exceedingly modest revenues otherwise: flagging foreign vessels, selling passports, licensing Internet domain names, and so forth. Specific data on rent, or

per capita GDP, was missing for most countries with the odder varieties of rentier income. Sometimes government income from the export of agricultural (or other organic) products have a whiff of rent about them: in these cases, however, it is very difficult to sort out the relative share of productive activity and rent windfalls in government income, so proceeds from agricultural products were not counted as rents.

Table 1: Rentier states

Country	Periods in which rent was typically > 40% of government revenues	Average % of rent in gov't revenue in rentier period (for years with available data)	Per capita GDP, 1990 (constant 1985 \$US)	Democratic periods 1972 (or independence) - 1999
Middle East				
Kuwait	Entire period	88%	13,114	
Qatar	Entire period	87%	16,986	
UAE	Entire period	84%	19,648	
Oman	Entire period	81%	7,879	
Saudi Arabia	Entire period	80%	7,174	
Bahrain	Entire period	59%	8,879	
Libya	Entire period	58%	n/a (middle income)	
Iraq	Entire period	No data	3,205	
Iran	Entire period	55%	3,392	
Algeria	Entire period	53%	2,777	
Yemen	From 1990	46%	1,979	
Sub-Saharan Africa				
Nigeria	Entire period	71%	995	1979-1983
Botswana	From 1983	64%	2,284	Entire period
Angola	From independence	62%	678	
Equatorial Guinea	From 1996	58%	n/a (poor)	
Congo (Brazzaville)	From 1980	57%	2,211	1992-3
Gabon	Entire period	50%	3,958	
Guinea	1986-91	50%	767	
Latin America				
Venezuela	Entire period	61%	6,055	Entire period
Trinidad & Tobago	1974-1984	53%	7,764	Entire period
Ecuador	1982-1993	47%	2,755	1979-
Bolivia	1988-1991	43%	1,658	1982-
Southeast Asia				
Brunei	Entire period	No data; extreme rentierism	n/a (rich)	
Indonesia	To 1989	49%	1,974	
Oceania				
Nauru	Entire period	No data; extreme rentierism	n/a (middle income)	Entire period
Kiribati	1995-1998	47%	n/a (poor)	Entire period

Chart 1: Rentierism and democracy scores in the Arab world

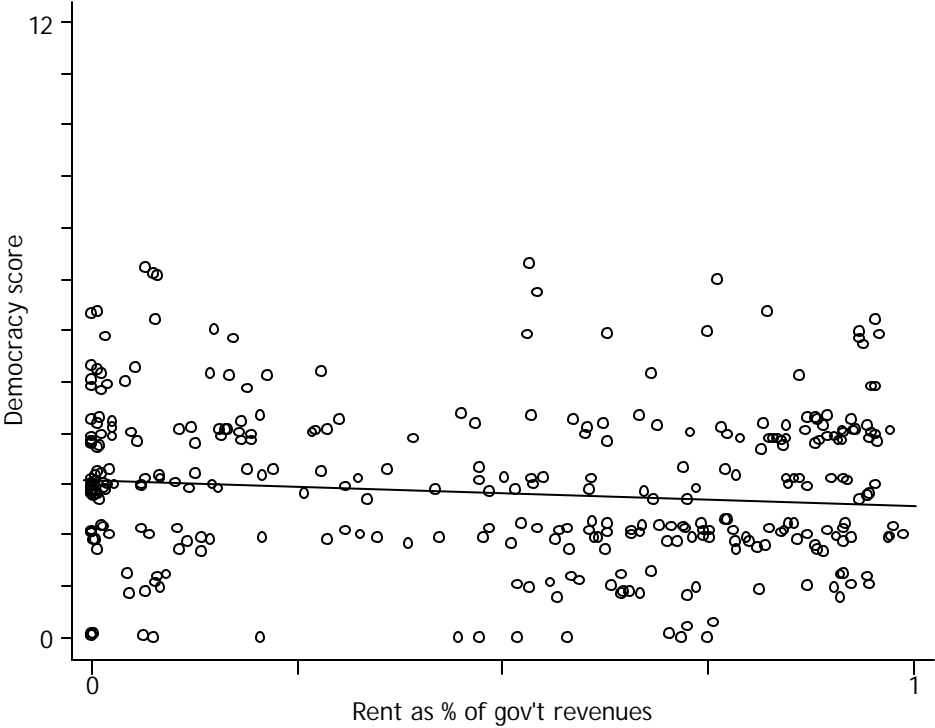


Chart 2: Rentierism and democracy scores in Latin America

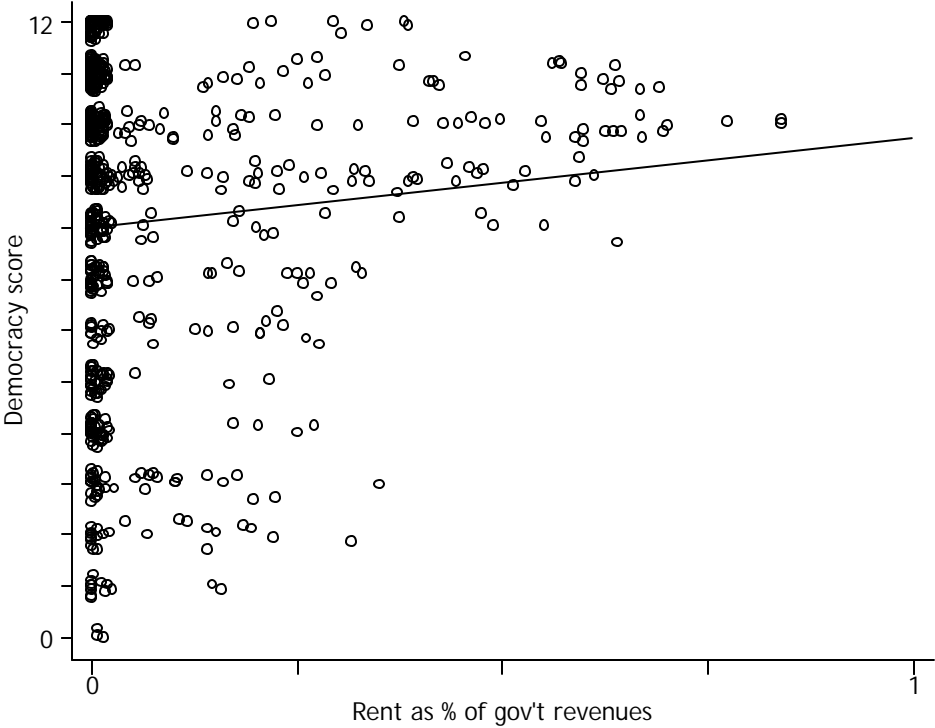


Chart 3: Rentierism and democracy scores in Sub-Saharan Africa

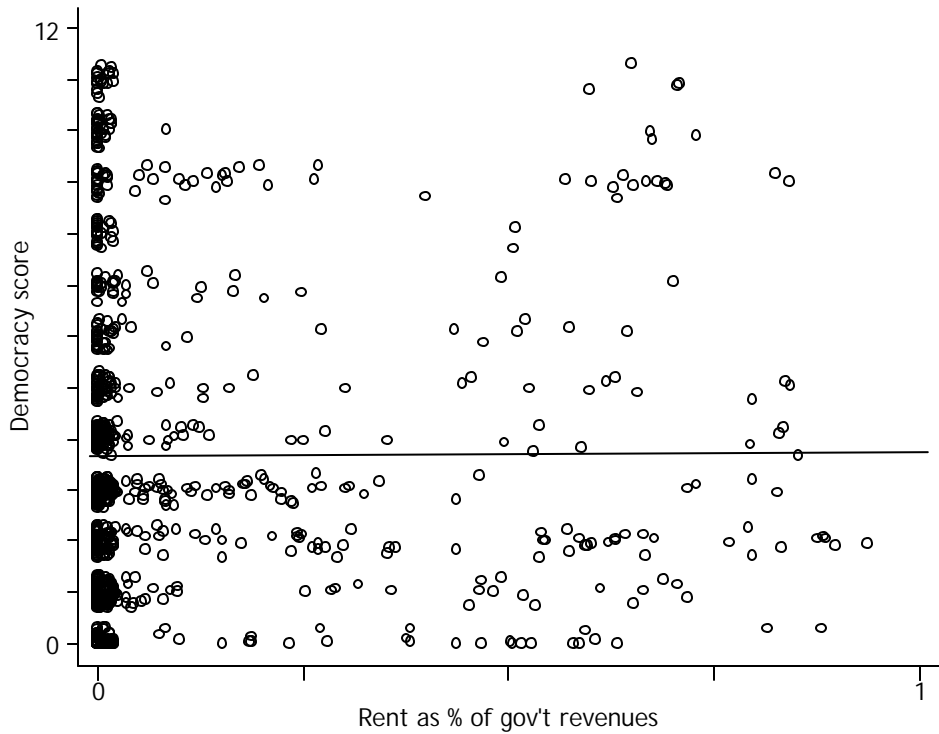


Table 2: Summary Statistics

	Observations	Mean	Std. Dev.	Minimum	Maximum
Freedom House democracy scores	4746	5.94	4.13	0	12
Rentierism	3335	.103	.225	0	.97
Dependence on net oil exports	2621	.049	.138	0	.93
Ln (per capita GDP)	3867	7.89	1.07	5.27	10.66
Ln (per capita GDP) with \$4500 cap for rentiers	3867	7.84	1.01	5.27	10.01
Ln (per capita GDP) with \$4500 cap for countries dependent on oil exports	3867	7.82	1.0	5.27	9.95
Ln (per capita GDP) with regional means for richer rentiers	4038	7.79	1.01	5.27	10.01
Regional democracy score mean	4674	5.97	2.76	1.77	11
Muslim % of population	4746	.235	.351	0	1

Table 3: Results

Variable	1	2	3	4	5	6	7	8
Democracy Score	.928 (.0144) (0.000)	. 927 (.0146) (0.000)	.927 (.0146) (0.000)	. 938 (.0123) (0.000)	.911 (.0160) (0.000)	.912 (.0159) (0.000)	.909 (.0161) (0.000)	.929 (.0131) (0.000)
Rent as a % of government revenues	-.214 (.124) (0.085)	-.172 (.1101) (0.118)	-.111 (.0960) (0.249)	-.0713 (.0914) (0.435)				
Net oil exports as % of GDP					-.587 (.214) (0.012)	-.355 (.183) (0.053)	-.174 (.163) (0.287)	-.105 (.163) (0.520)
Ln (per capita GDP)	.0836 (.0369) (0.023)				.136 (.0396) (0.001)			
Per capita GDP (capped at \$4500 for richer rentiers & oil exporters)		.0924 (.0386) (0.017)				.135 (.0389) (0.001)		
Per capita GDP (capped at regional means for richer rentiers & oil exporters)			.0965 (.0399) (0.016)				.151 (.0396) (0.000)	
Regional democracy score mean	.0441 (.0130) (0.001)	.0431 (.0128) (0.001)	.0412 (.0129) (0.001)	.0568 (.0137) (0.000)	.0545 (.0120) (0.000)	.0546 (.0120) (0.000)	.0524 (.0119) (0.000)	.073 (.0138) (0.000)
% Muslim in population	-.185 (.0722) (0.010)	-.178 (.0719) (0.013)	-.180 (.0719) (0.013)	-.177 (.0718) (0.014)	-.195 (.0755) (0.010)	-.189 (.0745) (0.011)	-.195 (.0749) (0.009)	-.148 (.0700) (0.034)
Constant	-.340 (.242) (0.160)	-.400 (.256) (0.118)	-.423 (.263) (0.108)	.169 (.0739) (0.022)	-.713 (.254) (0.005)	-.714 (.253) (0.005)	-.808 (.254) (0.001)	.126 (.0691) (0.069)
Observations	3282	3282	3282	3282	2450	2450	2450	2450

Coefficient (standard error)
(P-value)

Bold indicates significance $P < .05$

Table 4: Indices of development

	High-income OECD average or United States (in italics)	Kuwait	Saudi Arabia	Egypt				
Per capita GDP (PPP, current \$), 1995	23,370	22,050	11,340	2,950				
Adult female literacy, 1997	98.1	77.4	62.9	40.7				
Adult male literacy, 1997	99.1	82.3	82.1	64.8				
% of females enrolled in secondary education, 1996	<i>90</i>	61	41	64				
Daily newspapers per 1,000 inhabitants, 1996	<i>212</i>	377	59	38				
Internet hosts per 100,000 inhabitants, 1997	<i>7589</i>	234	0	3				
Scientific and technical journal articles per 100,000 residents, 1997	50.5	9.6	3.2	1.8				
% employed in 1990 in:								
Agriculture (male/female)	6.2	4.6	1.4	0.5	20.0	12.0	34.9	52.0
Industry	37.8	18.0	32.0	2.0	21.3	6.1	23.9	10.2
Services	55.8	<i>77.2</i>	66.5	97.6	58.7	81.9	40.9	37.5
Infant mortality rate (per 1,000 live births), 1997	6.5	14	26	66.1				

Table 5: Income and dealing with rentierism

Variable	1	2	3	4	5
	Basic model (equation 3) with no measure of rentierism	Dummy variable (all richer rentiers)	Dummy variable (six Gulf monarchies only)	All richer rentiers dropped from regression	Six Gulf monarchies dropped from regression
Democracy Score	.933 (.0136) 68.52	.931 (.0141) 66.24	.930 (.0145) 64.30	.929 (.0147) 63.08	.930 (.0143) 64.97
Dummy variable		-.173 (.0637) -2.72	-.330 (.1083) -3.05		
Ln (per capita GDP)	.0632 (.0264) 2.39	.0881 (.0313) 2.81	.0956 (.0326) 2.93	.102 (.0352) 2.91	.0933 (.0326) 2.86
Regional democracy score mean	.0434 (.0112) 3.87	.0384 (.0110) 3.49	.0388 (.0106) 3.68	.0396 (.0112) 3.57	.0386 (.0105) 3.68
% Muslim in population	-.206 (.0719) -2.86	-.181 (.0718) -2.52	-.163 (.0719) -2.26	-.128 (.0761) -1.68	-.162 (.0717) -2.25
Constant	-.235 (.180) -1.30	-.377 (.205) -1.83	-.438 (.215) -2.04	-.492 (.229) -2.15	-.424 (.215) -1.97
Observations	3867	3867	3867	3550	3738

Coefficient (standard error)

t-ratio*Bold indicates significance P < .05*

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