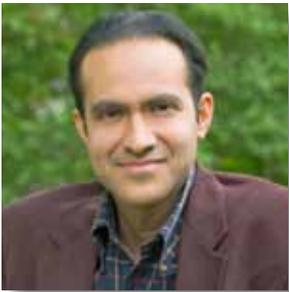




ISSUES IN BRIEF

Beyond the Resource Curse: Minerals and Global Development



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International institutions are obliged to consider various development paths for countries that often are dependent on natural resources as the primary source of wealth creation. However, during the past decade, serious doubts have been raised about the role of natural resources in development. Researchers not only have questioned the role of natural resources in development but they also have posited a link between natural resources and violent conflict – thus leading to use of the term “resource curse.” No doubt there have been justifiable concerns about the use of natural resources in funding wars; the U.N. Security Council itself has convened special panels to investigate this link in the cases of the Democratic Republic of Congo and Liberia. However, the findings of such linkages cannot be used as a blanket indictment of extractive industries as the term “resource curse” may imply.

Most notable among the originators of the resource curse hypothesis are Richard Auty (2001) and Paul Collier (2003). Using the ratio of the financial value of primary commodity exports over gross domestic product (GDP) as a measure of natural resource abundance, Collier and Anke Hoeffler found a significant relationship with violent conflict. More specifically, they found that the risk of civil war onset was greatest when the GDP share of primary commodity exports for a country was around 35 percent and the risk declined as the share increased from there (thus explaining relative calm in large exporters such as Botswana). Some subsequent cross-national statistical analyses also found that natural resource abundance in a particular sector (such as oil or minerals) rather than environmental scarcity was a cause of violent conflict (DeSoysa 2002).

Several environmental and human rights groups such as Oxfam, Global Witness, Earthworks, and the Worldwatch Institute have supported this “honey pot” perspective in their own research and analysis, for example, on cases of conflict over diamonds. Some researchers have found that the implementation of peace agreements is likely to be more difficult in countries abundant in natural resources and can also pose difficulties in postwar peace-building efforts (Stedman 2001). The list of studies is almost endless, with each scholar trying to find a way to capture the complexity of national destiny through ever-more complex numerical analyses.

Depending on the assumptions and resolution of the regression, there have been highly divergent findings on conflict linkages with mineral economies as well. For example, James Fearon and colleagues found no such link despite including a relatively comparable set of civil wars in their data set and operationalizing resource abundance in the exact same way as Collier and Hoeffler (Fearon et al. 2003). In a follow-up article, Fearon (2005) confirmed again that minor departures from the Collier and Hoeffler approach, such as using year-long data rather than grouping data in five-year intervals or employing a multiple imputation statistical

methodology to include cases with missing data, resulted in primary commodity exports no longer being associated with civil war in statistical terms. Despite such revisionist studies, this narrative has considerable influence among activists, particularly in the context of oil economies.

Oil and Turmoil?

Proponents of the resource curse theory postulate that oil abundance is particularly pernicious, not primarily because of its financial value to rebels, but because oil-abundant

countries tend to lack strong state bureaucracies. Oil abundance minimizes the need to collect general tax revenues, which is often one of the major functional reasons for building capacious state agencies. The statistical results support the weak state hypothesis, but many of the measures widely used to gauge state strength — government observance of contracts and investor perception of expropriation risk — are not particularly compelling proxies. This argument and supporting evidence of weak state institutions being associated with civil war outbreak is ironically consistent with the ideas and results offered by scarcity researchers that strong political institutions can reduce the likelihood of violent conflict in developing countries. In perhaps the most comprehensive conceptual and statistical work to date, Macartan Humphreys, Jeffrey Sachs and Joseph Stiglitz (2007) find support for the weak state mechanism rather than rebel financing hypothesis. Conflict initiation is correlated with past resource production (for both oil and diamonds) rather than potential future production (oil stocks). But the findings also indicate that natural resource abundance affects conflict onset independently of state strength. Contrary to previous research, this study also noted that violent conflicts in which natural resources are at stake tend to be shorter in duration and often end in the military defeat of one of the combatants.

The debate between environmental abundance and scarcity approaches has not progressed very far, partly because the scholars in these communities typically do not engage directly with each other. Perhaps even more importantly, there are clear differences in research style and the philosophy of knowledge between the two perspectives. Indeed, some systemic problems of dependence have been identified in terms of economies that export natural resources because they lead to a stifling of local manufacturing industries. The process begins with a rise in exchange rates due to increasing exports, which in turn makes local manufacturing less attractive and entangles the public sector intimately with business interests. This phenomenon occurred in Holland in the mid-20th century when natural gas was discovered, giving rise to the term “Dutch Disease.” Yet, the country was clearly able to overcome any effects that may have occurred through policy innovation as it is now one of the more prosperous countries in Europe. Mineral economist Graham Davis (1993) suggests that countries with resource

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endowments can reconfigure the windfall revenues in a way that they can “learn to love the Dutch Disease.” However, he also finds in more recent analyses that without proper planning the declining share of mineral revenues can lead to a loss of developmental progress as exemplified by countries such as Zambia (Davis chapter in Richards 2009).

These analyses have in turn been coupled with theories of governmental failure at various levels. Countries dependent on natural resources have been termed “Rentier States,” characterized by a lack of dependence on tax revenues due to mineral royalties and hence reduced accountability as well. Additionally, the mineral royalties could be spent on either buying political favors or repressing the population. Using similar logic, Michael Ross, who has spent much of his career studying the resource curse through regressions, has gone so far as to propose that oil is to blame for women’s rights violations in the Middle East (Ross 2008). Although Ross’s analysis may be impeccable from the point of view of quantitative methodology, it raises fundamental questions about how much one can suitably infer from regressions that are unable to account for myriad cultural variables that are coincident with geological availability of oil. Exonerating cultural factors and the nuances of development in such stark causality can clearly be quite dangerous from a policy perspective.

With the growing influence of globalization on national policies, some of the fears of resource dependency, particularly in Africa, and its connection to corruption may be assuaged. For example, consider Equatorial Guinea, which has been a under the same ruler since its independence from Spain in 1968. After the discovery of oil in the mid-1990s, the international community became more engaged with this tiny country. The United States reopened its embassy in Malabo in 2003, and the State Department asserts that U.S. “intervention has resulted in positive developments,” such as an office to monitor the human rights situation. The viability of such a mechanism as a means of initiating change in Equatorial Guinea was tested by a U.S. Senate hearing and an investigation by the Office of the Comptroller of Currency into the siphoning of funds from oil revenues to private bank accounts in 2004. None of this would have happened if the salience of Equatorial Guinea had not been brought to the world’s attention by oil. Such a trajectory and the questionable linkage between oil and authoritarianism are also being empirically challenged by recent studies (Haber and Menaldo 2009). Yet the onus for exerting positive influence once corruption is exposed still lies with the international community, who need to push for reform once such exposure is made possible through scrutiny of natural resource wealth. Without a unified stance against violations of agreements at the international level, ad hoc accountability arrangements such as those instituted by the World Bank in the case of the Chad-Cameroon pipeline, can still fail (Pegg 2006).

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Improved domestic regulation is another pathway to prevent abuse of oil revenues or the hegemonic influence of companies. Overall, regulatory capacity of governments in developing countries over oil activities has grown. Some governments have gained expertise in the technical matters of the oil business, improved their capacity to negotiate concession contracts and regulate social and environmental issues. For example, Chevron-Texaco got

a US\$2 million fine from Angolan authorities because of an oil spill in the sea in 2002. Even though companies have a history of oil spills and pollution in the region, this was the first time an oil company was fined because of environmental degradation in Africa. Chevron-Texaco also compensated local fishermen for losses in their incomes. However, such cases are still few and far between and there is clearly far greater need for local law enforcement of environmental and social regulations.

Exceptions or Examples?

Most of the world's major economic and educational powers have depended at some point in their development path on the exploitation of natural resources – the United States, Canada, Norway, and Australia being foremost among them. In many cases extractive industries have been necessary and desirable ingredients in the development trajectory. The key challenge, then, is to find the best structural mechanisms to make resources work for communities and for society as a whole. Finding the right mix of market incentives, regulation, planning mechanisms, and community vigilance is essential in making effective use of resources for development and for ensuring conservation of the natural life-support systems on which we depend.

Much of the alarm regarding oil in Africa stems from the admittedly troubling experiences of the continent's largest oil producer and most populous country – Nigeria. For more than 50 years, oil has been extracted from the southern part of the country, known as the Niger delta, and yet many of the most oil-rich communities are utterly impoverished and may not

even have cooking oil available for their homes. How did those communities that bore the brunt of the occupational and environmental hazards of oil extraction not benefit from the bonanza? The answer largely lies in a misconceived attempt at national wealth allocation that befell Nigeria in the postcolonial era. A country already fractured by ethnic and religious differences tried to extract wealth from one location and invest whatever escaped the clutches of corruption through a process of demographic prioritization. Urban areas were thus given priority, and lavish expenditure was incurred in building a new planned capital (Abuja). Thus the diabolical confluence of errant planning, poor leadership, artificially crafted national geographies, and apathy from multinational corporate investors pushed the country into chaos. Much to Nigeria's misfortune, it received investment from foreign companies at a time of minimal corporate accountability and transparency. There is little doubt that the extractive sector has historically had a strong linkage to corruption. In one study conducted by the Gallup organization, the supply side of international bribery was analyzed by developing a Bribe Payer's Index. Oil, gas, and mining had the most negative ranking in this index, after the arms industry.

The question in such eventualities is whether the situation might have been any better if oil had not been discovered. Would alternative sources of income have been available to sustain the population and would conflicts have been averted? In countries such as Saudi Arabia, Malaysia, or even Venezuela, some opportunity cost analysis of alternative sectors would probably suggest that oil in aggregate made things better in terms of development indicators. However, Nigeria's Niger delta is a region where oil actually diminished the development prospects for that part of the country because the alternative livelihoods of the communities

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were themselves impaired. Agriculture, fishing, and the potential for tourism all were harmed by the negligent way that oil was extracted. Clearly, this is an undesirable outcome for other countries to consider. However, once these systemic roots of turmoil in the Nigerian case are appropriately considered, we should apply those lessons in future development efforts.

Some of the most remarkable success stories of development such as Botswana, Malaysia and Chile have been mineral producers, and must not be dismissed as outliers, while recognizing that any developmental progress is reversible without proper planning for resource depletion.

There are even cases when mineral resources have helped a community to escape some of the most pernicious aspects of colonialism as exemplified by the Royal Bafokeng Nation in South Africa. This community of approximately 300,000 has maintained relative autonomy within the country and is economically self-reliant owing to a huge reserve of platinum on its land. The community was initially assisted in maintaining its land and resources with the help of Lutheran missionaries who kept land titles on behalf of the community during apartheid. One of the world's largest platinum reserves was found on their land in 1921, and a protracted struggle to assert rights over this reserve ensued. Ultimately, the community won its legal battles and the platinum has been an enormously beneficial source of income for the community and in setting precedents for self-determination in South Africa (Manson and Mbinga 2003).

Diamond producing states also present an interesting range of comparisons when one disaggregates artisanal mining of alluvial diamonds versus large-scale mining (Figure 1).

For development agencies it is essential to glean key lessons from these cases and see whether they can be replicated effectively with various changes. The most important criteria for success in this regard is effective mechanisms of governance that can hold all stakeholders to account over a longer time horizon.

Accountability and Assurance Mechanisms

As international norms for accountability evolve, the fear that resource endowments will be misused economically is abating. In 2007, 41 financial institutions agreed to a revised version of "The Equator Principles" for ensuring social and environmental consciousness in their investment decisions. The British government has been leading the Extractive Industries

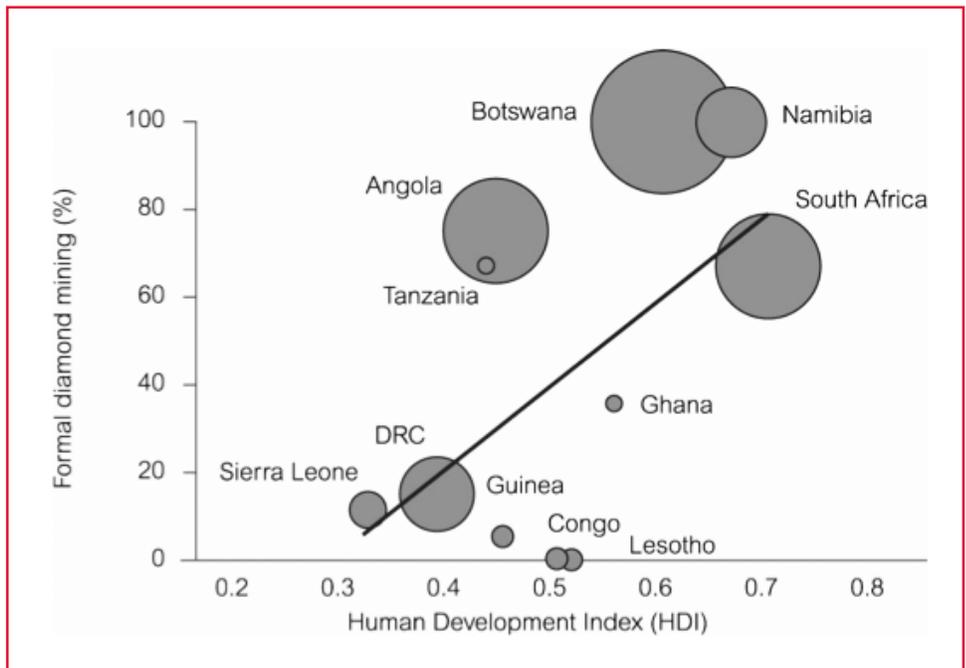


Figure 1 Formal diamond mining (as a percentage of all diamond mining) in selected African countries, and individual well-being as measured by the U.N.'s Human Development Index. The size of the circles represents total annual diamond production.

Source: De Beers Report to Stakeholders, 2007, based on data from the U.S. Geological Survey, U.N. Development Program, and Partnership Africa, Canada.

Transparency Initiative (EITI) that aims to recruit governments to establish constructive action plans for resource revenues. The Kimberley Process for diamond certification and the partnership between jewelry manufacturers and groups such as Earthworks and Oxfam on “clean gold usage” are promising signs of constructive engagement. Such efforts are far too easily labeled as “greenwash,” and deserve more credit and time to mature; they are likely to be successful as they gain traction. The key to their success is having non-politicized compliance assurance mechanisms, which can be accomplished by external auditing boards that are given authority to enforce the terms of the process.

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Curing the social ailments of resource dependence is possible but requires us to consider clear mechanisms and be ready and willing to innovate as demanded by the times. Some of the peculiarities of large-scale investments in the mineral sector such as a lengthy exploration phase for project development, and captive capital once the mine is built, have to be taken into account as well.

The U.S. state of Alaska provides an interesting example of how windfall wealth was managed in order to avoid corruption. The state has a history of considerable poverty and deprivation, especially among its indigenous inhabitants, since the U.S. bought it from Russia for a paltry \$7.2 million in 1867 (this amounted to roughly 1.9 cents per acre and would amount to approximately \$105 million current dollars). Despite its arctic climate, residence in Alaska is much sought after and considerably difficult to achieve because of the state’s oil wealth. Every resident has a stake in this wealth because of an innovative system created in 1976 to ensure long-term stability of the state’s economy. Funded through royalty payments to the state from oil extraction, the fund started with roughly \$700,000 and is now worth more than \$40 billion. Each year, all citizens of Alaska get a dividend payment from the fund, which was about \$1700 in 2007. The fund’s ultimate goal is to provide an investment base for economic diversification for Alaska’s economy once the oil stops flowing. Similar arrangements have also been made by the Norwegian government, which now has a petroleum fund estimated at around \$200 billion. However, such funds require good management, transparency, and delivery.

Conclusions

The transformation of natural resource wealth to productive enterprise and livelihoods is an ongoing challenge; it can entice us into rash behavior but can also catalyze lasting development. Appreciating the ephemeral state of mineral resources in their natural form is essential to avoid the eventuality of a resource curse. Yet the very evanescence of an ore deposit may lead some to rush and ravenously exploit the resource while prices are high and each extractor asks that fundamentally selfish question: “how long will the good times last?” This is where planning criteria have to guide us into moderating the speed and steering the trajectory of resource exploitation. Some key points for development agencies to consider in this regard include:

- The full range of livelihoods that may be available to the community for capital generation based on the area’s ecology and geographic constraints. The opportunity costs of various prospects need to be compared with community consultation through deliberative processes.

- The processes that will be used for extraction and whether ecological restoration would be possible afterwards. This is especially important for nonrenewable resources so that communities can still use the land productively after extraction is finished.
- The establishments of trust funds and other revenue management systems by donors and corporations. In the new paradigm of corporate social responsibility, it is not enough to shift the blame to the government but rather to ensure that the funds are appropriately managed. International institutions, such as EITI need to be strengthened to ensure that state sovereignty is not used to trump effective revenue management regimes.
- Some level of state ownership to ensure appropriate wealth transfer to local populations. Foreign capital and partnership with multinationals usually have an important role to play earlier on in the exploration and development cycle but eventually, as institutions develop, some level of state ownership is usually beneficial to protect the interests of local populations.
- Communities that bear the impact of extraction must be the first to reap the rewards. If wealth is being extracted from one region of the country, the development plan must give preference to that region in terms of poverty alleviation even if demographic indicators may suggest giving preference to other more populous part of the country. .
- The speed of mineral extraction must be calibrated with the capacity to manage the revenues effectively and to restore the land that has already been mined. Mineral resources, in particular, are fixed stocks whose value can only increase with scarcity in the future. Hence a rush to extract is not justifiable unless ecological constraints of impact and revenue management are ensured.

Mineral endowments are an accident of geography, and for development agencies they can certainly be an essential tool for spurring economic activity. Even though the extraction itself may be nonrenewable on human timescales, it can be a catalyst for capital flows that can provide for lasting development. By having a long-term planning horizon on mineral projects from exploration to closure and post-closure revenue management, we can envision a brighter future for countries with such resources. ●

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