As with Dutch disease, institutional explanations of the failure of natural resource abundance to deliver sustained growth have a long history in the economic literature.\(^1\) The basic argument is that natural resources can poison institutions—possibly more when resource discoveries and booms materialize when the country’s institutions are already deficient—and weak institutions can in turn undermine growth.\(^2\) Enclave mining or plantation agriculture may not require much institutional development, but may accommodate well to environments with poor governance and substantial shortfalls in the rule of law. They may even reinforce a bad equilibrium of deficient institutions.

In particular, poor institutions may foster exploitation of natural resources that does not rely on sophisticated contractual environments. Under these circumstances, the demand for institutional change may
be low because the benefits of marginal institutional improvements would be smaller than where resource exploitation relies on complex and efficient contractual environments (e.g., when resource exploitation is associated with significant clustering of related economic activities, substantial forward and backward linkages, and robust networks and spillover effects). A bad equilibrium can thus develop: weak institutions lead to natural resource exploitation patterns that do not call for better institutions, keeping institutions deficient and undermining growth.3

Without a major leap in institutional quality, institution-poor but resource-rich countries might not be able to break free to a good equilibrium where resource wealth, good institutions, and growth reinforce one another (Vardy 2010; see box 4.1). This reasoning is consistent with the theory of rent cycling, which stresses that initial conditions determine whether the “curse” will materialize, highlighting the existence of institutional quality thresholds below which natural resource discoveries harm a country’s development path (Auty 1993).4

Empirical work has not yet teased out convincing evidence that the natural resource curse is worse with low-quality institutions. To be sure, Mehlum, Moene, and Torvik (2006)—in cross-country econometric work that uses primary exports as a share of GNI as the proxy for resource abundance—do find that a low-growth curse is associated with more resource abundance in countries with poor institutions, whereas countries with high institutional quality neutralize the curse. This result, however, is not robust to changes in specification. In particular, it does not hold when better measures of resource abundance are used to avoid the endogeneity problem posed by their proxy—that a high share of primary exports in national income may itself be the result of low growth.

In fact, some studies provide evidence that the growth benefits of natural resource abundance are greater, on average, for countries with weak institutions (see, for instance, Alexeev and Conrad 2009; Brunnschweiler 2008). As explained by Brunnschweiler (2008), a negative interaction between resource abundance and institutional quality may be due to a “convergence effect.” Countries with lower institutional and economic development over the sample period (1970–2000) benefited more in growth from an abundance of natural resources simply because they were catching up, having started from lower development. The difficulty in establishing an empirical interaction between institutions and natural resources is consistent with the more general result in recent research described in chapter 3: there is no consistent empirical support in favor of the “curse,” contrary to the famous claim by Sachs and Warner (1995, 1997).

Beyond the inconsistent results from cross-country empirical work that capture the connections between institutions and natural resource wealth, the fact remains that resource-abundant countries may become entangled in a web of perverse institutional and political economy effects that can undercut sustained social, political, and economic progress. These risks are exemplified by many historical instances in Latin America. There, commodity bonanzas (cocoa, rubber, bananas, silver) in countries with underdeveloped institutions led to feverish expansions only to be followed by long periods of economic stagnation, and even desolation, when the price of the previously booming commodity took a nosedive.

With this downside in mind, the rest of this chapter focuses on the main channel for commodity abundance to affect institutions: rentier effects. We begin by setting out the characteristics of natural resources that lead to the rentier problem and by discussing the main mechanisms whereby natural resources to affect economic and political outcomes. Next, we turn to evidence from LAC on the dissipation of windfall rents from natural resources. Then we discuss some of the dynamics behind the oft-observed cycle of nationalization-privatization of natural resource industries. Last, we examine the evidence from LAC on ways for dependence to adversely affect the development of democratic political institutions or to lead to social conflict. This is not an exhaustive treatment of the institutional aspects of the resource curse. But in limiting our analysis to a discrete set of issues, we hope to shed light on some critical channels through which volatile and large natural resource rents have affected and may continue to affect institutions and the policy-making process in LAC.
Commodity Dependence and “Rentier” Effects

The concept of the rentier state was popularized by Mahdavy (1970) to describe the situation in pre-revolutionary Pahlavi Iran. He argued that a government receiving significant oil revenues from abroad tends to become autocratic and unaccountable to its own citizens. Rentier effects are thus associated with a high proportion of government revenue originating from resource rents. Rents from natural resources tend to be large, volatile, geographically concentrated, and controlled by the government. The consequent fiscal volatility may create an unfortunate political dynamic that ratchets up expenditures in booms to levels that cannot be efficiently absorbed or sustained over time, with a stop-go pattern of public expenditure that reduces the quality of public investment and services and thus limits growth potential.

The geographic concentration of natural resource sites, moreover, tends to create pressures to decentralize revenue toward local governments in those sites. This is not necessarily bad since resource extraction can have undesirable environmental and social consequences for which local jurisdictions need to be compensated. But to the degree that local institutions are less capable than the central government and do not internalize the national interest to the same extent, decentralization of revenues unduly dominated by the location of the natural resource site can degrade spending quality. Moreover large rents create a valuable “prize,” setting up incentives to contest for political power, perhaps even violently. It is this set of issues that is explored here.
Not all natural resources are equally associated with rentier effects. What matters is the size of the rents and the ease with which the government may appropriate them. Hydrocarbon and mineral natural resources are most closely associated with large rents—oil more than gas or metals. Economic rents do not generally emerge in agriculture, fisheries, or forestry, with rare exceptions arising from temporary perturbations in supply. Another characteristic for differentiating natural resources is the ease of taxing them. Point-source resources—hydrocarbon and large mining operations—are more easily taxed. Production of other commodities, including most agricultural products, is more geographically diffuse, leading to lower profit margins, and involves a wider range of private actors. Taxing these natural resources may therefore be much like taxing other production activities, which, when not incorporating rents, involves economic distortions and political costs.

The central problem of rents is the ability—or inability—of political actors to credibly commit to using natural resource revenues optimally for the public’s welfare over time. For example, the volatility of rents poses the problem of whether a government can credibly pledge to save today to spend tomorrow. When credible commitment is difficult and policy horizons are short, those in political power place little value on putting away natural resource revenues for future consumption, and rent dissipation is more likely. The capture of political parties or governments by relatively narrow class groupings or sectoral interests could be prevented if the government could make a credible commitment to a wider group of potential supporters. Societal pressures that extend the planning horizon of politicians and punish the misuse of rents—a sort of social pact to use rents for the best interests of society—would make the emergence of such a credible commitment more likely. Governments are more prone to make such credible commitments when reneging is costly. Otherwise, a lack of trust in leaders to use resource rents well can create greater incentives for citizens to engage in rent seeking or to attempt to broker political power for patronage to gain their “fair” share.

**Rentier effects on economic management**

Government coffers replete with natural resource rents are tempting targets, with a number of possible corrosive effects on public institutions.

**Patronage**

Controlling resource rents creates a significant payoff for those with political power but also increases the payoff for contesting that power. At the extreme, the incidence of coups or civil wars could be increased if the rents raise the payoff for staging a coup beyond the costs associated with failure of the coup (Dunning 2009; Ross 2010). But in a more moderate form, patronage can lead to an inefficient allocation of resources, hurting economic growth. The increased payoff to staying in power from commodity rents can induce the government to spend more resources to improve its chances of staying in power or of being reelected. This can easily involve patronage through the targeting of government expenditures at key constituencies, whether by expanding public employment or investing in politically expedient “pork barrel” projects. Increasing the value of political officeholding could also have beneficial effects by extending the planning horizon of politicians, resulting in more productive uses of resource rents and a better path of resource extraction (Kolstad and Wiig 2009).

**Rent seeking**

The pot of rents also has the demand-side effect of potential beneficiaries of government largesse, resulting in rent-seeking behavior. Rent seeking results in a waste of real resources, as economic agents spend time and other resources on nonproductive activities “to win a contestable prize” (Drazen 2000) and capture the rents (Lane and Tornell 1996; Tornell and Lane 1999; Baland and Francois 2000; Torvik 2002).

Rent-seeking models focus on private individuals outside the government who have the choice of engaging in productive or rent-seeking activities. Rent-seeking activities can be legal—for example, through lobbying—or illegal and corrupt, such as through bribery or extortion. In booms, the windfall gain can boost demand for fiscal resources from powerful
groups. Where multiple powerful groups exist and the legal-political institutional infrastructure is weak, there can be what Tornell and Lane (1999) term a “voracity effect”—a more-than-proportional increase in discretionary fiscal spending in response to a positive revenue shock, such as an oil revenue windfall. The national government is typically the recipient of hydrocarbon and mineral windfall revenues; therefore the most expedient way for powerful groups to appropriate the windfall is through the budgetary process. But the increased fiscal transfers to multiple powerful groups can cause government spending to rise by an amount exceeding the windfall revenues. When fiscal spending is not productive, there can be a negative impact on growth.

Incentives for patronage and rent seeking can exist even if resource-related revenues are stable. But the cyclical nature of these revenues can combine with pressure for increased spending and exacerbate the problem, fostering procyclicality in fiscal policy and associated ratcheting of public spending.

It should be clear from this discussion that mitigating the corrosive rentier effects of natural resource abundance constitutes a significant challenge for public policy, institutions, and political processes. Certain features of institutional arrangements and policy-making processes can help to meet this challenge, including well-designed systems of checks and balances, high degrees of transparency and accountability, and society’s ability to develop a “state policy” on managing natural resource wealth that is sustained despite electoral changes. These features lead to a greater probability that political actors will credibly commit to optimal intertemporal use of natural resources.

Countries with a prudent spending response to commodity-related revenue windfalls also tend to be more resistant to patronage and rent-seeking activities. In these countries, politicians have been able to credibly commit to appropriate management of natural resource rents over time. Although certain institutional and political economy characteristics make the emergence of such a societal pact more likely, other factors contribute as well, such as the learning effects associated with reaping the rewards of sound economic management resulting from the availability of countercyclical fiscal resources in bad times (see chapter 7).

In LAC, Chile has the least propensity toward profligacy in spending rents, much of which can be explained by institutional features. Copper rents, controlled by the national government, are managed transparently, with technical rules governing the identification and spending of windfall revenues. Excessive contention by political parties and their clienteles over rents has been curbed in Chile by a broad consensus between the modern left coalition (Concertación) and opposition parties on the need to maintain a countercyclical fiscal policy and generate long-term savings from the copper boom. Similarly, Norway has been successful in managing the fiscal policy implications of oil revenues. Davis, Ossowski, and Fedelino (2003) identify its mature democracy and strong, consensus-oriented parliamentary institutions as key factors behind this outcome. The country benefits from a broad societal understanding of the need to restrain public spending and avoid volatile expenditure patterns. Transparent political and bureaucratic processes and stable policies that incorporate long-term considerations contribute to the prudent fiscal outcomes.

Prudence and long time horizons for managing windfall commodity rents are arguably easier to achieve where private enterprise thrives. A strong and efficient private sector that perceives broad opportunities to engage in productive enterprise is less likely to engage in rent-seeking activities. Baland and Francois (2000) present a model with multiple equilibria in which a resource boom can either increase or decrease the proportion of the population engaged in entrepreneurship (productive activity), depending on initial conditions. When a resource boom occurs, the opportunity cost to individuals who engage in rent seeking is forgone productive activity (entrepreneurship). In the authors’ framework, the greater the proportion of entrepreneurs in a country when a resource discovery or boom hits, the higher the initial returns are to entrepreneurship. Therefore, a strong initial industrial base decreases rent seeking by making it less lucrative.
Rent dissipation in LAC

The procyclical fiscal policy response to business cycle movements has been established in empirical studies for Latin America (Gavin and Perotti 1997; Alesina, Camante, and Tabellini 2008). A key culprit may be the procyclical government spending response often associated with commodity price booms and busts. This section examines the evidence on rent dissipation in LAC and the possible role of patronage and rent seeking. The evidence points to the existence of effects such as those discussed by Cuddington (1989), who points out that while booms tend to be accompanied by unsustainable increases in public sector spending, once the boom ends, governments are slow to reduce spending, not least because of rigidities and costs to reversal. Besides providing the state with a pot of resources that can be used to mobilize political support, windfall rents may incite myriad private interests to clamor for public spending. This may take the form of subsidies for energy consumption, increased pensions, contracts for infrastructure construction, and so on (Webb 2010).

There is a necessary overlap between the discussion here and that of the next section, which covers the fiscal response to the recent commodity price cycle in more detail. Here, the treatment is selective and in no way attempts to provide a thorough account of country experiences during the latest boom in LAC. Country studies commissioned for this report provide detail on the political economy aspects of the recent boom in Bolivia, Chile, Ecuador, and Trinidad and Tobago. This section summarizes the evidence from these country studies, without attempting to rank or accurately measure the quantitative consequences for the economy of patronage and rent-seeking behavior in individual countries. The discussion is illustrative only, and the conclusions should not be generalized to the region.

Energy subsidies are a key avenue that LAC countries use to dissipate resource rents to domestic consumers. Subsidizing energy is not unique to LAC commodity-exporting countries; the governments of many small commodity-import-reliant economies also subsidize energy consumption. Nevertheless, the large commodity exporters feature prominently among the countries that provide substantial energy subsidies, principally subsidies on the consumer prices of fuels but also on the price of electricity (figure 4.1). In 2005, energy subsidies in LAC equaled, on average, 2.1 percent of GDP, ranging from 0.1 percent in Chile to 8.7 percent in República Bolivariana de Venezuela (OLADE 2007). Oil exporters Ecuador and República Bolivariana de Venezuela had the largest energy price subsidies as a percent of GDP, in the range of 7–8 percent.

Nondiscriminatory energy price subsidies are very regressive: they favor those who consume more energy in absolute terms, typically more affluent individuals and organizations. The case of fuel and liquefied petroleum gas (LPG) subsidies in Ecuador illustrates this point. Some 85 percent of the gasoline subsidy in Ecuador benefits the richest quintile of the population (SIISE-STFS 2003; World Bank–IADB 2004). In 2007, the benefit was US$1,053 for an average family in the richest quintile but only US$173 for a family in the poorest quintile. Fuel subsidies in Ecuador, moreover, create incentives for wasteful overconsumption; a

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**FIGURE 4.1**

Energy Subsidies for LAC Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Energy Subsidies as a Share of GDP, 2005 (%)</th>
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<tr>
<td>Suriname</td>
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<td>Venezuela, R. B. de</td>
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<td>Ecuador</td>
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<td>Haiti</td>
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<td>Barbados</td>
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<td>Bolivia</td>
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<td>Argentina</td>
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<td>El Salvador</td>
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<td>Nicaragua</td>
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<td>Paraguay</td>
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<td>Trinidad and Tobago</td>
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<td>Mexico</td>
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<td>Guatemala</td>
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<td>Panama</td>
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<td>Costa Rica</td>
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well-known example is rich households building gas-heated swimming pools that are much larger than they would be if prices more closely reflected the social opportunity cost of gas and other fuels.

Energy subsidies in Ecuador, on average, cost double what the country spends on education. Indeed, Ram and Ruta (2009) point out that for a number of LAC countries, the fiscal cost of energy price subsidies is higher than the resources allocated to education: education spending in LAC ranges from 2 to 5 percent of GDP, whereas energy subsidies reach as high as 8.7 percent (in Suriname). Moreover, energy subsidies are not transparent, obscuring the budgetary trade-offs. Generally, the fiscal cost of subsidies is not made explicit in budgets. Again, take the example of Ecuador. The public accounts provide no direct record of fuel subsidies; rather, this cost is only implicit in the difference between the state-owned oil company Petroecuador’s expenses and revenues. The hidden subsidy reflects the forgone income from crude oil used in local refining that could have been exported at the international price, on the one hand, and the losses from selling refined products at a much lower price than the cost of importing them or producing them at home, on the other.

Rent capture also takes place within the public sector
Organizations within the public sector—in LAC, most notably state-owned enterprises, public sector workers, subnational governments, and on occasion the military—can push to benefit from resource rents. In effect, the public sector is made up of a collection of organized groups, some of which press to get larger allocations of rents (Buchanan and Tullock 1962; North et al. 2007). Medas and Zakharova (2008) document how some Latin American countries have used the recent oil revenue windfall to raise public sector wages disproportionately. This has been the case, for example, in Bolivia and in Trinidad and Tobago, in connection with their hydrocarbons income, and in Argentina, in connection with its agricultural commodity boom. In Trinidad and Tobago, windfall rents continued to flow to urban unions, particularly the civil service, which received a large pay increase in 2003 following a change in government.

There is evidence that the military in some countries has also gained disproportionately during the recent commodity price boom. Thus, for Mexico, Webb (2010) documents that oil exports have been a prominent source of revenue for the military, in addition to considerable benefits meted out to PEMEX employees. In Chile, the military receives the equivalent of 10 percent of CODELCO sales, sharing significantly in the windfall in a way that enhances the military’s independence from the budget game.9

Substantial rents go to subnational governments in LAC
Subnational governments in LAC receive and spend a sizable share of natural resource rents. Argentina, Bolivia, Brazil, Colombia, Ecuador, Mexico, and República Bolivariana de Venezuela all have revenue-sharing systems that earmark a large share of natural resource revenues for states, regions, and municipalities. Pressures to obtain more advantageous revenue-sharing arrangements by localities where natural resources are exploited may be particularly strong—and understandably so—in regions populated by socially marginalized and minority ethnic groups that have been the victims of a long history of exclusion. But pure political patronage can also often be at play. Díaz-Cayeros (2009), for example, draws attention to the patronage networks in Mexico financed by oil revenue (excedentes petroleros) captured by governors.

Sharing commodity windfall revenues with subnational governments where the commodity is produced or extracted is not in itself the problem. This sort of spending could be required in an effort to mitigate damages to the local population or the environment from resource production activities or to correct long-standing inequalities affecting ethnic groups or traditionally excluded populations. But taken to the extreme, the argument that the body governing the location that generates the revenue should receive it back proportionally to the amounts generated would eliminate the social gains from coordinated production of public goods and services in the national interests, including stabilization and equity-driven compensation services.
Moreover, where subnational governments lack the institutional capacity to spend their allocations of natural resource rents efficiently, funds may be wasted. The institutional quality of national and subnational governments may vary, and thus, so may the social return on the spending of resource revenues at each level of government. There is evidence that resource rents at the subnational level are often linked to poor-quality spending and a rise in rent seeking. This suggests that decentralization of resource rents is risky and must be accompanied by capacity building at the subnational level.

Indeed, windfall rents may exacerbate the quality of subnational institutions, as two recent papers on Brazil show. Caselli and Michaels (2009) find that the oil-driven increases in municipal revenues and reported spending have not been accompanied by a commensurate improvement in the welfare of people living in the municipalities. In particular, the increase in municipal spending was not matched by a corresponding increase in the provision of public goods and services, as recorded by household survey–based measures. Observed increases in household income associated with royalty-induced government revenues were found to be negligible. Where, then, did the oil revenues go? The authors find evidence that they went disproportionately to municipal employees and were partly accounted for by some degree of rent seeking and corruption. Brollo, Nannicini, Perotti, and Tabellini (2010) find empirical evidence that the large windfall transfers to Brazilian municipalities seem to have induced more political corruption (as measured by a random audit program).

Yet these negative local effects are not inevitable. Outcomes depend on complex interactions among institutional quality, administrative capacity, and policies. Thus, Perry and Olivera (2009), using data from 32 departments and 1,098 municipalities in Colombia, find that higher-quality institutions—particularly those related to property rights—help reduce the natural resource curse and reinforce the positive effects of natural resource production and royalties at the regional level. The same effect appears, although in a weaker form, in departments where there is more transparent administrative (especially audit) institutions and with the maturity of civil-society organizations in municipalities.

**Who’s Running the Show? Management of Natural Resource Sectors**

It is important to ensure that the natural resource sector contributes its full potential to economic growth. Economic historians have shown the critical role of resource-based industries and revenues in the early stages of development of now high-income countries, including the United States. In a seminal contribution, Wright (1990) argues that the exploitation of natural resources was instrumental in the emergence of the United States as the world’s preeminent manufacturing nation during 1879–1940. Institutions and government policies had much to do with this. He finds that resource abundance reflected greater exploration and exploitation of geological potential, not just the initially known geological endowment. David and Wright (1997) argue that the factors that made possible the rapid exploitation of mineral deposits in the United States were mostly related to institutions and supportive government policies and included an accommodating legal environment, investment in public knowledge (such as geological surveys), and educational advances in mining, minerals, and metallurgy.

One critical factor is ownership. In the development of natural resources, the requirement of large up-front investments, among other things, creates pressure for government ownership. Mining and oil production industries are in fact government owned in many countries, and there are examples where these state-owned enterprises have been efficiently run. These include Statoil in Norway, Petronas in Malaysia, Petrobras in Brazil, and PDVSA in República Bolivariana de Venezuela in the 1980s and 1990s. Nonetheless, cross-country studies have demonstrated that productivity generally improves significantly after privatization (Schmitz and Teixeira 2008; La Porta and Lopez de Silanes 1999; Chong and Lopez de Silanes 2005). At the same time, private ownership of oil or mineral companies is likely to limit the scope of redistributional policies because private ownership is often accompanied by a lower fiscal take (government’s share of the...
sector's profits). Hence, countries often face a trade-off. Privatized firms are more productive than nationalized enterprises in general, but privatization is often associated with increased inequality. This trade-off is linked to back-and-forth changes in ownership of the natural resource sector between the public and private sectors.

Nationalizations and privatizations of natural resource sectors are often cyclical phenomena and tend to come in waves across several countries at once. LAC countries are no exception. Chua (1995), in a comprehensive historical study of the privatization-nationalization cycle focused on Latin America and Southeast Asia, finds that despite their differences, the two regions share a tendency to move back and forth between nationalization and privatization. Compared with Southeast Asia (particularly Malaysia, Pakistan, and Thailand), the cycle started earlier in Latin America, with its longer post-independence history. In Latin America (most prominently in Argentina, Brazil, Chile, Mexico, Peru, and República Bolivariana de Venezuela), the first wave of privatization extended from the 1870s to the 1920s, a period of increased global integration. Partly in reaction to the Great Depression, nationalizations became frequent and extensive in the 1930s. A second tide of privatization occurred after World War II, only to be reversed under the populist regimes of the 1960s and 1970s. Two decades later, in the early 1990s, privatizations resurged on a massive scale. Manzano and Monaldi (2008) report a trend toward renationalization in the last few years for a small group of mostly Latin America countries. Nationalizations in LAC have affected mainly resource extraction and utilities.

**Several factors seem to affect the probability of nationalization**

**High commodity prices**

Duncan (2006), analyzing the eight largest developing-country exporters of seven major minerals over 1960–2002, concludes that a high real price for minerals is a stronger predictor of state expropriation risk than are political or economic crises. Guriev, Kolotilin, and Sonin (2008), using panel data for 1960–2002, reach a similar conclusion for the oil industry. Manzano and Monaldi (2008) argue that large rents and sunk costs make the oil industry very attractive for government expropriation when oil prices rise and the tax system is inadequate, in the sense of being regressive and lacking price-contingency clauses. The general implication of these studies is that contracting arrangements that give private companies a largely unrestrained ability to capture windfalls create incentives for nationalization when commodity prices are high.

More flexible arrangements can reduce the incentives for nationalization. This can occur through tax arrangements that allow the government to at least partially capture the upside when prices boom or, as is common, through renegotiation of contractual terms.

A case in point is Chile, where the private sector is currently (as of 2008) responsible for 74 percent of copper production. Chile introduced a royalty on the total profits of private mining companies in 2005. The private mining sector objected strenuously to the first bill by the government proposing this royalty tax, but opposition declined when a second bill was passed in 2005 (Navia 2010). The bill had considerable popular support; a poll by CERC reported that 67 percent of Chilean adults supported a specific tax on mining activity. The imposition of the admittedly modest royalty does not appear to have worsened the investment climate. In a 2008–09 worldwide survey of mining investors, Chile ranked in the top five in the mineral potential index measuring the policy climate for mining exploration. One explanation is that the low royalty might have reduced the political risk for the private sector by lessening pressures for a dramatic overhaul of the tax regime, or indeed a reversal of private control of the sector. Even though copper prices reached historically high levels during the latest boom, the sector is increasingly in the control of private (and foreign) hands. This recent experience, furthermore, stands in contrast to that of the sharp price hike of the 1970s, when copper was nationalized. Entrenched inequality—especially when natural resource rents are perceived to benefit only a minority, and often a foreign minority at that Chua (1995) shows that nationalizations in Latin America have been promoted against foreigners and
domestic residents perceived as unfairly privileged. This has been the case especially where private ownership and management of natural resource companies were seen to have worsened inequality. This is well illustrated in Bolivia, where the government’s share of hydrocarbon production revenues fell significantly with privatization in the 1990s, while overall inequality rose substantially (figure 4.2). This, together with the proposed construction of a pipeline to Chile for future gas exports to the United States, led to increased opposition to what was perceived as exploitation of Bolivia’s natural resources by foreign companies at the expense of the Bolivian people. This anti-elitist movement has played a significant role in the recent round of nationalizations in Latin America.

The quality of institutions and the degree of economic reliance on the commodity sector

Nationalization is more likely in countries with low human capital, undiversified production, and weak public institutions. Guriev, Kolotilin, and Sonin (2008) find that governments are more likely to nationalize when the quality of institutions (measured by indicators of institutionalized democracy and constraints on the executive) and human capital (measured by adult literacy) are deficient. Kobrin (1984) and Minor (1994) remark that countries experiencing mass expropriations tend to depend heavily on a few commodities. Several mechanisms may be at play. When public institutions are flawed, governments are more likely to violate contracts and ignore the rule of law, as reputational costs, domestic disapproval, and external sanctions are minimal. Moreover, when human capital is low and the economy poorly diversified, income and consumption tend to be more volatile under a privatized system. In addition, when the production structure is heavily concentrated in a few industries, such as natural resources, outside options for workers who are not well remunerated in those industries are quite limited.

This discussion suggests that the cyclical nature of the nationalization and privatization of natural resource industries appears to follow some self-reinforcing dynamics. Nationalizations are more likely when...
commodity prices are high, inequality is extensive, and institutional quality is low. Furthermore, the incentive to nationalize rises where contracting and tax arrangements are inflexible, preventing governments from sharing in the upside of commodity price bonanzas. Reprivatization, by contrast, is more likely where commodity prices are low because of the greater efficiency in privately owned and managed natural resource exploitation. However, low commodity prices and the credibility lost during the previous nationalization combine to weaken the bargaining power of governments in reprivatization negotiations. Rather, the government may be induced to make greater concessions to attract private operators back to the natural resource sector. As a result, contractual arrangements for privatization may have to be fairly inflexible, excessively tying the hands of the government and not allowing it to partake in the upside. This, in turn, raises the probability of a renationalization during a future commodity bonanza, thus reinforcing the cycle. The cycle could be broken if the government could make a credible commitment not to renationalize, which would in turn allow it to negotiate better contractual terms.

Natural Resource Rents, Democracy, and Conflict

Studies of mineral-rich countries in the Middle East, Africa, and other regions have suggested that having abundant oil and other mineral resources inhibits democracy. Ross (2010) puts forward three potential channels. First, resource revenues may increase the repressive capacity of the state. Second, by discouraging taxation, natural resource revenues may diminish citizen pressures for greater state accountability, including through the adoption of representative institutions. Finally, the enclave character of much natural resource extraction may discourage broad modernizing changes, such as occupational diversity, that some scholars believe promote democracy. Ross (2010) finds econometric support for the second mechanism but not the first or third.

Yet, the claim that resources inhibit development or democracy does not explain important anomalies. For one, it fails to explain the coexistence of natural resource wealth and democracy in many of today’s high-income countries and even in many resource-rich developing countries. In addition, some countries may be democracies not despite oil, but in part because of it. Karl (1987, 1997) argues that petroleum revenues were crucial in the emergence of democracy in República Bolivariana de Venezuela (see also Dunning 2008).

The theory of resource rents posits two conflicting effects on the political regime, implying that whether natural resource abundance is a “political curse” or not is essentially an empirical question. On the one hand, a commodity boom may strengthen the incentives to control the distribution of rents, diminishing the attractiveness of democracy to elites. This is the “direct,” authoritarian effect of resource rents. On the other hand, a resource boom can vastly enhance the resources available to implement social policies, thereby reducing the threat of a nondemocratic redistribution of private income and increasing the attractiveness (or reducing the disutility) of democracy to elites. This is the “indirect,” democratic effect of rents—indirect because it works through the effect of resource rents on the threat of redistribution. It is not obvious a priori that either effect would always dominate.

Even if natural resource wealth is found, on average, to have hindered democracy around the world, recent studies conclude that this does not appear to have been the case in LAC (Dunning 2008; Ross 2010; Haber and Menaldo 2009). Evidence from LAC countries suggests that having natural resource wealth has not harmed—and may have helped—democracy. The examples of Ecuador and República Bolivariana de Venezuela—both of which became democracies in periods of high oil rents—are consistent with these studies.

Why is LAC an anomaly to the political curse of natural resources? One reason may be LAC’s high inequality, which would make the threat of nondemocratic redistribution more worrisome for elites. The greater inequality that accompanies non-resource-derived income or wealth could raise the importance of the effect of resource rents in moderating redistributive conflict.

Second, state control of the resource sector might also help. Although state control may be associated with low productivity, it could enhance the state’s ability to redistribute resource rents. If the democratizing
influence of natural resources works through the distribution of rents, state control of mineral industries could have positive consequences for democracy. For example, in LAC countries where resources were controlled by a small private elite (for example, in Bolivia before the 1952 revolution; see Dunning 2008), the democratizing effects of mineral wealth seem to have been especially weak or nonexistent.

Third, compared with societies in which the redistribution of non-resource-derived income is not as important, mass political support for redistribution—a product of high inequality—might increase the pressure on elites, tipping the balance in favor of the democratizing effect of natural resource rents. Finally, the extent of resource dependence matters. Dunning (2009) suggests that countries where the total economy (rather than simply the government) is heavily dependent on natural resources are more likely to be authoritarian than are countries less dependent on natural resource production. LAC countries are far less dependent on natural resources than are many states in the Middle East or Africa.

Of course, the question goes well beyond that of a simple democratic-authoritarian dichotomy. Recently, some natural resource booms have been accompanied by a weakening of democracy in the region (less press freedom and less influence of the rule of law). This is a fruitful area for additional research.

Globally, oil is the commodity most linked with violent conflict. But again, LAC appears to be more resistant to these effects, with a lower occurrence of violent separatist and national conflicts than the rest of the world (table 4.1). Because Latin America has historically been impervious to separatist conflicts—with no wars of secession since the 19th century—rates of violent conflict have been lower in hydrocarbon producer countries there than elsewhere. That is not to say that natural resources—particularly hydrocarbons and minerals—are unrelated to conflicts in the region. Today, there are some 120 local conflicts concerning mining. But they are generally nonviolent disputes over land rights, labor practices, and environmental protection.

There are at least two possible explanations for this anomaly: the region’s long history of sovereign statehood, which may have solidified national borders, and the absence (until recently) of highly politicized ethnic cleavages. Perhaps separatism is a phenomenon that fades over time, a result of either causation (national boundaries become more widely accepted) or selection (less cohesive states fracture until the remaining units are more cohesive). Perhaps secessionist conflicts were worked out earlier in LAC history. (There were a large number of separatist wars in Latin America in the 19th century.) To be sure, petroleum extraction does seem to touch off the same kind of frustrations and protests in Latin America as elsewhere, trigger the same demands for distributive justice, and contribute to the same kinds of sabotage and extortion—most visibly in Bolivia, Colombia, Ecuador, and Mexico. Yet neither mineral wealth nor other circumstances have caused marginalized ethnic communities in any LAC country to fight for secession or independence. Overall, LAC countries seem to have found political arrangements and compromises that, despite high inequality, have managed to forestall the type of separatist struggles and violent conflict around natural resource wealth often observed in other developing regions.

### Endnotes

1. For institutions, here we take the broad definition suggested by North (1990, p. 3): “Institutions are the rules of the game in a society or, more formally, are the humanly devised

<table>
<thead>
<tr>
<th>Year</th>
<th>Rest of world</th>
<th>Latin America</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960–1990</td>
<td>1.49*</td>
<td>2.39*</td>
</tr>
<tr>
<td></td>
<td>1.15***</td>
<td>0.00***</td>
</tr>
<tr>
<td></td>
<td>2.64</td>
<td>2.39*</td>
</tr>
<tr>
<td>1991–2006</td>
<td>1.97**</td>
<td>0.69**</td>
</tr>
<tr>
<td></td>
<td>2.53***</td>
<td>0.00***</td>
</tr>
<tr>
<td></td>
<td>4.5***</td>
<td>0.69***</td>
</tr>
</tbody>
</table>

**Source:** Ross (2010).

**Note:** The conflict onset rate represents the rate of emergence of new civil wars in the country-year sample. In the table, asterisks mark differences between the onset rate in Latin America and the rest of the world that are statistically significant. ***p < .01, **p < .05, *p < .10 in Pearson’s chi-square test (rows 1 and 3) or a one-sided Fisher’s exact test (rows 2, 4, 5, and 6). The tests are for values in rows (i.e., Rest of World vs. Latin America).
constraints that shape human interaction. In consequence, they structure incentives in human exchange, whether political, social or economic.” Institutions can be formal, consisting of rules, or informal, consisting of conventions and codes of behavior. Therefore, institutions as a concept encompass a broad range of political, economic, legal, and social arrangements.


3. The Latin American institutions that emerged from the colonial exploitation of natural resources have been put forward as explaining the divergence in incomes from those of North America. This has been linked to differences in factor endowments that affected the incentives of colonial powers in shaping institutions (Engerman and Sokoloff 1997, 2003). Thus, the emergence of small holdings as the predominant form of agriculture in the northern United States and Canada, due in part to labor scarcity and soil conditions, led to enhanced equality and more democratic institutions, compared with societies in South America and the southern United States, where large-scale plantations led to inequality and weak institutions.

4. This thesis echoes the intuition arising from the “limited access order” framework of North et al. (2007). Under the authors’ conjecture, to move from a system of limited access (for instance, one based on natural resource rents controlled by and for powerful elites) to one of open access, a society needs to cross a certain institutional quality threshold.

5. This distinction between resources that produce rents and those that do not parallels a distinction in the literature on natural resources and conflict between concentrated, lootable or “point-source” resources and geographically “diffuse” resources that are “non-lootable” by private actors (Le Billon 2001; Snyder 2001; Snyder and Bhavnani 2005; Isham et al. 2003).

6. Rather than directly emanating from competition for resource rents, the result in Baland and Francois’s (2000) work is generated by import quotas. An economy can import or produce industrial goods domestically. The right to import industrial goods confers a rent that accrues to domestic rent seekers. The more individuals that produce the good, the cheaper it is, meaning that at some threshold, the import license becomes useless because it is cheaper to produce the good domestically.

7. A procyclical fiscal response to a commodity boom does not require, as a precondition, a particularly corrupt budget process or a weak set of institutions. As Talvi and Vegh (2005) point out, procyclical fiscal policy tends to be the rule rather than the exception throughout the world. In their model of fiscal policy, Talvi and Vegh introduce a political distortion that makes running budget surpluses costly for a government because of the pressure to increase spending. The greater the fluctuations in government revenues, the more important will be the political pressure to spend, as the budget surplus will deviate more from its average value. The authors suggest, then, that the procyclical fiscal policies seen in developing countries are due to the higher variability of the tax base relative to that of G-7 countries. In this framework, fiscal dependence on volatile commodity revenues would increase the variability of the tax base.

8. The background country studies are available on the project website at http://go.worldbank.org/55O3DOM6N0.

9. In the case of Chile, there is a proposal to replace La Ley Reservada del Cobre, which gives 10 percent of CODELCO sales to the military, with a transfer from general government resources that would allow the military a medium-term planning horizon for its expenditures.

10. Andres et al. (2008), in a study of infrastructure privatizations in LAC (water, electricity, and telecommunications utilities), also found “overall significant improvements in sector performance associated with private sector participation; with consistent improvements in efficiency and quality and reductions in workforce.” They note, however, that within both the private and public sectors there was a great deal of variance, with the top public agencies performing as well as some private companies.

11. In keeping with Chua’s findings are those of Kobrin (1984). Kobrin analyzed expropriations in 79 developing countries over the period 1960–79. He found that expropriations grew in the 1960s, peaked in the early 1970s, and declined afterward. Minor (1994) and Shafik (1996) extended Kobrin’s study to include the period up to 1993. They found that, in the late 1980s and early 1990s, as many as 95 countries around the world experienced extensive privatization processes.

12. The bill of 2005 was also no doubt better received by mining companies because of the concessions in terms of accelerated depreciation that the Lagos administration made for private companies, which delayed the paying of the tax.


14. In particular, Haber and Menaldo (2009) find a positive relationship between natural resources and democracy in a longer time series for Latin America when the latter variable is measured in levels. However, when democracy is first-differenced by year, and when possible nonstationarities are addressed, the authors find no relationship, on average, between natural resources and the political regime. Within LAC, then, this study does not support the claim that oil has hindered democracy.