

## 3

# Maximizing the Benefits from Africa's Oil and Gas Resources

### 3.1 Introduction

Africa is blessed with vast natural resource-rich environments. These resources constitute a principal source of public revenue and national wealth. Crude oil and natural gas, in particular, contribute significantly to the economies of resource-rich African countries (see Chapter 2).

Under the right circumstances, an “oil bonanza” or natural resource boom can be an important catalyst for growth and development. Unfortunately, in many African countries natural resource booms have set off dynamic growth processes only to a limited extent. The failure of natural resource wealth to lead to the expected economic growth and development has been attributed to several factors, including<sup>1</sup>

<sup>1</sup> See the *African Development Report 2007* (AfDB, 2007a) for a detailed literature review and analysis.

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- “Dutch disease”—the syndrome of rising real exchange rates and wages driving out pre-existing export- and import-competing industries;
- rent seeking by elites and others who could otherwise put their energies into profit-making activities;
- price volatility and the “asymmetry of adjustment” (it is easier to ramp up public expenditure than to wind it down again);
- inflexibility in labor, product, and asset markets; and
- tensions between oil-producing and non-oil-producing regions within countries.

#### 3.1.1 *What Is the Resource Curse?*

Essentially, the resource curse refers to the inverse association between development and natural resource abundance. It describes a situation whereby an export-oriented natural resources sector in a country generates large revenues for government but leads paradoxically to economic stagnation and political instability (Overseas Development Institute (ODI), 2006). It is commonly used to describe the negative development outcomes associated with non-renewable extractive resources (petroleum and other minerals). It has often been asserted that petroleum, in particular, brings trouble—waste, corruption, consumption, debt overhang, deterioration, falling apart of public services, wars, and other forms of conflicts, among others. Thus, growth in natural resource-abundant countries tends to be slower than

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expected—considering their resource wealth—and, in many cases, is actually slower than in resource-scarce countries.

A common thread in explaining the resource curse—along with the other broad explanations provided above—is the central role of government behavior. The key issue here is how governments administer resource wealth and how they use natural resource revenues.

### 3.2 Wealth Creation

#### 3.2.1 *Oil and Gas Resources and Wealth Creation*

Three key factors underpin the facilitation and process of oil exploration and production: crude oil prices, technology, and fiscal regime. The legal framework that embodies the fiscal regime under which oil companies operate will—together with geological, geographical, and political factors—make a country or region more or less attractive for investors. The competitiveness of the regime is an essential determinant of the amount of upstream investment in exploration, discovery, and production by multinational oil companies. African countries are no exception to this conventional wisdom.

The rent from oil exploitation is very large. The sharing of this substantial rent between the governments of oil-producing and oil-consuming countries and oil companies has historically been contentious. The governments of both producing and consuming countries

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have tried to extract a sizable proportion of this rent. This was a key issue in OPEC countries' struggle for ascendancy in the world oil market in the 1970s (see Chapter 2).

A variety of upstream arrangements exist in many oil-producing countries. However, there are three major types of upstream arrangements: joint ventures (JV), production sharing arrangements (PSA), and service contracts (SC). Joint ventures are typically partnerships between state oil companies (SOCs) and multinational oil companies (MNOCs). In a JV type of petroleum agreement, the participants jointly share the risks of exploration and production in proportion to their equity share. The oil produced is also shared based on relative equity shares. Typically, the SOC has the majority share in the joint venture. A major problem with this arrangement, from the perspective of MNOCs, is the delay that often accompanies state oil companies' contribution to the joint venture exploration and production costs.

In a production sharing arrangement (PSA), the MNOC typically finances all exploration and development costs. If no oil is found in commercial quantity, the MNOC bears all the risks associated with exploration and development. If oil production commences and profitable extraction is achieved, the profit is shared between the company and the SOC/government according to an agreed formula. This option is much preferred by MNOCs because it gives them significant autonomy in operations and there is rapid recovery

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of upstream investment. Increasingly, oil-prospecting or oil-producing countries favor PSAs since this arrangement eliminates the need for the government to commit scarce funds upfront for the exploitation of its oil and gas resources.

The third major type of petroleum agreement is the service contract (SC) model. One sub-type involves a pure service contract, in which a company is contracted to undertake specific upstream activity—for example, drilling or seismic surveys—and is paid for this service. Another sub-type is “the risk service contract,” under which the oil company undertakes all the exploration risks and is paid for its services at a fixed rate of return, if oil is found. Costs are reimbursed at an agreed mark-up over the investment in the oil discovered. However, if no oil is found, the company bears the full investment loss.

Structural changes in the world oil industry have brought significant changes to upstream petroleum agreements. Prior to the 1970s, when the MNOCs fully controlled the world oil industry, concession agreements dominated the world oil industry. However, in the 1970s when OPEC gained ascendancy over multinationals as the key player in the industry, the SC model assumed greater importance from the producing countries in exploitation of oil and gas in their domain. Total or partial nationalization became the dominant trend in oil-producing countries. New oil agreements emerged in response to the demands of producing countries and also in line with the prevailing economic nationalism of the

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era, implicit in the emergence of SCs. In recent times, similar "nationalization processes" have materialized in such countries as Venezuela and Russia.

The type of agreement selected in an oil-producing country should ideally depend on three important parameters: the size of reserves, the exploration and production costs, and the recovery factor. Risk service contracts seem to be dominant in countries with large reserves and low costs. Host countries with low costs and reserves tend to demand various levies to maximize the rent they can extract from oil. Production sharing arrangements dominate in countries with medium costs and large reserves. Joint venture royalty/tax systems are dominant in countries with low reserves and high costs. Furthermore, higher exploration and production costs and risks associated with limited reserves or deepwater offshore exploration often require more flexible fiscal terms for oil companies. The structure of royalty tax is "water depth dependent," as demonstrated in Table 3.1, which shows the cases of this relationship for Nigeria. Deep offshore oil exploration attracts no royalty payment.

More than one type of agreement can be available in a number of African countries. This largely reflects the diversity in costs and reserves in various oil fields in the countries—offshore and onshore— as well as the prevailing regime (policy) at the time the contractual arrangements are established, and so on. Again, Nigeria is an example of a country where the three major types of agreements operate simultaneously.

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**Table 3.1: Royalty Regime and Other Levies for Offshore Oil in Nigeria**

Water depth in meters	Royalty (%)	Signature bonus (\$ millions)
Below 100 meters	18.50	10
Up to 200 meters	16.67	10
Up to 500 meters	12.00	20
Up to 800 meters	8.00	25
Up to 1000 meters	4.00	20
Beyond 1000 meters	0.00	20

*Data Source: NNPC (2008).*

Table 3.2 provides information on the competitiveness of African oil-producing countries in relation to other oil-producing non-African countries. African countries fall into two categories: low cost and medium cost producers (for example, Algeria and Nigeria, respectively). Among Africa's major oil-producing countries, Angola has the highest exploration and production costs at \$8, compared with \$5.25 in Nigeria; \$4.25 in Algeria; and \$3 in Saudi Arabia. The range of upstream costs is from \$3 at the low end to \$14.5 at the upper end in the U.S. Gulf of Mexico.

### 3.2.2 Management of Oil and Gas Resources

This section presents a summary of the approaches adopted by African nations to manage, conserve, and enhance their oil and gas resources. It also highlights

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**Table 3.2:** Petroleum Exploration and Production Costs (US\$, year 2000)

Country	Exploration Cost	Production Cost	Total Cost
Low cost			
Saudi Arabia	1.50	1.50	3.00
Kuwait	1.75	1.80	3.55
Iraq	2.25	1.50	3.75
Iran	1.75	2.50	4.25
Venezuela	1.20	3.42	4.62
<b>Algeria</b>	2.15	2.50	4.65
Medium cost			
United Arab Emirates	3.00	1.80	4.80
Kazakhstan	3.50	1.30	4.80
<b>Nigeria</b>	3.00	2.25	5.25
Oman	3.75	2.50	6.35
Brazil	3.80	3.20	7.00
China	3.50	4.00	7.50
Russia	4.25	3.50	7.75
<b>Angola</b>	5.00	3.00	8.00
Indonesia	2.50	6.00	8.50
High cost			
U.S. Lowe-48 onshore	4.95	3.57	8.52
Canada Western	6.75	3.00	9.75
North Sea	7.50	3.00	10.50
Canada Eastern	8.00	3.80	11.80
U.S. Gulf of Mexico	11.00	3.50	14.50

Source: Al-Attar and Alomair (2005).

the benefits and wealth these countries can reap from utilizing these resources (AfDB, 2007).<sup>2</sup>

Overall, management of non-renewable resources involves

<sup>2</sup> A detailed analysis is presented in the *African Development Report 2007* (AfDB, 2007a).

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- ensuring the availability (exploration and extraction) of the resources;
- allocating resources to competing players—this may entail participation of local versus international players;
- creating an environment for resource industries to flourish;
- ensuring integrity in the management of revenues received from the extraction, mining, and processing of resources;
- developing policies to manage national ownership of non-renewable resources;
- limiting the environmental impact of resource exploitation;
- ensuring health and safety in the process of resource exploitation;
- converting resource use into sustainable economic development through linkages; and
- using resource rents for economic and social capital development and ensuring the overall creation of wealth and well-being in the country.

One of the key concerns is that African governments that are major producers of fossil fuels (and other minerals) do not receive sufficiently large rents or revenues from the production of these extractive products. This is attributable to a number of reasons, including contracts and regimes that are not designed to extract maximum rents; and mineral policies that are designed

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primarily to promote and attract investments and have not evolved with changing global dynamics and national interests.

**Mineral resource rent** is the value of mineral resources minus all the necessary production costs. A tax system can be designed to capture rents using conditional payments—payments that are closely linked to actually realized rents. That is, one pays if one meets the criteria to pay. The fiscal system must offer incentives to explore and invest while securing a fair share of revenues for public use. The mineral tax system cannot move too far out of line with those countries of similar “prospectivity” (degree of assurance to find and extract at economically competitive and viable conditions). It can be structured to reduce investment risks and secure higher government revenues. A mineral resource tax system can differ from the general tax system and still remain neutral. The system can use production sharing, taxes and royalties, or degrees of state-ownership, each with equivalent fiscal effect. Investors will be interested in the overall impact of the tax regime under a range of assumptions about output costs and prices. This impact has two aspects: The tax burden and the tax structure. The tax burden—specifically the average tax burden—is the share the government takes in taxes, duties, and royalties over the life of a resource field (that is, the period when resources are extracted from an oil or gas field). But the tax structure is the way in which the tax burden is imposed at different points in the life of the resource field. In appraising a mineral

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resource project, large companies will first examine the intrinsic economics of the project under the given fiscal regime. This usually involves estimation of an expected rate of return in discounted cash flow terms, in constant prices, in an all-equity case. This return will have to exceed the corporate threshold adjusted for special project and political risks. The average tax burden is vital to this assessment, but so is the timing of the major part of the tax burden and thus the tax structure. For the latter, when a given tax burden is imposed, the investor's expected rate of return must be high enough to encourage the investor to invest. Expectations of fiscal stability will reduce investors' perceptions of risk and increase the rents that the state can secure (ESMAP, 2004).

Governments need to devise and implement appropriate and modern tax regimes for mineral resource extraction. One of the challenges is that governments rarely believe that companies pay too much tax; companies rarely believe they pay too little tax; and citizens rarely believe that they actually see the full benefits from the taxes that are paid.

One of the main forms of government income from mineral resource exploitation is **royalties**, a taxation form that has created controversy across the globe, unlike any other form of mineral resource tax (Otto and Cordes, 2004). Other common tax forms that cumulatively comprise "**the government take**" include state tax, revenue tax, corporate tax, income

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tax, production sharing, state equity (part ownership), and various special mineral resource taxes (ESMAP, 2004).

An analysis of fiscal regimes (policies, legal framework, fiscal system, revenue collection, and so on) for fossil fuels in Africa reveals that these regimes are by no means uniform. A multitude of royalties, taxes, resource rents, incentives, state equity levels, and so on, have been developed to foster interest in exploration and investments, on the one hand, and to capture some of the benefits for the state and the public, on the other hand. Table 3.3 outlines some of the key characteristics of fiscal regimes in Africa. As clearly demonstrated in the table, the "taxation levels" and principles applied are as heterogeneous as the landscape and people in Africa.

#### *3.2.3 Sustainable Resource Development*

Sustainable development of non-renewable resources, including oil and gas, encompasses all the policies, principles, and practices that support the utilization of resources in a manner that does not prevent future generations from accessing the resource(s) or its benefits (UNECA and AfDB, 2007). A key purpose is to ensure that mineral-hosting nations in Africa benefit from their mineral resource endowments in the short and long terms, for example, by using the revenues accrued from mineral resource development for socioeconomic development

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Table 3.3: Key Characteristics of Fiscal Petroleum Regimes in African Countries

Country	Royalties %	Production sharing %	Income tax rate %	Resource rent tax	Investment incentives (1)	State equity (2) %
Angola	...	15-80	50	None	Yes (E)	25
Cameroon	Negotiable	None	48.65	None	Yes (O)	50 (C)
Chad	12.5	None	50	None	None	10
Gabon	10-20	65-85	Gov. Share	None	Yes (E)	15 (C)
Mozambique	8	10-50	40	None	Yes (E)	None
Niger	12.5	None	45	None	Yes (E)	...
Nigeria	0-20	20-65	50, 85	None	Yes (E, Cr)	Variable
Sudan	None	60-80	None	None	...	None
Algeria	10-20	60-88	Gov. Share	None	None	30 (C)
Egypt	10	70-87	Gov. Share	None	Yes (I)	None
Libya	16.67	5-90	None	None	...	...
Tunisia	2-15	None	50-75	Yes	Yes (E, U, I)	Negotiable

Notes: (1) Investment incentives: tax holiday (H), accelerated depreciation (A), tax credit (Cr), current expensing of exploration and/or development cost (E), duty exemption for imports of equipment and capital goods (I), unlimited loss carry-forward (U) and other (O).

(2) The maximum equity share that the state can elect to take, often on a carried basis (C).  
Source: Adapted from ESMAP (2004).

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programs, creation of manufacturing industries, and other initiatives (Rogers, 2007).

The following specific principles, which are noticeably absent in the majority of African countries, can improve and enhance extraction to ensure more sustainable development (Otto and Cordes, 2004; Rogers, 2007):

- preserving strategic minerals of importance for future development (and generations);
- enforcing production quotas or caps;
- limiting the number of exploration licenses used, the areas available for exploration, or the number of extraction sites;
- ensuring longer production life by limiting annual capacity;
- establishing a profits trust framework; and
- instituting incentives to promote potential alternatives.

The majority of countries have taken important steps to formulate policies and legislation, and to incorporate fiscal terms into their strategies (AfDB, 2007a). However, more coherent principles, structures, and, above all, due diligence in enforcement would considerably increase benefits and sustainability for all countries. Some concrete issues related to sustainable development need to be improved. These include incorporating environmental aspects into the full extraction cycle and securing proper rehabilitation. Above all, although the countries have the means and measures in place to secure

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significant economic and social benefits from fossil fuels and mineral exploitation, a number of key questions remain:

- Are African countries benefiting enough from the resources at hand?
- Is the wealth created reaching the poor and the general population to a sufficient degree?

### 3.3 Resource Curse: The African Context and Experience

For oil and gas producers and exporters, higher oil prices are expected to be a blessing rather than a curse. Yet the evidence shows that in many of the net oil-exporting countries (in Africa and elsewhere), it has been a major source of economic, social, political, and environmental problems, rather than a treasure. The co-existence of significant oil wealth and large-scale poverty is certainly a “paradox of plenty,” if not an outright resource curse in itself.

The essential issue is that to create and sustain long-term wealth—rather than a short-term oil boom—mineral resources have to be converted into other forms of capital (human, financial, and infrastructure) and more sustainable livelihood opportunities.

Drawing on an appropriate theoretical framework (see also AfDB, 2007a), this chapter examines the *African evidence* of the paradox of plenty and the “resource

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curse" with a view to exploring the following issues and questions:

- Is natural resource abundance—in particular, fossil fuels—in Africa a curse or a blessing?
- Has the management of natural resources really stunted the growth and development prospects of many resource-rich African economies?
- How does volatility in the export value of resources contribute to volatility in growth in GDP per capita and to long-term growth and development in general?
- What political and social factors allow some resource-abundant countries to utilize their natural resources to promote development and prevent others from doing so?
- How, or why, has the potential resource curse been avoided in some cases and how can it be overcome in the future?

In most of the analyses that follow, African countries are categorized as

1. Resource-rich (encompassing both oil and mineral exporters);
2. Oil-rich (oil and gas);
3. Mineral-rich (other minerals, such as metals); and
4. Resource-scarce.

Africa has 22 resource-rich countries, defined in this study as countries where fuel and mineral exports

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contribute over 20 percent to GDP. These countries account for slightly more than two-thirds of Africa's GDP and for half of its population (Table 3.4). Half of these countries are oil exporters (fossil fuels), while the other half are mineral exporters (metals and other minerals). In contrast, there are 31 resource-scarce countries, which account for 30 percent and 48 percent of regional GDP and population, respectively.

### 3.3.1 *High Export Dependence in Africa's Resource-Rich Countries*

Africa's resource-rich countries continue to be highly dependent on natural resource exports for both foreign exchange and revenues. For example, fuels accounted for 65 percent of the total increase in export values in African countries between 2000 and 2005. Since 1990, the share of fuels in the total exports of African oil-exporting countries has increased by about 12 percentage points, to almost 90 percent (IMF, 2006).

In the last five years, buoyant oil, gas, and mineral price increases have enabled resource-rich African countries to increase their natural resource exports and thus their revenues substantially. These increased revenues are a significant source of income for these countries, demonstrating the importance of natural resources in output growth and capacity to generate export revenues. For example, oil revenues account for more than half of all revenues in Angola, Congo, Equatorial Guinea, Gabon, and Nigeria. In fact, in U.S. dollar terms oil

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**Table 3.4: Macroeconomic Indicators by Resource Endowment Category, 2007 or Most Recent Data**

	Population (million)		GDP Per Capita (current US\$)	Real GDP Growth (annual %)	GDP (PPP)		FDI (Cur, US \$m)	
	Pop in Million	% Share of Africa			Billion US\$	% Share of Africa	Million US\$	% Share of Africa
Oil-exporting countries	373	38.75	53,842	5.9	1,272	52.53	24,949	70.19
Mineral-exporting countries	263	27.26	20,045	4.3	660	27.25	2,005	5.64
Others	328	33.99	33,900	4.8	489	20.21	8,590	24.17
Africa	964	100.00	1,290	5.8	2,421	100.00	35,544	100.00

Source: Authors' calculations based on the AfDB Socio Economic Database.

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revenues increased about 3.5 times between 2002 and 2006. In addition to the upsurge in revenue, production also expanded significantly, by 45 percent on average, especially in Angola, Chad, and Equatorial Guinea (IMF, 2006). Thus, oil-exporting countries, in particular, are highly revenue (fiscal) dependent on oil, implying the need for prudent fiscal discipline to minimize the adverse effects of the boom-bust cycle of oil prices.

The data shows that government expenditures have risen in recent years, but not at nearly the same rate as natural resource revenues. Before the current boom, non-oil deficits exceeded oil revenues in many resource-rich African countries (such as in Angola, Congo, and Nigeria); since then, the ratio of non-oil fiscal deficits to oil revenues has improved noticeably (Table 3.5). This reflects both the rapid rise in oil revenues and the narrowing of non-oil fiscal balances.

**Table 3.5:** Fiscal Balance, Investment Rates, and Terms of Trade Changes (in %)

	2000–2003			2004–2007		
	TOT	FD	INV	TOT	FD	INV
Oil-exporting countries	6.70	1.06	21.02	8.23	7.71	21.77
Mineral-exporting countries	–0.93	–4.14	16.33	4.11	–0.32	20.39
Other	1.77	–5.35	22.61	–1.94	–1.22	24.70
Africa	2.78	–1.83	19.87	5.84	2.43	21.85

FD: Fiscal Deficit GDP; INV: Domestic investment growth; TOT: Change in Terms of Trade

Source: Authors' calculations based on the AfDB Socio Economic Database.

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The relatively cautious fiscal policies in many resource-rich African countries are helping these countries reduce their macroeconomic vulnerabilities. In other words, a good number of countries have used natural resource revenues to strengthen their external positions by reducing external debt (especially Gabon and Nigeria); accumulating external reserves (Angola, Congo, Equatorial Guinea, Gabon, and Nigeria); and reducing domestic and external arrears (Angola, Equatorial Guinea, Gabon, and Nigeria). Cameroon, Angola, and Congo have also improved their non-oil primary fiscal balances (IMF, 2007).

#### *3.3.2 Foreign Direct Investment in Resource-Rich Countries*

A major concern about foreign direct investment (FDI) to Africa is that the overwhelming majority of the inflows go into natural resource exploitation. Most of the flows to the top recipient countries—Angola, Algeria, Sudan, Nigeria, and Gabon—go to oil and gas projects.

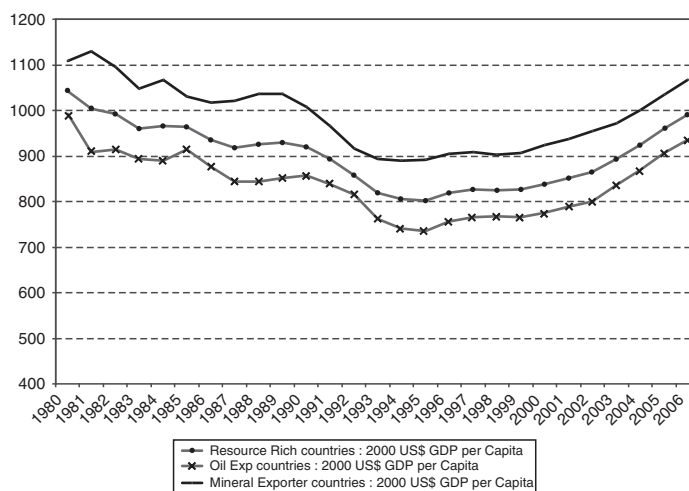
#### *3.3.3 Growth Performance: Resource-Rich Countries*

Before the first oil shock in the 1970s, average oil-rich African countries enjoyed favorable macroeconomic conditions: robust economic growth, moderate inflation, manageable fiscal deficits and external debt, and external current account surpluses. The pro-cyclical policies they followed during the oil boom of the 1970s were intended to use the oil bonanza for economic

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and social development and to encourage economic diversification. Unfortunately, these objectives were not achieved since the actual results were economic imbalances that caused major distress when oil prices plunged in the 1980s and stayed low for over a decade (IMF, 2007).

Indeed, as Figure 3.1 shows, resource-rich Africa experienced a very disappointing two decades—1980–1999. However, a reversal has occurred in the last five to ten years, and current growth rates are in fact trending upwards. Cumulatively, resource-rich countries only experienced an average growth rate of 2.4 percent from 1981 to 2006, considerably lower than the 3.8 percent



**Figure 3.1:** Natural Resource Abundance and Real GDP Per Capita

Source: AfDB Statistical Department, 2007; Computed from database.

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average for resource-scarce countries. Resource-rich African countries are, nevertheless, richer than their resource-scarce peers (US\$991 versus US\$671 per capita, as Table 3.4 shows). The gap narrowed considerably during the 1980–2000 period but is widening again in conjunction with the recent resource boom (it has, all-in-all, narrowed from approximately 50 percent to 30 percent).

#### 3.3.4 Savings in Resource-Rich Countries

One of the features of many countries that are endowed with abundant natural resources is that they save less than what is expected, considering the rents obtained from extracting and selling natural resources. Presumably, if the countries saved more, they would grow at a sustainable and faster rate. To gain a better understanding of sustainable development, it is useful to examine the concept of *genuine saving*.<sup>3</sup>

Genuine saving corresponds to an increase in the wealth of a nation. According to the so-called Hartwick rule, any depletion of natural resources or damage by stock pollutants must be compensated for by increases in non-human and/or human capital. This rule of zero genuine saving can be seen as a rule of thumb or motivated by max–min egalitarianism. It requires that resource-rich

<sup>3</sup> Genuine saving is defined as public and private saving at home and abroad, net of depreciation, *plus* current spending on education to capture changes in intangible human capital, *minus* depletion of natural exhaustible and renewable resources, *minus* damage of stock pollutants (CO<sub>2</sub> and particulate matter).

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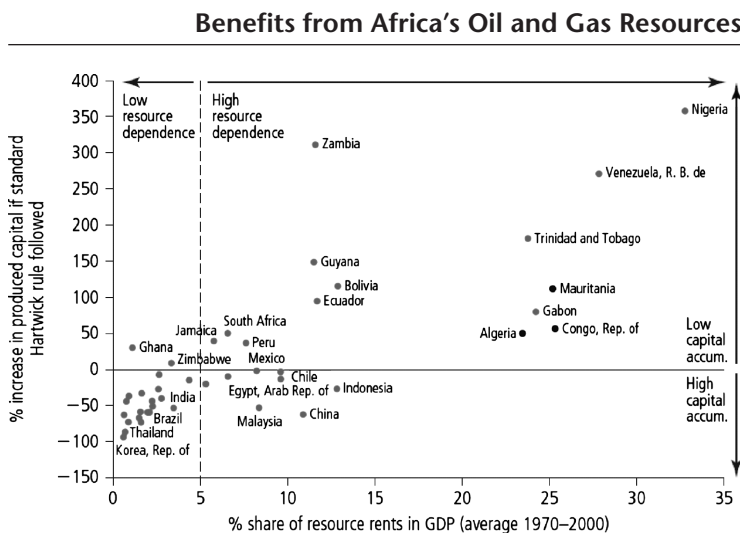
countries adopt a strategy for transforming their natural resource wealth into other forms of productive capital (World Bank, 2006c; and Ploeg, 2007).

Resource-rich countries in Africa therefore need credible and transparent rules for sustainable consumption and investment to ensure that exhaustible natural resources are gradually transformed into productive assets at home or abroad. Furthermore, countries with high population growth rates need *positive* rather than *zero* genuine saving rates to maintain constant consumption per head. They thus need to save more than their exhaustible resource rents—but only rarely manage to do so.

Analysis suggests that resource-rich countries with negative genuine saving, such as Nigeria, would experience increases in productive capital by a factor of five or four if the Hartwick rule were applied. Effectively, for countries with negative genuine saving, the erosion of their natural resource wealth exceeds their accumulation of other assets. They squander their natural resources at the expense of future generations without investing in other forms of intangible or productive wealth. This is an unfortunate feature of several resource-rich African economies (Figure 3.2).

### 3.3.5 *Human Capital Development and Income Distribution*

One of the dilemmas of natural resource abundance is that it *may*, pervasively, cause a country to neglect



**Figure 3.2:** Counterfactual Exercise—Imposing the Hartwick Rule

Source: World Bank (2006c), "Where is the Wealth of Nations?"

human capital development—the same basic causes and effects outlined above in reference to negative genuine saving. High levels of natural resource revenues can thus divert attention from diversification and wealth creation, including from institutional and human development (World Bank, 2006c; and Ploeg, 2007). The logical expression of such a potential correlation between resource abundance and neglect of human capital development would, in the medium to long term, be reflected in a low basic human development status. The United Nations Human Development Index (HDI), a comparative measure of life expectancy, literacy, education, and standard of living in countries worldwide, provides a standard means of measuring human well-being and country

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**Table 3.6:** Resource Abundance and Social Performance

	Human Development Index (HDI) (Scale 0–1; Niger lowest with 0.31; Seychelles highest with 0.84)	Income Inequality (GINI Coefficient Index; scale 0–100)*
1- Resource-rich countries	0.51	31.1
Oil-exporting countries	0.55	15.3
Mineral-exporting countries	0.46	46.8
2- Resource-scarce countries	0.51	26.8
<b>5- Africa</b>	0.51	45.9

\* For the GINI Coefficient Index; 0 corresponds to perfect equality  
*Sources:* UNDP (2006), Human Development Report 2006; World Bank (2006d).

development status. As reported by the UNDP in its 2006 Human Development Report, Africa dominates the low end of the HDI (29 of the 31 countries with a low human development status). Only the Island States of Seychelles and Mauritius qualify as having a high human development status. The remaining 22 countries, including all the North African Arab states, have a middle-level human development status. It is also worth noting that oil-rich Norway has the highest HDI among all countries in the world (UNDP, 2006).

A deeper analysis of HDI data (Table 3.6) indicates that there is no difference between resource-rich and resource-scarce countries (0.51). However, oil-rich countries are doing considerably better in this aspect than primarily mineral-rich countries (0.55 compared with 0.46).

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Another important aspect, frequently highlighted as problematic in resource-rich countries, is increased income inequality. Oil, gas, and mining industries are often characterized by their "enclave nature," with few forward and backward linkages into the economy. During exploration and production, such industries employ only a relatively small number of highly-skilled, well-paid workers and generally import the majority of inputs. Furthermore, there is a considerable risk that public expenditure during a resource boom may exacerbate inequality, for example, concentrating expenditure in the formal sector in towns and cities, skewing distribution (not benefiting rural households), and prioritizing the interests of the elites and wealthier classes. Because of these tendencies, society tends to identify the production and export of natural resources with the interests of the rich (Overseas Development Institute, 2006). As Table 3.6 shows, income inequality is noticeably higher in resource-rich African countries (Gini Coefficient of 31.1) than in resource-scarce countries (Gini Coefficient of 26.8). Nevertheless, it is again worth noting that income inequality is more pronounced in mineral-rich countries than in oil-exporting countries.

### **3.4 Policies and Governance**

In most countries and legal regimes, oil, gas, and minerals are vested to the state. Revenues in the first instance

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accrue to the government, inviting government action, in one way or another, to spend some of the accrued revenues. There is a recurrent debate on how or why this very often results in policy failures and poor governance. Several strands of arguments are presented below (see also the African Development Report—ADR, 2007).

### 3.4.1 *Poor Decision-Making*

The first strand argues that large windfall revenues lead to poor decision-making by governments. This is attributable to several factors, including the following (Ploeg, 2007; Auty, 2001; Auty, 2004; Stevens, 2003):

- Resource booms raise expectations and increase appetite for spending. The promise of natural resource wealth dramatically expands the horizons of governments in natural resource-exporting countries. A boom mentality not only affects the way governments behave—creating grandiose plans and ideas; it also shapes how people respond. Work ethics may be undermined, resulting in decline in productivity.
- The development of oil, gas, or minerals raises expectations among the population. This pressures governments to “do something,” thus encouraging speedy responses. This often leads to quick, inappropriate, and poorly coordinated decisions.

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- Having more money to “play with” tends to weaken prudence and normal procedures of “due diligence.” In particular, governments may decide on capital spending without due thought to recurrent spending implications.
- Governments often dramatically increase public spending based on unrealistic revenue projections. In resource-dependent countries, windfalls increase both public spending and the appetite for transfers by a factor that is more than proportionate to the size of the boom itself. This means that spending quickly surpasses revenues. Nonetheless, various interest groups continue to demand even larger shares of national income when natural resource revenues go into a downtrend.

#### 3.4.2 *Corruption and Rent Seeking*

It is often argued that natural resource booms often decrease the quality of public spending and encourage rent seeking (Ploeg, 2007; Auty, 2001; Auty, 2004; Stevens, 2003). Centralization, and, hence, concentration of fiscal resources from resource booms, fosters excessive and imprudent investment. It also leads to mismanagement and misallocation of resources and, in the most severe cases, corruption.

The key issue is that natural resource revenues tend to replace more stable and sustainable revenue streams, exacerbating problems of transparency and accountability. With sizeable resource revenues, the reliance

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on non-resource taxes and other government incomes decreases. This tends to free natural resource-exporting governments from the types of citizen demands for fiscal transparency and accountability that arise when people pay taxes directly to the government. Thus, natural resource export earnings actually sever important links between the people and their governments, links related to popular interests and control mechanisms.

The larger the public purse, the less noticeable the leakage to interest groups. Rent seeking is greater in resource-rich countries because wealth is concentrated in the public sector (or possibly in a small number of companies). Therefore, the bulk of the rents created in these economies are channeled by bureaucrats, the majority of whom are members of the politically dominant groups. Such rent-seeking behavior produces undesirable results for the economy. First, rent-seeking behavior imposes significant losses on the economy. Second, it distracts attention away from long-term development goals to maximizing rent creation and capture. Third, rent seeking creates extremely powerful lobby groups that are able to block needed economic reforms. Fourth, societies face severe impediments to innovation as a result of the behavior of special interest groups. Fifth, rent seeking makes it more difficult for governments to adjust spending when faced with revenue fluctuations. Finally, rent seeking is tantamount to the creation of monopoly power in an economy and the social costs of such monopolization are higher if the costs to maintain that monopoly are added (Stevens, 2003).

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Governance indicators, such as government effectiveness, voice and accountability, political instability and violence, the rule of law, regulatory quality, and control of corruption are markedly weaker in oil-rich African countries (see Table 3.7). The data furthermore indicates that this problem is by far most common in relation to oil exploration and revenue, as the performance of oil-exporting countries is clearly worse than that of countries with other minerals.

The literature emphasizes the role of governments in the misallocation of resource revenues (Stevens, 2003). Resource booms have adverse effects because they provide incentives for politicians to engage in inefficient redistribution of revenues and income in return for political support. However, it is important to note that the status of existing institutions (before the resource boom) is crucial, as it determines the extent to which politicians can respond to these perverse incentives. Regardless of the starting point, pressure from the public to raise public spending is likely to be significant—leading to inefficient redistribution in the form of public employment provisions, subsidies to farmers, labor market regulations, and protection of domestic industries from international competition.

#### 3.4.3 *State Predation*

The attainment of political independence did not transform the structure of a good number of African states, which remained forceful and authoritarian. Thus,

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**Table 3.7: Natural Resource Abundance and Governance Indicators**

	Voice and accountability 2006	Political stability 2006	Government effectiveness 2006	Regulatory quality 2006	Rule of law 2006	Control of corruption 2006
1-Resource-rich countries	-0.8	-0.7	-0.8	-0.7	-0.9	-0.8
Oil-exporting countries	-1.3	-1.0	-1.0	-1.0	-1.1	-1.0
Mineral-exporting countries	-0.4	-0.3	-0.5	-0.5	-0.6	-0.5
2-Resource-scarce countries	-0.5	-0.4	-0.7	-0.7	-0.6	-0.5

*Data Source: Kaufmann, Kraay and Mastruzzi (2007).*

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instead of transforming the state and making it relevant to the needs and aspirations of the populations, some emerging post-colonial leaders were content with using the enormous authoritarian structures of the state to appropriate economic gains for private ends. In response to the forces of globalization—epitomized by the end of the Cold War, growing pressures for both economic and political liberalization, as well as increasing internal resistance and demands for democratization—many state regimes have resorted to repression and predation. A predatory state is characterized by the concentration of power at the top and the personalization of networks for delegation of this power, which is enforced by ruthless repression. In this context, economic inducements for government officials and generalized corruption are the government way of life (Castells, 2000).

Predatory rule has two major consequences on natural resource wealth and revenue management in most fragile African states. First, access to state power is equivalent to access to wealth and to the sources of future wealth. Second, political support is built around clientele networks, which link power-holders with segments of the population. The concern of the various elites, ultimately connected to the top of state power, is how to gain support and consolidate clienteles while maximizing the amount of resources needed to obtain this support. These networks are formed along ethnic, regional, territorial, religious, and economic lines (Castells, 2000).

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Predatory states use different violent and non-violent strategies to manage mineral and oil resources and to appropriate the proceeds accruing from their exploitation and sale. Since minerals are extracted in enclave production centers, sometimes located offshore, the common strategy is to negotiate royalties and other agreements directly with foreign companies. These deals are often shrouded in mystery, making it difficult, if not impossible, to track how much money is generated or how these revenues are spent. According to oil industry experts, OPEC countries on average retain some 75 percent of their oil revenues for the state budget, allowing for operating expenses. In the case of African oil producers, this proportion, even in the best-case scenario, falls in the range of 55 percent to 70 percent. The difference represents supplementary profits shared by the oil companies and African elites (Hibou, 1999).

### 3.4.4 *Sociocultural and Political Impacts*

As outlined above, countries that have abundant point-source natural resources (such as oil) tend to have less prudent policies and poor governance. They also tend to have weaker institutional capacities (Stevens, 2003). The following paragraphs discuss some of the reasons for this relationship and how it can be avoided.

Resource rents are an invitation to non-productive lobbying and rent seeking. This problem occurs mostly in countries with “grabber-friendly” institutions, while countries with “producer-friendly” institutions generally

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do not suffer from the curse. In other words, countries that avoided the resource curse in previous resource booms did so because they had transparent and sound institutions and because they adopted specific policies—including institutional capacity building—to minimize the impact of, and damage caused by, the resource windfalls.

Countries in which governance (hence transparency) is initially poor are thought to face a substantial risk of turning resource windfalls into catastrophe. Indeed, there is evidence that governance is likely to deteriorate further in a resource boom, even from a low-start status, because of the windfalls. Governance and effective public spending are thus critical for both living standards and private activity and, since the public sector is a large part of the economy, its own productivity growth is a key component of overall growth. This in turn requires that governments aspire to overall national goals, thus becoming accountable to citizens, regardless of their own interests and aspirations.

Poor economic performance during previous natural resource booms underscores the importance of sound macroeconomic policies and strong institutions. The large public investment projects of the 1970s and 1980s, when governance and institutions were extremely weak in most of Africa, were often undertaken with little scrutiny and accountability. The return on public investment was correspondingly low. Meanwhile, poor macroeconomic management of natural resource price cycles in several African countries resulted in large exchange rate appreciation, erosion of the competitiveness of

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non-oil sectors, and high inflation. Given that many African countries leveraged their natural resource wealth to access credit from foreign suppliers and governments, the early 1990s witnessed a sharp rise in external debt, well above 100 percent of GDP, in most cases, resulting in unsustainable external debt levels. These macroeconomic imbalances have eventually called for very painful policy adjustments, such as sharp fiscal contraction, trade liberalization, exchange rate adjustment, and debt rescheduling (Collier and Goderis, 2007).

In addition, with weak institutions and legal systems, there is a higher return on rent seeking, and a higher occurrence of crime, corruption, unfair company takeovers, and other shady dealings. A resource bonanza thus elicits more rent seekers and reduces the number of productive entrepreneurs. In the long run, profits fall, resulting in an economy that is worse off. Thus, if institutions are weak and conditions are not favorable, dependency on oil and on other natural resources effectively hinders democracy and the quality of governance (Ross, 1999; Ploeg, 2007).

**Box 3.1: GOVERNANCE AND TRANSPARENCY IN NATURAL RESOURCE EXPLOITATION AND MANAGEMENT**

Governance remains the overarching and most critical challenge for natural resource exploitation and management. Although African governments bear prime responsibility for managing natural-resource wealth in a fair, transparent, and accountable way, they are only one part of an intricate web of interests and relationships, which include regional actors, foreign governments, and multinational extractive companies. The main governance-related challenges facing resource-rich countries can be summarized as follows:

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### Transparency

Transparency is the key issue in establishing accountable governance structures and fighting corruption. However, this has to start with the concession contract itself, as well as with revenues accruing from the sale of the resources:

- Corruption in the allocation of resource concessions undermines governance in resource-rich countries and also entails a poor deal for their citizens. There is overwhelming evidence that concession allocation is often obscure and involves a lot of corruption.
- Concession contracts often contain confidentiality clauses and are therefore not open to public scrutiny. Without knowing the details of the deals signed by their government, the citizens of a given country have no way of holding their politicians accountable.
- Transparency is equally important for the revenue flows of natural-resource rents between extractive industry companies and host governments. If the companies publish what they pay and the governments publish what they earn, the revenue flows can be traced and governments can be held accountable for sustainable management of these revenues and fair distribution of the wealth.

*Data Sources:* Heinrich Boll Foundation (2007); Alley et al. (2007).

### 3.4.5 Resource Governance Policy Initiatives

The last decade has seen a growing recognition that improved transparency and accountability for the huge revenues generated by oil, gas, and mineral industries is vital to avoiding the “resource curse” and extending the benefits of natural resource abundance to poverty reduction. Consequently, several international policy initiatives, mechanisms, and standards have been launched to address these dilemmas, improve governance, and reduce the observed environmental and socioeconomic impacts of extractive industry activities. These include (see also AfDB, 2007a)

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- The Extractive Industries Transparency Initiative (EITI)
- The international Publish What You Pay (PWYP) campaign
- The International Council on Mining and Metals (ICMM)
- The Kimberley Process Certification Scheme (KPCS)
- The Equator Principles (social and environmental standards)
- The African Peer Review Mechanism (APRM)

The most important of these—from an African perspective—are discussed below.

### 3.4.5.1 THE EXTRACTIVE INDUSTRIES TRANSPARENCY INITIATIVE

This initiative was launched by the UK government in 2002 to address the general failure to transform resource wealth into sustainable development (the “resource curse” or “paradox of plenty”) and the associated governance problems in the extractive industries sector. The EITI aims to intervene in the middle of the value chain—collection of taxes and royalties stage—but neither upstream nor downstream. The EITI has grown into a worldwide initiative. More than 20 countries have committed to its principles and criteria, the majority of them African countries (see also [www.eitransparency.org](http://www.eitransparency.org)).

*Assessment of African Participation:* A considerable number of African countries have endorsed the EITI and are applying its principles to various extents. It is worth

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noting that the initiative is very much focused on the oil and gas sectors. Its scope and mandate can be expanded, revenue transparency strengthened, and the initiative extended to upstream and downstream issues and to environmental stewardship (Jourdan, 2006).

The Nigeria Extractive Industries Transparency Initiative (NEITI), operating the EITI "plus" model, is the most advanced and comprehensive of all the initiatives of participating countries. The NEITI was launched in 2004 and yielded the first-ever comprehensive financial, physical, and process audits of Nigeria's oil and gas sectors for the 1999–2004 period. Cameroon and Mauritania have appointed stakeholder committees at the highest levels of government, drawn up action plans, and offered workshops and training for civil society. These two countries have also issued two reports ([www.eitransparency.org](http://www.eitransparency.org)).

In summary, and looking ahead, the EITI has recorded some significant achievements, although it is voluntary in nature. It is increasingly being recognized as a *partial* solution to the problem of corruption in energy-rich developing countries. However, the EITI faces a number of challenges that need to be addressed (EITI, 2007; AfDB, 2007b):

1. Not all countries that have adhered to the EITI have started implementing it in its full extent. Many countries thus only show rhetorical commitment and only actually implement the initiative to a limited extent.

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2. Civil society organizations play an important role in the EITI and in its implementation at the national level, where such a multi-stakeholder initiative is often difficult to realize. However, in a number of countries, records have emerged of civil society representatives being harassed.
3. The EITI does not address the core problems of corruption, mismanagement, and accountability comprehensively.

The success of the EITI as a concept is increasingly threatened by the lack of clarity about what it means in practice. These problems and issues must be addressed, and EITI is only a first step in the right direction. One of the undeniable effects of the EITI process is that it has raised international awareness that transparency in oil, gas, and mining revenues is vital to preventing corruption in countries that depend on resource revenues and to ensuring that these revenues are used to promote growth and development. The EITI has brought together companies, investors, governments, civil society groups, and international institutions to promote this shared vision.

### 3.4.5.2 THE INTERNATIONAL PUBLISH WHAT YOU PAY CAMPAIGN

The Publish What You Pay (PWYP) initiative is a coalition of over 300 global civil society organizations from more than 50 countries. It aims to promote full transparency in the payment, receipt, and management of revenues paid to resource-rich developing country

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governments by the oil, gas, and mining industries. PWYP campaigns are focused on achieving mandatory disclosure of payments made by oil, gas, and mining companies to governments and other public agencies. This is commonly accepted as a necessary first step towards a more accountable system for the management of natural resource revenues. Such disclosures will not only allow members of civil society to draw a comparison and thus hold their governments accountable for the management of revenues; it will also strengthen the social standing of companies by demonstrating their positive contribution to society.

*Assessment of African Participation:* The response of African countries to the PWYP initiative has been positive, with a considerable number of NGOs pledging their commitment. To date, NGOs from 23 African countries have joined the coalition. Nigeria has been a strong supporter of the initiative and is home to 47 PWYP coalition-member NGOs (PWYP, 2007).

The debate on PWYP (a voluntary principle) raises the same issues highlighted above in relation to the EITI initiative.

#### **3.4.5.3 EQUATOR BANK PRINCIPLES**

Ideally, banks and financial institutions should be made accountable for oil- and mineral-backed loans and disbursements, particularly when they undermine attempts by the international community and international financial institutions to control the flow of money that

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involves corrupt natural-resource deals. The two most well-known global banking initiatives that target this issue are the “Equator Principles,” which set social and environmental standards for project finance deals, and the “Wolfsberg Group,” which has developed a set of anti-money laundering principles. However, both of these initiatives are voluntary.

The Equator Principles are essentially a voluntary financial industry benchmark for determining, assessing, and managing social and environmental risks in project financing. Institutions that have adhered to the Principles (known as “Equator Principles Financial Institutions” or “EPFIs”) have consequently adopted these values and principles. The initiative is currently supported by some 50 banks from 16 countries. In their current form, the Principles are based on the environmental and social safeguard policies of the International Finance Corporation (IFC). As such, they do not provide any specific guidance for extractive sector projects—a considerable limitation in itself. Nevertheless, the EPFIs have committed themselves to not providing loans to projects where the borrower is unable to address and comply with the general principles and overall stated policies and procedures ([www.equatorprinciples.com](http://www.equatorprinciples.com)).

A distinct disadvantage of the Equator Principles is that they are driven by the Western world and do not, as such, focus on developmental impacts in the developing world (Jourdan, 2007). It would thus be beneficial for financial institutions to look at developmental aspects as

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well. Given the important role that banks play in financing private sector projects around the world, it is critical that signatories to the Equator Principles join in the global push for transparency in extractive sectors. What is further needed, to boost the effect of this and similar initiatives, is mandatory transparency in the financing of resource projects. This ideally implies putting an end to resource-backed loans for governments, investors, and others who refuse to manage resource revenues in a transparent manner. This would also call for an amendment of money laundering regulations, recognizing that resource deals and resource-backed loans constitute a significant "yellow flag" for potential money laundering (Jourdan, 2007).

#### **3.4.5.4 AFRICAN PEER REVIEW MECHANISM (APRM)**

The African Union's New Partnership for Africa's Development (NEPAD) identifies good governance as a basic requirement for peace, security, and sustainable growth and development. One of its "immediate desired outcomes" is that "Africa adopts and implements principles of democracy and good political, economic, and corporate governance, and the protection of human rights becomes entrenched in every African country." For this purpose, NEPAD set up the African Peer Review Mechanism (APRM), an innovative tool aimed at peer review of governance benchmarks and design of action plans for improvement.

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Participation in the system is voluntary and a panel appointed by the APRM Secretariat oversees implementation throughout Africa. The process consists of a number of stages (website: [www.aprm.org.za](http://www.aprm.org.za)). The ultimate stated goal of the APRM is to encourage African countries to plan a way forward on governance issues and implement relevant plans in this direction. The APRM process is designed to help participating countries develop and promote the adoption of laws, policies, and practices that lead to political stability, high rates of economic growth, sustainable development, and continental economic integration.

*Assessment of African Participation:* At present, 27 countries have committed to the APRM and 13 of them have had reviews launched. To date, Ghana, Rwanda, and Kenya are the three countries that have completed the entire process. The broad inclusiveness of the process has demonstrated the presence in countries of a strengthened culture of political dialog and empowerment. However, implementation has posed some challenges, for instance, the establishment of an appropriate national structure, the financing of the process, and the organization of a participatory and all-inclusive self-assessment system (APRM, 2007; AfDB, 2007c).

Voluntary participation in the APRM assessment has resulted in very high expectations, and it is imperative for member countries and stakeholders to now see the “dividends” from the APRM in terms of enhanced governance and improved living standards. The APRM is

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a cornerstone of NEPAD, the first African-initiated and -led instrument to take full ownership of the continent's future by addressing the key governance challenges that constitute major constraints.

### 3.5 Summary and Conclusion

The conclusion from the analysis in this chapter is that the true potential benefits of having significant natural resource wealth have *not* been fully exploited by oil-rich African countries. Overall, the performance of resource-rich countries in Africa has been disappointing, especially from 1980 to 2000.

However, despite the challenges and issues involved, a natural resource boom can, under the right circumstances, be an important catalyst for growth and development. The often referred to "natural resource curse" can be avoided with the right knowledge, institutions, and policies. Several African countries have demonstrated this, and there is reason for cautious optimism that more countries have learned hard lessons from past resource booms, and, in future, will pursue strategies and policies that will allow them to fully reap the benefits of natural resource wealth.