Is There Really a Resource Curse?  
A Critical Survey of Theory and Evidence

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This article provides a critical survey of the resource curse—the idea that mineral and fuel abundance generates negative developmental outcomes in less developed countries. In particular, it examines the idea that mineral and fuel abundance generates growth-restricting forms of state intervention, extraordinarily large degrees of rent seeking, and corruption, which are generally argued to be negative in terms of the developmental outcomes they generate. The analysis surveys the Dutch disease, rentier state, and rent-seeking versions of the resource curse and finds they have significant shortcomings in terms of theory and evidence. It also identifies some decisive factors that help determine the blessing threshold—below which the risk of a resource curse may be very high—in mineral and fuel abundant developing countries. Keywords: resource curse, economic performance, rentier state, rent-seeking models, resource abundance.

The relationship between mineral and fuel wealth and economic development has been the subject of intense debates over the past century. Central to the effect of mineral and fuel wealth on long-run economic growth is the stimulus that it can provide to industrial activities. One of the main lessons of world economic history of the past two centuries is that sustained economic growth is achieved with sustained and successful industrialization.¹ The idea that commodity exports generate domestic demand for manufactures has long been emphasized by development economists.² Similarly, the “staple thesis” demonstrated that growth in backward areas commonly began through the initial stimuli that primary product exports brought in terms of attracting capital and labor and inducing a more diversified production structure.³ Natural resource rents, to the extent they are appropriated by state governments, can relax common resource constraints to growth; namely, the savings, foreign exchange, and fiscal constraints.⁴

Despite the historically positive association of natural resource abundance and industrial growth in many now-advanced countries, the literature covering less developed countries (LDCs) since the 1950s has largely drawn the opposite conclusion. Natural resources, for most poor countries, are deemed to be more of a “curse” than a “blessing.”⁵ Structuralists, dependency theorists, and some Marxist theories of imperialism are well-known examples of the negative view of natural resource export specialization as a basis for sustained in-
dustrialization. For structuralists, such as Raul Prebisch, primary products were subject to declining terms of trade and destabilizing price volatility. For dependency theorists, natural resources were unlikely to stimulate growth particularly if foreign multinationals dominated resource extraction and were allowed to repatriate profits. Marxists, such as Paul Baran, argue that governments in poor economies were dominated by local elites (the so-called comprador bourgeoisie) whose interests were allied not with national development, but with foreign multinationals.

The enclave nature of mineral exports, it is argued by dependency theorists and structuralists, also meant that the leading export sector had few linkages with the rest of the economy, lessening the stimulus resource booms have on investment in non-mineral sectors. The theoretical and empirical weakness of dependency theory, at least as it applies to Latin American historiography, has received thorough treatment. The variation and change of industrial growth within and across poor economies in Latin America made sweeping generalizations about the “development of underdevelopment” untenable. Within debates over the role of natural resources on economic development, the role of mineral and fuel exporting activities (such as oil) has received special attention. One of the reasons that oil exporting nations have been considered special cases revolves around some peculiar features of petroleum production. These peculiar features include the fact that such activities are large scale, enclave, capital intensive (usually with close links to multinationals), and pay much higher wages compared with the average wage in a labor surplus economy. The well-above-average profit margins that accrue to oil production are characteristic of the low extraction costs and predominance of ground rent in the value of such production. The peculiar characteristics of mineral and fuel rents have largely been viewed to have negative consequences for the macroeconomy. John Maynard Keynes, for instance, argues that, in the sixteenth century, discoveries of precious metals in America and the subsequent inflow of income had an adverse effect on Spain’s domestic industries by raising wage levels above competitive levels.

In sum, the general thrust of the resource curse arguments is that natural resource abundance leads to poor economic performance and growth collapses, high levels of corruption and poor governance, and, in some models, greater political violence. In this article, I focus on the extent to which mineral abundance affects economic performance. The issue of whether mineral abundance generates greater political violence or increases the likelihood of authoritarianism has been treated elsewhere.

**Economic Explanations of the Resource Curse**

The question of structural change in oil exporting economies has received considerable attention in the economics literature, particularly after the discovery
of North Sea oil and its impact on the industrial structure of such economies as the Netherlands and the United Kingdom. The concern was focused on the subsequent deindustrialization in output and employment, which took place in these two economies following their resource booms, a phenomenon that has come to be called "Dutch disease."

The logic of the simple Dutch disease theories can be described as follows. In an economy in full-employment equilibrium, a permanent increase in the inflow of external funds results in a change in relative prices in favor of nontraded goods (services and construction) and against non-oil traded goods (manufacturing and agriculture), leading to the crowding out of non-oil tradables by nontradables. That is, an appreciation of the exchange rate leads to a decline in the competitiveness, and hence production and employment, of the traded goods sector. The mechanism through which this change takes place follows directly from the model's assumptions of full-employment equilibrium and static technology. With these assumptions, the external funds (from an oil boom) can be translated into real domestic expenditure only if the flow of imports increases. However, since nontraded goods cannot be imported easily (or only at prohibitive costs), a relative contraction of the traded goods sector is inevitable. Otherwise, the resources needed to enhance the growth of the nontraded sector would not be available.

Thus, the model predicts that deindustrialization is the inevitable structural change that occurs as a result of oil booms. It is important to note that, even without the restrictive assumptions of full employment, oil booms can induce more investment in nontraded investments and thus discourage manufacturing investment. This is because the price of nontraded goods rises relative to the price of non-oil traded goods as a result of exchange rate appreciation. A second mechanism through which manufacturing can become less competitive in this model is through the increase in manufacturing wage rates that result from increases in aggregate demand for labor that oil booms can generate. In the short run, when productivity levels are fixed, unit labor costs in manufacturing rise. This can, in the absence of compensating policies, lead to a loss in manufacturing competitiveness.

The association of deindustrialization as a disease stems from the unique growth-enhancing characteristics the manufacturing sector can potentially embody. The primacy of industrialization advocated in academic and policy circles in the postwar period developed as a result of numerous studies examining the causes of backwardness in developing economies. Primary products (as well as services) were not believed to possess the "external dynamic economies" observed in the manufacturing industry where faster growth leads to increasing productivity manifested ultimately in the dynamic specialization of employment.

The potential dynamism that manufacturing can generate opens up an important role for policy in affecting the growth outcomes of oil booms. In the
simple Dutch disease model, technology is assumed to be given (i.e., it is a blueprint), which means that additional foreign exchange is not of particular relevance from the point of view of economic growth. However, when a late developing country faces a technological gap, additional export revenues, if channeled by an appropriate industrial policy, can play an important part since the additional foreign exchange can accelerate the process of importing advanced technology and the machines that embody them. Additionally, if the industrial strategy promotes "learning," additional revenues can theoretically accelerate the growth process. For instance, during the boom, the government could promote industry by channeling resources toward that sector through protection, subsidies, or financial incentives. This can serve to modernize the manufacturing capital stock, which in turn can improve productivity.

This means that the structural change against non-oil tradables, such as manufacturing, is not inevitable; rather, the outcomes of resource booms depend on state policy responses. Peter Neary and Sweder van Wijnbergen note:

> Insofar as one general conclusion can be drawn [from our collection of empirical studies], it is that a country's economic performance following a resource boom depends to a considerable extent on the policies followed by its government. . . . [E]ven small economies have considerable influence over their own economic performance.\textsuperscript{15}

Evidence from Venezuela, for instance, suggests that policy responses, such as industrial policy and exchange rate management, determine how oil booms affect the growth prospects of the economy.\textsuperscript{16} What the Dutch disease literature does not address is why growth-enhancing policies are chosen in some contexts and not others, and, more important, why leaders correct ineffective policies at a faster rate in some countries and not others.

**Political Economy Explanations of the Resource Curse: Rentier State and Rent-seeking Models**

Rentier state models attempt to explain why state decisionmakers in natural resource–rich economies create and maintain growth-restricting policies.\textsuperscript{17} These models move beyond economic models of the resource curse, such as Dutch disease models, by attempting to endogenize policymaking and institutional formation. The rentier state model posits the need to view poor economic performance in the context of oil abundance and booms as outcomes of historically specific institutional arrangements and not causes of economic decline. These models are part of a growing trend of reviving the staples thesis, the notion that natural factor endowments or technology shape the relations of production or institutional evolution of a society.\textsuperscript{18}
In the rentier state model, oil and mineral abundance is assumed to generate growth-restricting state intervention, extraordinarily large degrees of rent seeking where these rent-seeking contests are assumed to be uniformly negative in terms of the developmental outcomes they generate. There are several important propositions that are developed within this framework. First, the existence of a higher level of mineral rents increases rent-seeking and corruption relative to economies with lower mineral abundance. Second, increases in rent seeking and corruption generate lower growth. This is in part due to the fact that, with corrupt transactions, the need to keep bribes secret reduces the security of property rights, which lowers investment in long-gestating projects. Third, oil rents provide a sufficient fiscal base of the state and, thus, reduce the necessity of the state to tax citizens. This in turn reduces political bargaining between state and interest groups, which makes governance more arbitrary, paternalistic, and even predatory. Fourth, the absence of incentives to tax internally weakens the administrative reach of the state, which results in lower levels of state authority, capacity, and legitimacy to intervene in the economy.

**Insights from Rent-seeking Theory**

Modern theories of rent seeking and corruption form a substantial part of the intellectual foundation of the rentier state model. The basic idea behind these models is that there are substantial costs to the workings of an economy when the allocation of resources is channeled primarily through state leaders, who have discretionary authority, rather than through bargains between private economic agents. In oil economies, because most revenues originate in the central government, the levels of state discretion in allocating resources and regulating the economy tend to be higher than in most non-oil economies. In the rentier state model, the predominant view is that oil economies are subject to a higher level of rent-seeking and corruption in comparison with non-mineral abundant economies.

Rent seeking can be broadly interpreted as activities that seek to create, maintain, or change the rights and institutions on which particular rents are based. Rents refer to the "excess incomes," or the "proportion of earnings in excess of the minimum amount needed to attract a worker to accept a particular job or a firm to enter a particular industry." Rents can take many forms such as higher than competitive rates of return in monopolies; extra income earned from exclusive ownership of a scarce resource, whether natural resources or specialized knowledge; or extra income from politically organized transfers such as subsidies. Since rents specify incomes, which are higher than would otherwise have been earned; they create incentives to generate and maintain these rents. These influencing activities range from bribing and coercion to political lobbying and advertising. In the mainstream view, the avail-
ability of rents is the ultimate source of rent seeking and corruption. And some have been even postulated an "iron law" of rent-seeking: "Wherever a rent is to be found, a rent seeker will be there trying to get it."21

Aaron Tornell and Philip Lane provide a more nuanced view of rent-seeking dynamics that may occur in oil abundant developing countries.22 Their model considers an economy that lacks strong legal-political institutional infrastructure and is populated by multiple powerful interest groups. In such an economy, powerful groups dynamically interact via the fiscal process that effectively allows open access to the aggregate capital stock. In equilibrium, this leads to slow economic growth and a "voracity effect" by which a shock, such as a terms of trade windfall, perversely generates a more than proportionate increase in fiscal redistribution and reduces growth.

In the Tornell and Lane model, if institutional barriers to discretionary redistribution do not exist, an increase in the raw rate of return in the formal sector reduces growth. The intuition is as follows. An increase in the raw rate of return in the formal sector unleashes two conflicting effects: (1) a direct effect that increases the profitability of investment in the formal sector; and (2) a voracity effect that leads each group to attempt to grab a greater share of the national wealth by demanding more transfers. This is reflected in a higher tax in the formal sector, which induces reallocation of capital to the informal sector, where it is safe from taxation. This shift reduces the growth rate in the economy, counteracting the direct positive effect of an increase in the raw rate of return.

The empirical evidence suggests, Tornell and Lane argue, that Nigeria, Venezuela, and Mexico enjoyed significant oil windfalls, but dissipated their revenues.23 The model predicts a more than proportional increase in fiscal spending in response to a positive revenue shock. "The poor growth performance of countries experiencing windfalls is suggestive that increases in public capital expenditure were not productively deployed and that appropriated resources were consumed, invested in safe but inefficient activities, or transferred overseas."24

Critiques of Rent-seeking Theory
The extent to which mineral economies generate both higher rent-seeking costs and less developmental rent-seeking outcomes is ultimately an empirical issue. There are several pieces of evidence to suggest that large inflows of resources (whether through oil or aid) lead to a worsening in economic performance. Let us consider these issues in more detail.

First, the rentier state theory cannot explain the long-run variation and change in growth of mineral abundant economies (e.g., Botswana, Malaysia, Venezuela, Nigeria). Second, the variation and change in economic growth in non–mineral rich economies are not well explained (e.g., India, China, Tanzania, Malawi) either. Third, recent growth accelerations in aid-dependent
economies are not well explained (e.g., Mozambique, Uganda, Tanzania, Ghana). The fact that aid-dependent economies may be pursuing more liberal economic policies demonstrates that policy matters more than levels of rents in the economy, although there is considerable debate as to whether liberal economic policies are best for LDCs.

In terms of the relationship between corruption and growth, there is also little support for the rent-seeking variant of the resource curse. Table 1 suggests that mineral abundant economies do not appear to be more corrupt than non-mineral abundant economies. Moreover, the evidence in the table suggests that corruption rates are indeterminate with respect to long-run growth.

In the period 1965–1990, the median annual average growth of the non-mineral abundant developing economies did outpace the mineral abundant economies. However, in the same period, the median corruption rate of the non-mineral dominant economies was slightly higher than the mineral dominant economies. In the period 1990–2000, the mineral dominant economies grew slightly faster and were slightly less corrupt than the non-mineral dominant economies. None of this evidence provides much support for the rentier state and rent-seeking models.

With respect to the Tornell and Lane model, there are two important shortcomings. First, there is little evidence that non-oil taxation has been significant in oil-dependent LDCs.25 Second, declines in oil exports per capita since the early 1980s have not coincided with increased growth rates in many oil economies.26 If the model predicts that the “voracity effect” of oil booms generate declines in

Table 1 Growth and Corruption in Mineral-Abundant and Non-Mineral Abundant Developing Countries, 1965–2000

<table>
<thead>
<tr>
<th></th>
<th>Mineral-abundant Developing Countries (13 observations)</th>
<th>Non-mineral Abundant Developing Countries (19 observations)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965–1990</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median GDP growth rate (range)</td>
<td>4.3 (2.5 to 12.4)</td>
<td>5.6 (1.5 to 9.5)</td>
</tr>
<tr>
<td>Median corruption index 1980–1985 (range)</td>
<td>3.9 (0.2 to 6.5)</td>
<td>3.6 (0.7 to 8.8)</td>
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<tr>
<td>1990–2000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median GDP growth rate (range)</td>
<td>4.0 (1.6 to 7.0)</td>
<td>3.7 (–0.6 to 10.3)</td>
</tr>
<tr>
<td>Median corruption index 1996 (range)</td>
<td>3.3 (0.7 to 6.8)</td>
<td>3.2 (1.0 to 5.0)</td>
</tr>
</tbody>
</table>

Sources: World Bank, World Development Indicators, various years; Transparency International, Corruption Perception Index, various years.

Notes: A corruption index of 10 indicates minimum corruption, an index of 0 indicates maximum corruption. Mineral abundant is defined as those economies where mineral or fuel exports in total exports are equal or greater to 35 percent in 1980; non-mineral abundant is defined as those economies where mineral or fuel exports in total exports are less than 35 percent in 1980.
growth rates, then declines in relative oil abundance should have led to less “voracious” rent-seeking and thus greater growth. This has not occurred. Declines on per capita oil rents in many oil-dependent LDCs in the period 1980–2005 have not generally been associated with improved economic performance.

Critiques of Rentier State Theory

There are several assumptions of the rentier state argument as developed by Terry Karl that drive the results. First, it is assumed that a weak state exists at the time of the discovery of “external rents.” Karl arbitrarily chooses oil booms as the point in which state formation takes place in late developing oil economies and makes the case that the timing of the discovery of mineral rents is decisive for subsequent state capacity developments. Karl would argue that Norway and Australia already possessed “strong” bureaucracies before their mineral windfalls arrived and, thus, had countervailing industrial and agricultural interest groups to ensure that resource rents were well managed.

However, the Venezuelan case, which is the focus of Karl’s petrostate study, does not corroborate her argument. Karl arbitrarily chooses the period of oil discovery in the 1920s as the period of state formation in Venezuela. The long postcolonial history of Venezuela before then (1810–1920) was a period of mineral resource scarcity in production terms. The focus on resource abundance as determining state formation should have meant, according to Karl’s argument, that Venezuela had ample time and stimulus to develop a “Norwegian” style bureaucracy by the time of oil discovery in the 1920s. This is because the petrostate problem can be avoided when state building has occurred prior to the introduction of the oil export activity.

In fact, the period 1810–1920 in Venezuela was a period where mineral resource scarcity coexisted not with state building, but with incessant factional caudillo wars and fragmentation of the national territory. The Federal War (1859–1863) was among the most brutal in nineteenth-century Latin America. The negative effects of this contestation were reflected in economic performance: per capita income in Venezuela was approximately one-half the Latin American average by the period 1900–1920. Moreover, Karl’s argument cannot explain why oil abundance in Venezuela has coexisted with periods of rapid growth and stagnation in the period 1920–2005. More generally, the failure of central state consolidation in nineteenth-century Latin America was common and certainly not associated with any one pattern of resource endowment.

Second, rulers are assumed to own the natural resources. That is, they are assigned the property rights over resources. How rulers appropriate and maintain power is not analyzed in any of the rentier state literature. By assigning rights to leaders, the whole problematic of how to manage “common pool resources” is neglected, when the real problem of common pool resources is, in fact, analyzing the processes through which rights are assigned, enforced, maintained, and changed. In other words, it is assumed that there are no col-
lective actors within the society who can impose some domestic conditional-
ity on how those who occupy the state exercise their power.

The rentier state does not adequately address the question of the legiti-
macy of state leaders and the political strategies that may support or under-
dine the appropriation and use of mineral rents. The political coalitions
underpinning a leader's power surely affect how mineral rents are managed.
Since the state is a historically specific agent of coalitions, the very process of
class, group, and coalition formation drives institutional formation and
change. Thus, the ways in which mineral rents are used is not prior to, but is
essentially the by-product of political struggles, bargains, and settlements.

Third, leaders are assumed to have predatory as opposed to developmen-
tal aims. The neglect of the political processes through which a leader appro-
priates power limits our understanding of the motivations of state leaders. The
state is not a thing, such as "a predator" or "rent-seeking maximizer," but a set
of social relations. Why a particular coalition in power will not use oil rev-
ues to diversify production is not addressed. Even if it is (unrealistically) as-
sumed that the leader has absolute power and is thus the owner or residual
claimant in an economy, it does not necessarily follow that leaders will act in
predatory ways. Following Mancur Olson, a leader who has a long time hori-
zon, what he calls a "stationary bandit," has the incentive to maximize the rate
of economic growth as this will maximize the resources accruing to the state
in the long run. Predatory behavior on the part of leaders (such as confisca-
ting property rights) cannot be assumed or simply described, but needs to be
explained. Thus, the conditions under which predatory motivations dominate
developmental motivations in a mineral dominant economy are not addressed
in the rentier state model.

Fourth, by choosing oil booms as the point at which state formation takes
place in late developing oil economies, Karl's model is subject to selection
bias. By definition, most countries that do not have a diversified agricultural
and manufacturing base become mineral dependent. In historical terms, almost
all countries began as mineral dominant economies. For instance, the United
States, Canada, Norway, Sweden, the Netherlands, Australia, and Malaysia
were, in earlier stages of development, more mineral dominant, less diversi-
fied economies. Not only that, natural resources generally played a growth-
enhancing role in stimulating capital accumulation and growth throughout the
now-advanced countries in the period 1870–1914.

The problem of selection bias renders many of the econometric studies,
which suggest a positive correlation between resource abundance and poor
economic growth, spurious. As Christa Brunnschweiler notes:

Assuming a strong positive correlation between natural resource abundance
and natural resource exports is by no means obvious given counter-examples
of resource-rich countries with relatively low primary exports such as Aus-
tralia and Germany. Moreover, we could also plausibly argue that a dominant share of primary resource exports in GDP is a strong indication for an overly specialized economy. Slow growth in countries with a large share of primary exports may therefore be due more to economic policy leading to a high economic dependence on the natural resource sector, rather than a direct natural resource curse.  

In other words, poor economic performance in many LDCs is more likely to be due to mineral dependence rather than abundance per se.

Finally, rentier state theorists do not examine the possibility that mineral abundance can be central to the development of the manufacturing industry in particular. For instance, Gavin Wright and Jesse Czelusta (2007) examine how and why technological development and collective learning positively affected the development of natural resources in the US economy. They demonstrate how large-scale investments in exploration, transportation, geological knowledge, and the technologies of mineral extraction, refining, and utilization in natural resources contributed to long-run economic growth and industrialization in the United States. Other authors explore how the development of natural resources led to increasingly high-tech industrial production in Sweden and Finland during the nineteenth and twentieth centuries. The key policy question to ask is why natural resource revenues are used in ways that sustain economic growth and diversification in some countries and not in others. Lack of economic diversification and poor economic growth are why economies are mineral dependent. If that is the case, then it makes sense to ask why, for example, political conflicts prevented growth in some mineral-dependent economies and not in others.

Threshold Effects: Which Factors Enhance the Development Prospects of Mineral and Fuel Abundant Less Developed Economies?

One of the main policy issues is to identify what are the decisive factors that help determine the blessing threshold—below which the risk of a resource curse may be very high. There are three such thresholds worth noting. The first concerns the fiscal capacity of the state to appropriate mineral rents in the first place. The second concerns the ownership structure of the mineral sector itself. The third involves the ability of the state to develop dual-track growth strategies. Let us consider briefly each in turn.

Taxing Resource Abundance Effectively

Notwithstanding the potential danger of mineral booms for growth and governance, recent commodity booms do offer an important opportunity for mineral abundant countries to generate significant tax revenues and increase their pol-
icy space. The potential revenue capture from such booms often can far outweigh aid flows. However, recent experience suggests that, in sub-Saharan Africa at least, this potential is not always being realized.

Consider the case of Zambia, which has experienced one of the worst declines in income per capita in the period 1960–2000. The reasons for the decline in Zambian economic performance are complex, but include a combination of the disruption of regional trading routes, the nationalization of the copper industry before the development of skilled workers and managers emerged on the domestic scene, and mismanagement of the state-owned copper industry. Copper production declined from 600,000 tons in the 1960s to just over 300,000 tons by the end of the 1990s.

The response of the government in the late 1990s was to privatize the copper industry and lower mineral royalties in order to attract foreign investment. This was undertaken in the context of desperation; namely, historically low world copper prices, declining copper production, and an unsustainable debt burden. Its privatization strategy for copper included the reduction in the corporate tax rate from 35 to 25 percent; exemption from customs duty on inputs up to US$15 million; reduction of the mineral royalty from 2.0 percent to 0.6 percent; exoneration from excise duty on electricity; an increase in the period for which losses could be carried, from ten to twenty years; and exemption from the withholding tax on interest, dividends, royalties, and management fees.

Indeed, the mining sector contributes less to government revenues than either the finance or telecom sectors. In sum, the mining companies effectively paid almost no income taxes in the period 2000–2006. The effect of these so-called incentives was that it would be decades before the government received substantial revenue from the new mining companies.

While the government in 2008 has considered raising the royalty rate to 2.5 percent with the support of the International Monetary Fund (IMF), this rate is still low by the standards of Zambia’s neighbors—an IMF survey of tax and royalty rates in developing countries found no other African country charging royalties with royalty rates below 2 percent, and some with royalties as high as 20 percent. As a result, taxes as a percentage of gross domestic product (GDP) declined from 18.4 percent in 1996 to 17.0 percent in 2005. In 2006, the government received just $25 million in copper royalties out of a $2 billion turnover in copper sales. This substantially hampers the extent to which the government can finance improvements in physical infrastructure that are essential for reviving productive capacity and growth in the non-copper sectors of agriculture and light manufacturing.

Of course, lack of state appropriation of mineral booms can also be due to theft by government officials who do appropriate mineral rents, but do not pass them on to the treasury. The problem of theft of revenues is significant in some
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fragile states. It has been estimated that up to $200 billion of Nigeria’s oil revenues have been stolen. To take another example, by 2006 royalty payments to the treasury of the Democratic Republic of Congo were generating only $86,000 per year despite several hundred million dollars of commodity exports. It is possible to draw several policy implications from the cases of Zambia and the Democratic Republic of Congo. First, there is an urgent need for mineral abundant states to enter into a renegotiation of mining contracts when they are unfavorable. Second, capacity building in the geological survey capacity in sub-Saharan Africa needs to be developed in order to improve the bargaining power of states vis-à-vis multinationals. This is an area where the international financial institutions can play a leading role. Third, strengthening the legitimacy and enforcement of the Extractive Industries Transparency Initiative (EITI) and the Kimberly process (under which diamonds traded have to be certified as not originating from areas of conflict) may contribute to reducing the illegal appropriation of mineral rents by domestic actors.

The Ownership Structure of Exporting Industries

A second important threshold effect worth noting is the extent to which there is a viable non-mineral, export-oriented private sector in an economy rich in minerals and fuels. The existence of important non-mineral private exporters can act as a counterpoint to potential predatory behavior when the state dominates mineral exports. Such a private presence can also create a lobby group advocating exchange rate and other policies that promote export-led growth. In particular, such a lobby would likely demand exchange rate policies that prevent Dutch disease-type appreciations of the currency as a result of mineral booms.

Ricardo Hausmann and Francisco Rodríguez argue that the dramatic decline in capital accumulation and growth in Venezuela in the post-1975 period, for example, can be accounted for, both within closed and open capital account models, by the country’s inability to develop an alternative export industry. Nearly complete oil specialization is, they argue, a necessary ingredient of an explanation of the Venezuelan economic collapse. Had there existed an alternative export sector in Venezuela in 1980, the authors argue, the growth of that sector would have played a stabilizing role in the country’s reaction to falling oil revenues. In its absence, the domestic economy had to react to adverse oil shocks by contractions in domestic production. This process must continue until either the fall in oil revenues is halted or the real exchange rate falls sufficiently to make the production of non-oil tradables competitive. The authors show that of the ten oil exporting developing countries that experienced significant export collapses in the period 1981–2002 (Mexico, Oman, Bahrain, Indonesia, Saudi Arabia, Trinidad and Tobago, Venezuela, Ecuador, Algeria, and Nigeria), only two of these countries (Mexico and Indonesia) were able to experience a significantly strong growth of their non-oil exports (especially in
manufacturing) to compensate for the decline in oil exports and generate an overall positive economic growth.

The Hausmann and Rodríguez argument provides an important contribution to the resource curse argument by identifying that the degree of export diversification matters for the growth prospects among oil exporting late developers. And indeed they argue that policies that increase productivity in the non-oil tradable sector would have improved the growth prospects of the Venezuelan economy. However, their argument does not explain why non-oil tradable (and especially manufacturing) productivity was so poor and, as a result, why non-oil export sectors did not emerge in a more dynamic and diversified manner in Venezuela. This is because their model assumes a given path of productivity growth among oil exporters. A more complete understanding of the growth collapse in Venezuela and in other monoeconomy must not only identify the failure of export diversification, but also explain the mechanisms underlying poor productivity growth in the non-oil tradable sectors of the economy in question.

Implementing Dual-track Growth Strategies
Since the role of the government is generally more pronounced in LDCs that are rich in oil and minerals, there is likely to be significant amounts of pressure for patronage among contending groups and classes. Much of the rent seeking indeed leads to the creation of ineffective public spending and subsidization. However, the distribution of rents and privileges, especially to elites, is often central to the maintenance of political stability. In such cases, a trade-off between economic growth and political stability can emerge since those with access to state resources may be politically powerful, but not necessarily effective, risk-taking and dynamic producers.

In this context, the introduction of a dual-track growth strategy may be promising. The basic idea of this strategy is to promote an emerging dynamic sector (Track 1) where competition and risk taking are promoted while continuing to protect and subsidize a vast array of politically powerful but uncompetitive/inefficient producers in manufacturing and agriculture with the aim of reducing social tensions and maintaining political stability (Track 2). Examples of Track 1 strategies are export processing zones and industrial parks. Such a dual-track strategy postpones confrontation with established rent seekers while the dynamic sector drives competitive diversification of the economy and also builds a pro-reform political constituency. The main challenge of this strategy is to insulate or ring-fence the Track 1 sector from political and clientelist predation and capture. In general, this strategy can be seen as a transitional path to more growth-enhancing institutional reforms.

There are a range of countries that have attempted dual-track strategies. These include Malaysia, Indonesia, China, and Mauritius. What is noteworthy in all these cases is the existence of strong national political parties and or-
ganizations underpinning executive authority. Strong, disciplined national parties not only enable the state to centralize patronage and make credible bargains and side payments to contending groups, but they also provide a focal point around which collective action and lobbying can occur in a relatively predictable manner. They additionally are central to providing the institutional mechanisms for distributing patronage to regional elites and to important political constituencies in ways that either prevent challenges to authority or maintain cohesion of the ruling coalition. Moreover, the necessity for national parties to build cross-ethnic and cross-regional alliances reduces the possibility that significant politically destabilizing horizontal inequalities will develop. Thus, one important threshold for this strategy to work in mineral abundant economies would appear to be the existence or construction of viable national political parties.

Conclusion
The proposition that oil abundance induces extraordinary corruption, rent seeking, and centralized interventionism, and that these processes are necessarily productivity- and growth restricting, is not supported by comparative or historical evidence. Similar levels of state centralization and corruption coincided with cycles of growth and stagnation in economies dependent on minerals and fuel. Explaining governance and state capacity in such economies needs to be consistent with this basic evidence. The extent to which mineral and fuel abundance generate developmental outcomes depends largely on the nature of the state and politics as well as the structure of ownership in the export sector, all of which are neglected in much of the research curse literature. Much more research is needed to examine why some economies are able to effectively use mineral and fuel rents in productive ways. A further exploration of which threshold effects are decisive in affecting the development path of resource-rich developing countries may provide some useful policy insights.

Notes
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24. Ibid., p. 40.


27. Ibid.


29. Ibid., pp. 40–43.

30. The key term here is “in production terms.” With hindsight, we know that Venezuela had large oil reserves. However, no one knew about them in the nineteenth century nor was there any technological capacity in the country to discover, let alone develop, the vast oil and natural gas reserves that existed.


38. It should be kept in mind that developmental outcomes are not only, or even mainly, the result of a leader’s intentions or aims. Developmental outcomes are often the unintended consequences of conflicts and political struggles. Also, the distinction between developmental and predatory is not necessarily in binary opposition. Leaders who do not have developmental aims will not necessarily become predatory.


47. The potential of improving the bargaining position of governments is enormous. As of 2000, the average square kilometer of the African landmass had beneath it only around $25,000 of known subsoil assets whereas the corresponding figure for the landmass of the Organisation for Economic Co-operation and Development (OECD) is $125,000; Collier and Venables, “Natural Resources and State Fragility,” p. 18. Since the subsoil assets of the OECD have been heavily exploited for a far longer period than those of Africa, it is likely that the true average value of Africa’s subsoil assets exceeds that of the OECD.


50. Ibid., p. 10.

51. Ibid.

52. Ibid., p. 12.

