Resource Wealth and Political Regimes in Africa

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Abstract

Political economists point to poverty and income inequality as the most important determinants of political regimes. We present empirical evidence suggesting a robust and negative correlation between the presence of a sizeable natural resource sector and the level of democracy in Africa. Thus, resource abundance is a crucial determinant of democratic governance in Africa. The results illuminate the fact that post-cold war democratic reforms have been successful only in resource poor countries such as Benin, Mali, and Madagascar. We argue that resource-rich countries such as Nigeria and Gabon can become democratic only if they introduce strong mechanisms of vertical and horizontal accountability within the state.

Introduction

This study presents empirical evidence suggesting that resource abundance is a crucial determinant of African political regimes. Evidence suggests that the discovery of a natural resource has led to a decrease in the rate of economic growth in African petrostates. Less studied is the phenomenon that all African petrostates or resource dependent countries have authoritarian governments or have experienced a very slow process of political reforms. These include Algeria, Nigeria, Libya, Gabon, Cameroon, and the former Zaire. On the other hand, besides South Africa, transition to democracy has been successful only in resource-poor countries such as Benin, Mali, Senegal, and Madagascar. Thus, in Africa, oil revenues either cause democratic governments to breakdown or authoritarian governments to endure.

The literature on rentier states has investigated the political implications of resource abundance (Mahdavy 1970; Beblawi and Luciani 1987). A rentier state is characterized by a high dependence on external rents produced by a few economic actors. Rents are typically generated from the exploitation of natural resources, not from production (labor), investment (interest), or management of risk (profit). The common conclusion is that rentier states tend to be autonomous. Thus, states with large natural resource endowments are more detached and less accountable because they do not need to levy taxes. Mahdavy (1970) uses this argument to explain the lack of pressure (from below) for democratic change in the Middle East. In a related work, Yates (1996) argues that rentier states suffer from poor governance because state officials can more easily use resource rents to meet unpopular or illegal objectives. For Karl (1996), fiscal reliance on petrodollars weakens the state and creates political instability. Finally, Lam and Wantchekon (1999) investigate how economic growth, the distribution of income, and the allocation of political power simultaneously evolve when resources are discovered. They find that resource abundance is likely to increase income inequality and the consolidation of dictatorial regimes.

As noted by Ross (1999), a key shortcoming of the rentier state literature is that it is based on selected case studies of wealthy petrostates (Venezuela, Algeria, and Iran, among others) and has never been tested in a cross-section or a panel setting. Wantchekon (1999) and Ross (2000) have filled this gap. We test the validity of these cross-country results in the context of Africa. Given the Banerjee and Duflo (2000) critique of cross-country regressions, a test of the rentier authoritarianism hypothesis in the context of countries with similar economic and political background provides a useful robustness check.[2]

The finding that resource dependence is negatively correlated with change in level of democracy corroborates a finding by Bratton (1998) of a decline in the level of democracy in several African countries in the post third wave period (1995-1997). According to Bratton (1998), from the founding elections that took place in the period from 1989 to 1994 to the second elections that took place in period from 1995 to 1997, there has been a decline in the rate of leadership alternation (37% to 6.6%), an increase in the rate of opposition boycott (11% to 73%), and an increase in the mean of winner's vote share (61.4% to 69.1% for presidential elections and 62.7% to 72.0% in parliamentary elections). These results suggest that this decline could be attributed partly to natural resource dependence. For instance, an examination of Bratton's data set reveals that an opposition boycott and election riggings took place mostly in petro-states or resource dependent countries such as Gabon, Cameroon, Togo, and Zambia. In other resource dependent countries such as Algeria, Congo, the former Zaire, and Sierra Leone, democratization simply sank into civil wars. We note that from 1965 to 1990, nearly all African low income countries, including the resource dependent countries, were authoritarian. However, the correlation between political regimes and resource dependence became more evident after the third wave of democratization and the end of the cold war. The result suggests that natural resource abundance is one of the most serious obstacles to democratization in Africa.[3]

Nowhere is the positive correlation between natural resource windfalls and dictatorship more evident than in Nigeria. As the share of oil revenues in its GDP increased from 1% in 1960 and 30% in 1964 to more than 90% after 1979, its government has become increasingly centralized and oppressive.[4] Only four of Nigeria's past thirty-five years of political history have been under civilian rule. Oil revenues have allowed the government to consolidate power on the federal level by creating financially dependent states. More than half (55 percent) of oil rents accrue directly to the federal government, which is responsible for distributing an additional 35 percent of these profits to states (Khan 1994). The resultant regional and ethnic competitions for oil revenues have contributed to Nigeria's political system of institutionalized patronage.[5]

The Theoretical Argument

Why do sub-Saharan Africa countries with an abundance of natural resources tend to have authoritarian governments? An abundance of natural resources causes an increased competition for control of the state, which is linked to high levels of political violence and the use of resource rents by the ruling party to maintain their hold on political power. Resource-poor countries, such as Mali and Benin, have less competition for control of the state, which favors elite cooperation and the maintenance of democratic governance. The logic of the argument is as follows.

Consider a political system with incumbents in a one-party or no-party state that face no opposition, or a multiparty state where incumbents face competition from a number of parties. Voters in both types of systems have preferences based on ideologies and the level of resource rents. In systems such as Nigeria that have very high levels of resource rents available, issues concerning the distribution of resource rents, not ideology dominate politics. Voters select parties on the basis of credible promises to deliver natural resource rents to regions, localities, and groups of individuals; parties attempt to maximize political power. In political systems with opposition parties, incumbents make offers on resource rents in a Downsian fashion, attempting to gain a minimum winning coalition to maintain power. In systems with no credible opposition, such as Gabon's, incumbents make resource rent offers to a select group of voters to win their political support.[6]

In authoritarian political systems, resource abundance allows incumbent politicians to maintain support and consolidate their hold on political power. That is, higher levels of resource rents translate directly to higher levels of support for incumbent politicians. Resource wealth enhances the ability of the elite to generate political support through spending on patronage networks. For instance, in Nigeria regional and ethnic competition for oil revenues have contributed to Nigeria's political system of institutionalized patronage (Bienen 1983). In Zambia, copper revenues were used to "distribute jobs, loans, and trading licenses with the aim of building local support for the ruling party and undermining opposition parties" (Bratton 1994: 105).

Congo Brazzaville provides us with a good example of the affects of natural resources on political regimes.[7] The Congo's oil industry gained in importance when large production increases coincided with the 1973 oil shock. The oil windfalls from this price shock faded, as did the prospects of the ruler Marien Ngouabi. Ngouabi undertook a number of economic reforms such as nationalization and new industry creation that were financed through oil revenues. Ngouabi was killed on March 17, 1977. Joachim Yhombi-Opango and then Denis Sassou-Nguesso succeeded him in 1979. Sassou's rise to power coincided with the second OPEC oil shock of 1979 and 1980, when the government passed a massive five-year plan in 1982 that would increase public expenditures to over 40% of 1981 GDP (Tommasi 1999). Although this ambitious policy was only partially implemented, the second oil shock of 1979 and 1980 provided him with the resources to consolidate his rule until democratic reforms were undertaken in 1991 (Clark 1994).[8]

Although countries like Congo-Brazzaville provide extreme cases of the use of oil revenues to consolidate political power, other less direct methods have been employed. One example includes massive spending on public service employment. In mineral-rich Guinea, over 50,000 civil servants consumed over half of the budget.[9] In Botswana, employment in the civil services exploded from 1964-1984, fueled by revenues from the sale of diamonds (Niemann 1993). Bratton (1994) describes a similar pattern in the United National Independence Party of Zambia's use of copper revenues to generate patterns of employment favorable to the regime, which included higher wages to urban workers.

In Cameroon, relatively modest oil wealth has been used as an information advantage and as resources to buy support. Nicolas van de Walle (1994) argues that under President Ahmadu Ahidjo (1960-1982) oil revenues were not documented in official revenue totals and were kept in secret bank accounts overseas. These oil revenues were "repatriated to finance state activities when he saw fit" (van de Walle 1994: 141). Even when Paul Biya came to power in 1982 and incorporated oil revenues into general government accounts, rumors of a presidential oil account circulated.

Even in systems with legitimate political competition, natural resource dependence translates into authoritarian government. When state capacity is weak and the state can not enforce the law, incumbent politicians have a large amount of discretion in the allocation of resource rents, which is used to allocate to voters in return for political support. If the opposition is unable to break this incumbency advantage, resource rents will translate into one-party dominance, such as in Botswana. Opposition parties are often forced to resort to nonconstitutional means to combat the incumbency advantage. Opposition parties might use riots and coups to vie for political power, causing political unrest in resource-dependent countries (see case study below). Incumbent politicians often anticipate the political unrest caused by opposition groups and either ban them or force them to merge with the ruling party, creating an authoritarian government.

The key mechanism linking authoritarian rule and resource dependence is the incumbent's discretion over the distribution of natural resource rents. This mechanism is clear in most sub-Saharan Africa countries, where weak political institutions allow incumbent politicians to distribute resource rents for political gain. Odedokun (1990) finds that the budgetary procedures of Nigerian states from 1980-1983 show a pattern of utilization of federal allocation changes during election years in favor of consumption expenditures and against capital expenditures. Picard (1987) directly links the dominance of the Botswana Democratic Party (BDP) to the presence of resource wealth (see case study below). Nicolas van de Walle (1994) argues that Cameroon's "patrimonial orientation" was due to its political leaders' management of oil wealth, and this wealth, along with foreign aid, allowed this authoritarian regime to endure.

Discretion in the allocation of resource rents and the informational advantage of the levels of resource rents by incumbents leads to authoritarian rule through a variety of mechanisms. When one-party dominance is combined with a weak rule of law, the opposition will resort to nonconstitutional means such as coup d'etats to achieve political power. One possible outcome is that, foreseeing the opposition's need to resort to these nonconstitutional means, the incumbents will preempt such a move by repressing or banning the opposition. Similarly, the incumbents may go beyond banning the opposition party and suspend elections all together. Lastly, with high levels of natural resource rents and executive discretion in their distribution, the incumbents may simply use the natural resource rents to buy off the opposition such as in Nigeria and Niger (Ayittey 1998).

In summary, resource abundance leads to authoritarianism for one of the following reasons: (1) it could allow an already dominant or authoritarian party or a coalition of parties to extend its level of popular support and consolidate its hold on political power;[10] (2) it could generate incumbency advantage and political instability, which could incite the incumbent to adopt repressive policies towards the opposition;[11] (3) it could generate an open and extra-constitutional conflict (civil war), which could result in a dictatorship by the opposition party or the incumbent party.[12]

The Data

The panel data used in this study come from a series of data sets made available by Robert Bates through the *Africa Research Program at Harvard University*. This data set series is composed of six individual data sets, four of which have been made publicly available on-line.[13] The four available data sets are comprised of political data, economic data, violence data, and a set of controls for 46 sub-Saharan countries from 1960 to 1995. Descriptive statistics for all variables used from these data sets are presented in Appendix A.

The dependent variable for the panel regressions is a measure of political regime type taken from the Polity III data set from Jaggers and Gurr (1996). This data set provides a number of political regime measures for all countries with a population greater than 500,000. Sticking to convention, we have operationalized democracy by the formula: Polity III democracy score minus Polity III autocracy score, and rescaled it by adding 10. This variable, "Democracy," is an ordinal measure of regime type ranging from 0-20, from the lowest democracy score to the highest democracy score, spanning the period from 1970 to 1996.

Other control variables were used from the Bates data set including the log of GDP per capita, GDP growth, number of coups, number of government crises, number of demonstrations, number of riots, and the number of strikes. Descriptive statistics for all of these variables are included in Appendix B.

In addition to the data provided in these four data sets, we have constructed a measure of natural resource dependence from the World Bank *World Development Indicators CD 1999*. The World Bank provides data on fuel and mineral/metal exports as a percentage of merchandise exports. Unfortunately, although the country coverage of this data is excellent, missing values for most African countries plagues the time-series. Using this data on fuel and minerals/metals as a percentage of merchandise exports, we constructed a measure of resource dependence that ranges from 1-4 (low to high resource dependence) for 46 countries. The objective classification of countries in these four categories followed the rule: countries with less than 25% of merchandise exports from fuel and minerals/metals were coded as 1, countries between 25% and 50% were coded 2, 50% to 75% were coded 3, and countries with greater than 75% of merchandise exports from fuel and minerals/metals were coded 4. Given the relative stability of natural resources for most countries in the sample, missing values were filled in by examining the value of the constructed resource dependence score immediately before and after the missing data. Appendix B presents the average constructed natural resource dependence measure for 45 countries from 1970 to 1995.

The relatively short period since the first waves of African democratization in the 1990s and the most recent data on political regimes (1998) makes panel analysis an inappropriate tool for examining the more recent political changes in Africa. To analyze the effects of natural resource dependence since the first waves of democratization, we have constructed a cross-sectional data set for 46 countries. The dependent variable, "Democracy," is the same ordinal measure of democracy on the same 0-20 scale used in the panel regressions, except that it is the most recent democracy score (1998) from the Polity 98 data set from Jaggers and Gurr (1998).

We have included a number of independent variables from Michael Bratton and Nicolas van de Walle's *Political Regimes and Regime Transitions in Africa 1910-1994*. These variable include the "Number of Elections," a measure of the total number of elections since independence, "Percent of Seats," a measure of the total number of legislative seats held by the largest party in 1989, “Protest Frequency,” the measure on the level of political protest, and “Military Role,” an ordinal measure on the role of the military in the political process. Bratton and Van de Walle used these control variables in their book to model the level of democracy in 1994. A more detailed description of these variables and their original source is located Appendix C.

To control for natural resource dependence, we have included the variable “Natural Resources,” which is the constructed natural resource dependence score for 1990. We have also included GNP per capita, take as the log of GNP per capital from the Bratton and van de Walle data set. Lastly, we have included a measure of past GNP growth rates from the Bratton and van de Walle data set.

Empirical Results

To test the implications of natural resource dependence on political regimes we have constructed a number of time-series cross-sectional regressions. We have taken into account the numerous critiques of panel regression analysis to make our regressions the theoretically strongest test of the effects of natural resource dependence on political regimes. One set of critiques concerns using random effects versus fixed effects regressions. A fixed effects regression has the desirable property of allowing each panel group (African countries in this case) to have an independent intercept, decreasing the probability of omitted variable bias. The practical problem with this technique is that it is costly in terms of losing degrees of freedom. To come to grips with this problem, we have regressed all models using both random effects (GLS) and fixed effects (OLS) and preformed the Hauseman test to examine if there is a statistically significant difference in the coefficients. For all models, the Hauseman test failed to reject the null hypothesis that there was no systematic difference between the coefficients of the GLS and OLS estimates. Both random and fixed effects regressions find similar coefficients for all our regressions.

A second set of critiques relate to the calculation of the standard errors from OLS panel regressions. Beck and Katz (1995) show the GLS estimator, when applied to a time-series, cross-sectional data set, often lead to “extreme overconfidence” in calculating the standard errors. To address this second issue, we have estimated all models using what Beck and Katz recommend: a random effects OLS regression with panel-corrected standard errors.

The empirical results are presented in Table I. The top number for each variable is the coefficient, and the number in parentheses is the T-statistic. Model 1 regresses the level of democracy on the log of GDP per capita, GDP growth, resource dependence, and includes two decade dummies to control for time trends in the data. The analysis clearly supports the role of natural resource abundance on political regimes.

High levels of GDP per capital and high levels of economic growth both have a positive affect on democratic institutions across countries. Even more interesting, they provide strong evidence for the theory presented in this study: countries with higher levels of natural resource dependence have lower democracy scores. The predicted effects of natural resource dependence on democracy are presented in Table II. Highly natural resource dependent countries such as Nigeria, Gabon, Zaire, and Angola (coded as 4) are predicted to have a democracy score that is 1.59 lower than the least dependent countries (coded as 1). Although a change in 1.59 units may seem like a small change on the surface, during this time period the average level of democracy for this set of countries was only 5.63. Natural resources had a clear effect on political regimes.

Models 2 and 3 add measures for life expectancy, as a measure of human capital. Although our empirical results for natural resource dependence were not affected by the inclusion of the life expectancy variable, this variable was positive and statistically significant. Countries with higher levels of average life expectancy are expected to be more democratic.

Model 3 includes a measure of ethnic fragmentation.. When ethnic fragmentation was added to the regression, natural resources were no longer a significant determinant of political regimes. One possible explanation for this result is the correlation between ethnic fragmentation and country size. Countries with the highest levels of ethnic fragmentation are large in both land area (correlated at 0.32) and population (correlated at 0.44). These large, highly populated countries are slightly more likely to be natural resource dependent (correlation of 0.12).

Table I: Dependent Variable: Democracy

Log of GDP per capita	2.847*** (10.956)	1.373*** (4.691)	1.078*** (3.689)	1.995*** (6.266)
GDP Growth	0.091** (2.305)	0.080** (2.288)	0.072** (1.967)	0.076** (2.176)
Resource Dependence	-0.530*** (-5.945)	-0.460*** (-5.894)	0.016 (0.192)	-0.364** (-3.779)
Dummy for the 1970s	-0.717 (-1.424)	0.588 (0.913)	-0.714 (-1.560)	-0.887** (-2.021)
Dummy for the 1980s	-0.538 (-1.093)	-0.067 (-0.916)	-0.738 (-1.659)	-0.699* (-1.679)
Life Expectancy		0.261*** (5.623)		
Ethnic Fragmentation			-0.608*** (-7.891)	
Colony Dummy-Belgium				-1.566*** (-2.782)
Colony Dummy-France				-1.605*** (-2.638)
Colony Dummy-Portugal				-1.825*** (-2.564)
Colony Dummy-United Kingdom				2.305*** (2.774)
Constant	-13.661*** (-7.972)	-16.510*** (-10.933)	-0.314 (-0.169)	-7.751*** (-4.789)
Number of Observations	690	690	669	690
Number of Countries	39	39	38	39
Chi-sq	202.63	773.78	152.48	1246.26
Hausman Test	3.67	9.62	1.18	1.89

Table II: Dependent Variable: Democracy

Model 4 adds former colony dummy variables for the former Belgian, French, Portuguese, and British colonies. Although these variables had little effect on our estimates of the effects of natural resource dependence on political regimes, these results deserve some attention. Colonial heritage seems to have a large effect on a country's political regime where former British colonies were predicted to have the highest democracy score and former Portuguese colonies the lowest. Two potential explanations are possible. One is that a number of political institutions inherited by the former colonies have a large impact on current political regimes. Jennifer Widner (1994) forwards a concise set of these arguments on the differences between countries with Anglophone and Francophone heritages and how this has an impact on political reform. A second explanation is that a former colony dummy doesn't necessarily capture the "path dependence" of colonial institutions, but rather stresses the importance of ties with the former colonizers. Cold War politics undoubtedly had a large effect on African political regimes where ties with former colonizers had an impact on domestic politics.[14] A number of scholars have linked the emergence of democratic political regimes and the persistence of authoritarian regimes to political protest and political violence. To control for these different possible explanations we have included a number of empirical tests using different variables on protest and violence in Table II, such as the number of coups, government crises, demonstrations, riots, and strikes. Even when these political violence controls are added, the affect of natural resource dependence on political regimes is unchanged.

Although the mechanisms are complex through which natural resource dependence effect political regimes, one potential test is the affect of natural resources on the levels of government consumption. Table III presents a time-series cross-sectional regression with government consumption as a percentage of GDP as the dependent variable. This variable includes government consumption statistics for 42 countries from the Bates data set. The affects of natural resource dependence on government consumption are obvious. Countries with large natural resource endowments spend more on government consumption than resource-poor countries. The substantiative difference between a resource-rich (4) and a resource-poor (1) country amounts to over 3% of GDP. This illustrates one of the mechanisms through which democratic regimes breakdown, or authoritarian regimes persist in resource-rich countries.

These empirical results show that natural resource dependence had a negative effect on democratic institutions, although during most of this time period few African countries would have been considered democratic. As Yates states, "The idea is not to blame the lack of democracy and the presence of authoritarianism in Africa on the mere existence of oil—for after all what states in Africa have truly democratic regimes?—but rather is to show that these states conform to the general pattern of the rentier state" (Yates 1996: 229). Although the Cold War period was characterized by relatively low levels of democracy in sub-Saharan Africa, in the early 1990s a number of African countries made the transition toward democratic governance. Unfortunately, this early period of democratization has been marked by a backslide toward authoritarianism for a number of countries.[15] In many of these countries the presence of large natural resource endowments has facilitated this backslide. A second set of empirical tests explores how natural resource dependence had a hand in this backslide toward authoritarianism.

The relatively short time period since the first wave of African democratization and the most recent data on political regimes (1998) make panel analysis an inappropriate tool for examining these recent regime changes. To examine the role of natural resources in the wave of democratic transitions in Africa, more specifically the backslides in democracy in a number of countries, we have employed both cross-sectional OLS and ordered probit analysis on the changes in democracy between 1994 and 1998.

Table III: Dependent Variable: Government Consumption

Log of GDP per capita	0.943***	0.251
	(2.822)	(0.697)
GDP Growth	-0.098***	-0.078**
	(-2.754)	(-2.286)
Resource Dependence		1.083***
		(5.763)
Dummy for the 1970s	1.500***	1.473**
	(2.865)	(2.965)
Dummy for the 1980s	3.233***	2.773***
	(6.255)	(5.598)
Constant	14.933***	18.246***
	(6.328)	(7.517)
Number of Observations	842	818
Number of Countries	42	41
Chi-sq	56.04	100.04

The empirical results for the ordered probit regression are presented in Table IV. The regressions in the first column mirror the work done by Bratton and van de Walle for 1994. The interpretation of this result is that although the number of elections, percent of seats, protests, and military role in politics all had a significant effect on the level of democracy in 1994, the subsequent changes between 1994 and 1998 are not captured by these variables. In columns 2-4 we have included our constructed natural resource dependence score for 1994. In all three of these regressions, natural resources contributed to a backslide in democracy since 1994.

These results are not necessarily at odds with the work done by Bratton and van de Walle. Bratton and van de Walle showed empirically that the effects of political variables, such as protests and electoral history contributed to the emergence of democracy in sub-Saharan Africa. As they state, “The weight of our account of democratization rests on domestic political factors. Indeed, an adequate explanatory model could be constructed with reference to military intervention, political protest, and opposition cohesion alone, that is, entirely without reference to international or economic factors” (Bratton and van de Walle 1997: 223). Our results show that although these domestic political variables may have been instrumental to the initial wave ofdemocratization, dependence on natural resources has a dramatic effect on the likelihood of democracy enduring in these countries. In many sub-Saharan countries, natural resources and how these rents are distributed are not simply an economic factor, they are a central element of domestic politics.

Table IV: Dependent Variable: Democracy 1998

Democracy 1994	0.193***	0.278***	0.289***	0.286***
	(3.172)	(4.672)	(4.633)	(4.626)
Number of Elections	0.006	0.115	0.124	0.121
	(0.076)	(1.293)	(1.339)	(1.321)
Percent of Seats	0.001	-0.003	-0.003	-0.003
	(0.134)	(-0.524)	(-0.656)	(-0.627)
Protests	-0.031	-0.058	-0.065	-0.068
	(-0.710)	(-1.416)	(-1.458)	(-1.514)
Military Role	0.303	-0.286	-0.395	-0.382
	(0.475)	(-0.417)	(-0.568)	(-0.553)
Resource Dependence		-0.585**	-0.656**	-0.675**
		(-2.178)	(-2.162)	(-2.096)
GNP per capita			0.186	0.239
			(0.696)	(0.634)
Growth				-0.012
				(-0.120)
R-sq	0.181	0.230	0.233	0.232
Chi-sq	19.66	32.34	31.02	31.67
Number of observations	30	30	30	29

Case Studies

Nigeria

The revenue collection and allocation mechanism was a major source of conflict between parties and regions in post-colonial Nigeria. Post and Vickers (1973) point out that:

> since the early 1950s, one of the major grievances of various sections had been their wealth was being used to subsidize poorer ones, and the growing exploitation of oil deposits in the east and Mid-West in the 1960s thus only added to the fire which had been lit long before. Conversely, not only the mobilization of material resources but their distribution was an important source of inter-sectional competition and conflict, with constant accusations of unfair treatment (p. 58).

The conflict escalated into political violence: there were armed rebellions by the Tiv ethnic group in 1960 and again in 1964, a coup attempt by some members of the Action group against the federal government in 1962, and the Yoruba rebellion of 1965.

The growth of the oil industry also coincides with a stronger grip of the Northern People Congress (NPC) on the federal government and an increase in violent political opposition. The NPC won the 1964 election, which was marred by fraud, political assassinations, and threats of secession (Post and Vickers 1973). One year after the election, the NPC government was ousted by a coup d'etat, and the prime minister Balewa was assassinated. The persistent tension over the control of the oil resources led to the secession of the Eastern Region of Biafra and a two-year civil war. (Khan 1994)

As the share of oil revenues in the Nigeria's GDP increased from 1% in 1960 and 30% in 1964 to more than 90% after 1979, its government has become increasingly centralized. This phenomenon was further facilitated by decree No. 13 of 1970, which reduced mining rents and royalties to oil producing states, and decree No. 9 of 1975, which transferred all mining rents and royalties from the states of origin to the federal government. Later, the 1989 constitution strengthened the discretionary power of the federal government over the process of revenue allocation to the states. The constitution states that "the federal government may make grants to a state or a local government to supplement the revenue of that state or local government in such a sum and subject to such terms and conditions as may be prescribed by the National Assembly" (section 162 (1)) (from Yekini 1992: 49) .

Centralization generated financially dependent states and the politicization of revenue allocation. The percentage of government revenues allocated to the states that stood at 40.8% in 1966 sharply declined over the subsequent years. In the meantime, the share of the federal government increased from 59.2% in 1966 to 73.4% in 1980 (Yekini 1992: 47). From 1967 to 1980, most states were running budget deficits whereas the federal government had a surplus budget and "was therefore in a comfortable position to act like 'Father Christmas' to the states" (Yekini 1992: 47). This resulted in regional and ethnic competitions for oil revenues, which contributed to the institution of patronage in Nigeria's political system. For instance, Bendel State seems to have gone out of favor with the federal government and experienced a sharp decline in federal transfers. Despite being a major oil-producing state, Bendel state received 19.6% of the total transfers to the states in 1966 and only 9.5% in 1980.

There is currently a huge clamor from this region for an overhaul of the income-sharing process in the country to favor the regions from which oil is being extracted — the revenue from which makes up about 95% of total export earnings. Currently, all income from crude oil sales accrue directly to the federal government of Nigeria, which then shares the income with the states based on some parameters, such as income generated, population, and land mass. Prior to the new democratically elected Obasanjo government, the proportion of this income that was shared on the basis of derivation — that is contribution to income by each state — was 6%. This has since been increased to 13%, and the government has set up an agency, the Niger Delta Commission, to carry out developmental work in the region using special appropriations from oil revenues.

<u>Botswana</u>

Botswana constitutes a case in which resource abundance generated incumbency advantage and one-party dominance but not authoritarian government and sociopolitical instability. Botswana became one of the top diamond producers in the world after the discovery of three diamond mines by DeBeers between 1969 and 1982. The country also has a rich copper-nickel mine. Throughout the 1980s, diamonds alone made up almost half of the GDP and 75% of the exports.

Botswana is rated a democracy by Gurr and Jaggers (Polity 1998) but an autocracy by Alvarez, Cheibub, Limongi and Przeworski (Alvarez *et al.* 1997). This is because the Botswana Democratic Party (BDP) has had complete control over of the government since independence in 1966 and faced no opposition. First, the opposition was basically divided until the formation of the Botswana National Front (BNF) after the 1965 elections. Thereafter, there were only three opposition parties: the BNF, the BPP (Botswana People's Party), and the BIP (Botswana Independence Party). The problem with the BNF however, has been the incongruity of its constituency, which is composed of the left in the urban areas and the right (traditionalists) in the rural areas (Picard 1987: 151). According to Picard, the main reason for the political dominance of the BDP is the presence of resource wealth. Diamond revenues provide the BDP with the political resources necessary to win continuous support from voters.

For instance, the BDP has been skillful at monitoring discontent, especially in the rural areas through the use of a colonial mechanism whereby the district commissioners (DCs) whose main function is to act as judicial magistrates are also put in charge of security matters. The DCs are to report to the government any discontent in their respective territories including formation of political groups against the government. Once such activity is noticed, the BDP dispatches funds to serve the needs of the people in that area or employs other forms of political manipulation to neutralize or recruit potential political leaders not in line with their own views (Picard 1987, 148-50). In addition, World Bank data show that military expenditures and state-owned enterprise employment increased greatly in the mid-to-late 1980s before falling to its initial levels in the mid-1990s.

One-party dominance in Botswana is sustained by the presence of diamond revenues and the fact that state institutions in the country have the reputation for being clean and free of corruption. Civil servants are highly educated and well paid. The bureaucracy is autonomous and plays the role of policy advisor to the politicians. Thus, there is a separation of administration and politics (Picard 1987: 114). The civil service never underwent a rapid nationalization after independence. It has been based on qualifications for positions, and there was no real violence or hostility between the bureaucrats and those granting them independence. According to Picard, there are two reasons why the system functions well in Botswana: (a) the civil servants are not ruled by ideology in their policy making; and (b) policy research and conduct have been designed to fit the administrative capacity of the bureaucracy (Stedman 1993: 188-99).

Concluding Remarks

In this study we present evidence suggesting that African rentier economies tend to generate authoritarian governments or undermine democratic governance. The theoretical argument focuses on the way in which lack of transparency and executive discretion in revenue allocation affects electoral outcomes when voters care only about redistribution. The empirical section provides strong evidence for the link between natural resource dependence and political regimes. From the period between 1970 and 1995, countries with higher levels of natural resource dependence tended to be more authoritarian than their less resource dependent counterparts. After the initial wave of democratization, countries with higher levels of natural resource dependence experienced a backslide toward authoritarian rule. The two case studies provide further evidence and illustrative examples of how an abundance of natural resources contributes to authoritarian rule or one-party dominance.

Before the third wave of democratization in the 1990s, almost all African countries were authoritarian, including the rentier states. Thus, the correlation between authoritarianism and resource abundance is essentially a post-”third wave” phenomenon. Furthermore, because post third wave democratization has been greatly facilitated by outside pressure, we intend in future works to formally investigate to what extent the failure of democratic reforms in most rentier states results from less dependence on aid resources and thus less vulnerability to donor political pressures. In other words, the distinct character of rentier states may be their ability to deal with oppositions as well as donors.[16]

One other interesting avenue for further research would compare the effects of natural resource dependence and foreign aid on political regimes. The theory forwarded in this study points to two possible conjectures on the effects of natural resource rents versus foreign aid on political regimes. First, governments with large natural resource endowments have more discretion in spending these rents, whereas foreign donors can put both economic and political constraints on aid. Second, incumbents in governments with large natural resource endowments have an informational advantage over challengers to the level of natural resource rents, whereas foreign aid flows are much more transparent. According to both conjectures, natural resource dependence should have a larger negative affect on political regimes. Our preliminary empirical results find that although natural resource endowments and foreign aid both increase levels of government consumption, natural resources and foreign aid have the opposite affects on political regimes.[17] Natural resources are associated with lower levels of democracy, whereas foreign aid contributes to the emergence of democratic institutions.

Finally, instead of viewing low state capacity (that allows the incumbent to manipulate state rents) to be exogenously determined, we could thoroughly investigate how corrupt rentier states use low state capacity to further undermine the legal order and facilitate rent seeking.

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APPENDIX

Appendix A: Average Resource Dependence Scores

Country	Score	Country	Score
Angola	3.49	Madagascar	1
Benin	1	Malawi	1
Botswana	4	Mali	1
Burkina Faso	1	Mauritania	3.59
Burundi	1	Mauritius	1
Cameroon	1.57	Mozambique	1
Cape Verdi	1	Namibia	3
Central African Rep	1.11	Niger	2.78
Chad	1	Nigeria	3.7
Comoros	1	Rwanda	1
Congo	2.89	St. Tome	1
Cote d'Ivoire	1	Senegal	1.24
Djibouti	1	Seychelles	1
E. Guinea	1.27	Sierra Leone	1.48
Ethopia	1	Somalia	1
Gabon	3.62	Sudan	1
Gambia	1	Swaziland	1
Ghana	1.46	Tanzania	1
Guinea	4	Togo	2.24
Guinea-Bissau	1	Uganda	1
Kenya	1.08	Zaire	3.76
Lesotho	.	Zambia	4
Liberia	3.11	Zimbabwe	1

Appendix B: Variables for Panel Regressions

Variable	Obs	Mean	Std. Dev	Min	Max
Log of GDP per capita	1324	7.04	0.58	5.8	9.03
GDP Growth	1122	0.7	8.07	-47.5	91.79
Resource Dependence	1665	1.74	1.17	1	4
Life Expectancy	1519	46.91	7.05	32.01	71.12
Ethnic Fragmentation	1584	3.38	1.73	1	9.8
Coups	1146	0.05	0.22	0	1
Crisis	1140	0.09	0.34	0	4
Demonstrations	1140	0.16	0.58	0	6
Riots	1140	0.16	0.64	0	7
Strikes	1140	0.04	0.25	0	4
Assassinations	1140	0.07	0.37	0	7

Appendix C: Variables for Cross-Sectional Regressions

Variable	Obs	Mean	Std. Dev	Min	Max
Regime 98	40	9.9	5.81	1	20
Regime 94	38	10.16	6.57	1	20
Number of Elections	47	6.19	3.88	0	14
Percent of Seats	47	76.71	39.02	0	100
Protest Frequency	42	9.05	7.56	0	26
Military Role	42	0.02	0.56	-1	1
Resource Dependence	46	1.8	1.22	1	4
Log of GNP	47	6.07	0.84	4.38	8.35

Notes

[1] Leonard Wantchekon is Assistant Professor in the Department of Political Science and the Economic Growth Center, and Nathan Jensen is a Doctoral Candidate in the Department of Political Science. We thank Robert Bates for sharing his Africa data set with us. We also thank Nicolas Van de Walle for helpful discussions and suggestions. The theoretical argument and the case studies draw in part from Wantchekon (1999). We are responsible for any remaining errors.

[2] Banerjee and Duflo (2000) question the validity of cross-country empirical studies. They derive from a simple U-shaped relationship between inequality and growth that changes in inequality are associated with a reduced growth in the next period. This would explain why empirical studies of the relationship between inequality and growth are very different from one another.

[3] For instance, the authorities of the newest African major oil producer, Equatorial Guinea just held a conference to examine why its neighbors had squandered their oil dollars "to evaluate what to do not to have the same thing happen (in their country)" (New York Times, July 23, 2000; p.6).

[4] Bienen (1983)

[5] This feature of Nigerian political economy is shared with other African petro-states. As Howard French (1998) wrote in an investigative report for the New York Times: "In addition to their vast oil reserves, all the Gulf of Guinea producers share the traits of authoritarian governments. They also have in common extraordinary brazen forms of official corruption, which have made their elites some of the richest in the world while leaving the bulk of their populations in stuck-in-the mud poverty" (New York Times, March 7, 1998).

[6] This core group of supporters has been termed the "selectorate" by Bueno de Mesquita, Morrow, Siverson, and Smith (1999).

[7] See Clark (1994) for an excellent review of politics in the Congo.

[8] These reforms led to the election of Patrice Lissouba. But two years later, a civil war broke out, Lissouba's regime collapsed, and Sassou-Nguesso returned to power

[9] Ayittey (1996) cites a quote from The Washington Times, October 17, 1996 from Prime Minister Sidya Toure stating, "this country had 50,000 civil servants who were consuming 51 percent of the nations wealth."

[10] This was the case in Algeria, Gabon, Libya, and Iraq among others.

[11] This was the case in Nigeria and Congo-Brazzaville.

[12] The former Zaire, Congo Brazzaville, Liberia are good illustrations of this case.

[13] http://www.gov.harvard.edu/research/rbates

[14] For an interesting discussion of the literature on international factors and African democratization, see Bratton and van de Walle (1997).

[15] Bratton (1998)

[16] We thank Nicolas Van Walle for suggesting further investigation of this issue.

[17] These preliminary results were generated with panel-corrected standard error regressions similar to table I. In these regressions the level of democracy was regressed on the log of GDP per capita, economic growth, decade dummies, natural resource dependence, and overseas development assistance as a percentage of GDP. The coefficients for natural resource dependence and foreign aid were -0.46 and 0.04 respectively and both were highly statistically significant (T-statistics of -5.77 and 4.27). Both foreign aid and resource dependence had a positive and statistically significant effect on government consumption (coefficients of 1.59 and 0.17 and standard errors of 1.72 and 5.45 respectively.