

## CHAPTER 4

# Africa's Natural Resources: The Paradox of Plenty

## Introduction

Africa is blessed with vast natural resources and rich environments (see Chapters 2 and 3). It is generously endowed with productive land and with valuable natural resources, which include renewable resources (such as water, forestry, and fisheries) and non-renewable resources (minerals, coal, gas, and oil). Natural resources dominate many national economies and are central to the livelihoods of the poor rural majority. These resources are the basis of income and subsistence for large segments of Africa's population and constitute a principal source of public revenue and national wealth.

Under the right circumstances, a natural resource boom can be an important catalyst for growth, development, and the transition from cottage industry to factory production. Indeed, with the right approach natural resources can be used to make the transformation from a low-value economy that relies on exports of primary commodities to one with a substantial labor-intensive manufacturing base.

It is commonly agreed that one of the avenues for getting many of the poorest African countries out of the low-income trap is to provide them with a big demand push that will generate enough demand complementarities to expand the size of markets and recover the fixed costs of industrialization. Natural resource wealth

could be used to pursue this goal. Unfortunately, in many African countries natural resource booms have only to a limited extent set off a dynamic growth process (see Box 4.1). This is largely due to failure to implement the right growth-promotion policies and to ensure that strong institutions are in place — suggesting that it is very difficult to make the big push towards diversification and development of manufacturing in the resource-rich parts of Africa. The danger is that much of Africa is not industrialized and is stagnating in a staple trap, dependent on exports of a few mineral resources.<sup>1</sup> In particular, oil resources and other point resource-dependency could, with the wrong policies, lead to this scenario.

The failure of natural resource wealth to lead to the expected economic growth and development has been attributed to several factors, including

- the so-called “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 that otherwise could put their energies into profit-making activities;

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<sup>1</sup> See Auty (2001); Auty (2004); and Ploeg (2007) for detailed discussion of these aspects

- volatility of prices 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.

### ***What is the Resource Curse?***

The resource curse refers to a situation whereby a country has an export-driven natural resources sector that generates large revenues for government but leads paradoxically to economic stagnation and political instability.<sup>2</sup> It is commonly used to describe the negative development outcomes associated with non-renewable extractive resources (petroleum and other minerals).<sup>3</sup> Essentially, the resource curse refers to the inverse association between development and natural resource abundance. 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, natural resource-abundant countries tend to grow slower than expected — considering their resource wealth — and, in many cases, actually grow slower than 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.

Historical accounts indicate that natural resource booms do not always worsen economic performance, and can indeed catalyze economic transformation. A resource boom can lead to growth expansion, as demonstrated in the case of Europe (industrialization), the “new economies” (Australia, Canada and the United States), and tropical subsistence agricultural economies without manufacturing. Today, resource-rich countries like the United Arab Emirates, Kuwait, and Qatar are using revenues from their resource wealth to construct mega-cities out of desert land, thereby also generating considerable down- and side-stream economic activities and additional incomes. These countries have also undertaken large-scale foreign investments, which not only promote economic development, but also foster inter-generational equity. The key point is that the often referred to “natural resource curse” can be avoided with the right knowledge, institutions and policies.

### ***Key Questions***

Drawing on an appropriate theoretical framework, and on the logic presented in the previous section, this chapter examines the *African evidence* of the paradox of plenty and the “resource curse” with a view to exploring the following issues and questions:

- Is natural resource abundance in Africa a curse or a blessing?
- Has the management of natural resources really stunted the growth

<sup>2</sup> Overseas Development Institute (ODI) (2006)

<sup>3</sup> Catholic Relief Services (2003)

#### Box 4.1: Cross-Country Evidence of the Natural Resource Curse

There are, indeed, resource-rich countries that benefit from their natural wealth, but overall, the economies of many resource-rich countries are in a surprisingly poor state. History clearly shows that natural resource wealth may harm economic performance and make citizens worse off. There are well-known examples of countries whose abundant natural resources have been accompanied by bad macroeconomic performance and growing inequality among its citizens. A dramatic example is Nigeria.

Nigeria has been a major oil exporter since 1965. Its oil revenues per capita have increased tenfold in 35 years, but its income per capita has stagnated since independence in 1960, making Nigeria one of the 15 poorest countries in the world. During this period, the country's poverty headcount ratios have almost tripled, while the rich have grabbed a much larger part of income. Huge oil exports have not benefited the average Nigerian. Despite the rapid accumulation of physical capital, Nigeria has suffered a declining Total Factor Productivity (TFP), and capacity utilization of manufacturing hovers around a third. Successive military dictatorships have plundered oil wealth and many suspect transfers of funds (of undisclosed amounts) have occurred. Oil wealth has fundamentally altered politics and governance in Nigeria. Other oil exporters such as Iran, Venezuela, Libya, Iraq, Kuwait, and Qatar have also experienced negative growth during the last few decades and OPEC as a whole has seen a decline in Gross National Product (GNP) per capita.

In contrast, Botswana has managed to beat the resource curse. Forty percent of Botswana's Gross Domestic Product (GDP) stems from diamonds. It has the second highest public expenditure on education and has enjoyed the world's highest growth rate since 1965. Its GDP per capita is ten times that of Nigeria. The Botswana experience is noteworthy, since the country started its post-colonial experience with minimal investments and substantial inequality.

The United Arab Emirates also seems to have turned the resource curse into a blessing. The UAE accounts for close to 10 percent of the world's crude oil and 4 percent of the world's natural gas reserves. The UAE's government debt is very small, inflation is low, and hydrocarbon wealth has been used to modernize infrastructure, create jobs, and establish a generous welfare system. Major strides in life expectancy and literacy have been made through universal and free access to education and health care. In anticipation of the depletion of its natural reserves, Dubai has diversified into light manufacturing, telecommunications, finance, and tourism, and the other emirates have focused on small-scale manufacturing, agriculture, quarrying, cement, and shipping services. By diversifying, the UAE is investing in sustainable growth.

Sources: Sala-i-Martin and Subramanian (2003); van der Ploeg (2007)

and development prospects of many resource-rich African economies?

- How does the volatility in the export value of resources contribute to volatility of growth in GDP per capita and to growth and development in general?
- What political and social factors enable some resource-abundant

countries to utilize their natural resources to promote development and prevent other resource-abundant countries from doing the same?

- How does access or non-access to the coast (that is, being a landlocked country or not) affect development parameters?

- How, or why, has the potential resource curse been avoided in some cases and how can it be overcome in the future?

### Stylized Features of Africa's Resource-Rich Economies

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

- (1) Resource-rich (oil and mineral exporters);
- (2) Resource-scarce;
- (3) Land-locked (resource-rich and resource-scarce);
- (4) Coastal (resource-rich and resource-scarce), and
- (5) The SANE group (Africa's four largest economies: South Africa, Algeria, Nigeria and Egypt).

A complete listing is presented in Appendix 4A. Africa has 22 resource-rich countries, defined in the analysis framework for this Report as countries where fuel and mineral exports contribute over 20 percent to the GDP. These countries represented slightly more than two-thirds of Africa's GDP and half of its population in 2006 (Table 4.1). Half of these countries are oil exporters, while the other half are mineral exporters. It is worth noting that only four of the resource-rich countries are landlocked and that three of Africa's four largest economies that make up the SANE (South Africa, Algeria, and Nigeria) are both resource-rich and coastal countries. In contrast, there are 31 resource-scarce countries, accounting for 30 percent and 48 percent of regional GDP and population, respectively. One-third of these countries are land-locked.

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

Africa's resource-rich countries continue to experience high dependence on natural resource exports for both foreign exchange and revenues (see Appendix Table 4B). For example, of the total increase in export values in African countries between 2000 and 2005, fuels accounted for 65 percent; manufactures, 24 percent; and food and raw materials about 5 percent each. Since manufactures include processed natural resources, Africa's export boom seems to be largely driven by natural resources. 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. The dependence of African non-fuel exports on agricultural commodities has declined, while exports of certain resource-linked manufacturing products have increased. In these countries, manufactured exports accounted for nearly 60 percent of all non-fuel exports in 2005, up from 37 percent in 1985. Within manufacturing, the major categories are precious stones (the share of which has more than trebled since 1985); and silver and platinum (the share of which has nearly doubled). Iron and aluminum are the other major product categories.<sup>4</sup>

### *High Fiscal Dependence in Africa's Resource-Rich Countries, but Improving Fiscal Performance*

Before the current resource boom, resource-rich African countries had been challenged to reap the full benefits of their resource endowments. Owing to boom-bust cycles,

<sup>4</sup> IMF (2006)

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Table 4.1: Macroeconomic Indicators

|                                       | 2006, or most recent year with available data |                         |                |                   |               |                   |                      |                   |                                |                        |                   |                   |
|---------------------------------------|---|-------------------------|----------------|-------------------|---------------|-------------------|----------------------|-------------------|--------------------------------|------------------------|-------------------|-------------------|
|                                       | Per Capita Income (US\$)                      | Area (Km <sup>2</sup> ) | Population     |                   | Nominal GDP   |                   | GDP(\$ billions PPP) |                   | Annual GDP growth Rate 81–2006 | Share of Africa Export | FDI (\$ millions) |                   |
|                                       |   |                         | Million of Pop | % share of Africa | Billions US\$ | % share of Africa | Billions US\$        | % share of Africa |                                |                        | Millions US\$     | % share of Africa |
| Africa                                | 838   | 30,323                  | 924.3          | 100.0             | 1079.4        | 100.0             | 1886.5               | 100.0             | 3.0                            | 100.0                  | 30669             | 100.0             |
| Resource-rich countries               | 991   | 20,975                  | 482.5          | 52.2              | 750.9         | 69.6              | 1137.8               | 60.3              | 2.4                            | 80.5                   | 19587             | 63.9              |
| Oil-exporting countries               | 935   | 11,537                  | 278.2          | 30.1              | 431.0         | 39.9              | 519.6                | 27.5              | 2.4                            | 55.1                   | 10503             | 34.2              |
| Mineral-exporting countries           | 1067  | 9,438                   | 204.3          | 22.1              | 319.9         | 29.6              | 618.2                | 32.8              | 2.4                            | 25.4                   | 9084              | 29.6              |
| Resource-scarce, countries            | 671   | 9,347                   | 441.8          | 47.8              | 328.5         | 30.4              | 748.7                | 39.7              | 3.8                            | 19.5                   | 11082             | 36.1              |
| Landlocked countries                  | 264   | 7,979                   | 225.0          | 24.3              | 82.5          | 7.6               | 202.2                | 10.7              | 3.3                            | 6.7                    | 2330              | 7.6               |
| Resource-rich, landlocked countries   | 588   | 3,241                   | 27.7           | 3.0               | 29.0          | 2.7               | 46.6                 | 2.5               | 4.5                            | 3.9                    | 1316              | 4.3               |
| Resource-scarce, landlocked countries | 208   | 4,690                   | 194.4          | 21.0              | 49.3          | 4.6               | 146.1                | 7.7               | 2.9                            | 2.0                    | 981               | 3.2               |
| Coastal countries                     | 1023  | 22,344                  | 699.3          | 75.7              | 996.9         | 92.4              | 1684.3               | 89.3              | 2.8                            | 93.3                   | 28339             | 92.4              |
| Resource-rich coastal countries       | 1016  | 17,734                  | 454.8          | 49.2              | 721.9         | 66.9              | 1091.2               | 57.8              | 2.3                            | 76.7                   | 18271             | 59.6              |
| Resource-scarce coastal countries     | 1132  | 4,017                   | 209.4          | 22.7              | 251.9         | 23.3              | 561.2                | 29.7              | 4.1                            | 15.6                   | 10047             | 32.8              |
| SANE                                  | 1482  | 5,528                   | 290.8          | 31.5              | 593.7         | 55.0              | 1072.0               | 56.8              | 3.0                            | 59.4                   | 16239             | 52.9              |

Source: AfDB Statistics Department, Computed from AfDB Database, 2007.

weak institutions, poor public financial management, and weak oversight, many resource-rich African countries were saddled with unsustainable amounts of external debt as income declined, risks of violent conflicts increased, and social indicators worsened. However, a new trend seems to have emerged with the onset of the current resource boom (especially with the meteoric rise of oil prices since 2002). There are, indeed, encouraging signs that resource-rich African exporters have become more prudent in the use of natural resource revenues than in previous booms.

In the past 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 fiscal income for resource-rich African 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, and oil revenues increased in USD terms about 3½ times between 2002 and 2006. In addition to revenue upsurge, production also expanded significantly, by 45 percent on average, especially in Angola, Chad, and Equatorial Guinea.<sup>5</sup> Thus, oil-exporting countries, in particular, are highly fiscal dependent, implying that if the current boom cycle develops — like in the past — to a boom-bust cycle, prudent fiscal discipline will be required.

<sup>5</sup> Ibid.

The available data shows that in general government expenditures have risen in recent years, but not at nearly the same rate as natural resource revenues. Before the current boom in 2002, 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 4.2). This reflects both the rapid rise in oil revenues and the narrowing of non-oil fiscal balances.

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.<sup>6</sup>

### ***Concentration of Foreign Direct Investment in Resource-Rich Countries***

One major concern about Foreign Direct Investment (FDI) inflows to Africa is that the overwhelming majority of these go into natural resource exploitation. Among the top recipient countries, most of the flows to Angola, Algeria, Sudan, Nigeria, and Gabon went to oil and gas projects. Similarly, over 50 percent of the flows to South Africa and

<sup>6</sup> IMF (2007)

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Table 4.2: Fiscal Balance, Investment Rates, and Terms of Trade Changes (in %)

|                                       | 1981–1985 |      |      | 2001–2005 |      |      |
|---------------------------------------|-----------|------|------|-----------|------|------|
|                                       | FD        | INV  | TOT  | FD        | INV  | TOT  |
| <b>1- Resource-rich countries</b>     | -3.6      | 22.6 | 1.6  | -0.2      | 22.6 | 6.3  |
| Oil-exporting countries               | -4.4      | 24.5 | -0.4 | 3.3       | 24.8 | 8.7  |
| Mineral-exporting countries           | -2.9      | 20.8 | 3.5  | -3.6      | 20.3 | 3.9  |
| <b>2- Resource-scarce, countries</b>  | -7.9      | 21.9 | 3.2  | -4.8      | 20.0 | -1.1 |
| <b>3- Landlocked countries</b>        | -4.5      | 18.1 | 4.4  | -3.2      | 20.2 | 1.1  |
| Resource- rich landlocked countries   | 0.2       | 18.0 | 3.8  | -2.7      | 27.5 | 6.1  |
| Resource-scarce, landlocked countries | -6.1      | 14.6 | 5.9  | -3.9      | 15.2 | -1.3 |
| <b>4- Coastal countries</b>           | -6.8      | 24.0 | 1.8  | -2.7      | 21.5 | 2.3  |
| Resource-rich coastal countries       | -4.5      | 23.6 | 1.0  | 0.4       | 21.4 | 6.3  |
| Resource-scarce coastal countries     | -9.3      | 24.4 | 2.2  | -6.0      | 21.9 | -1.0 |
| <b>5- Africa</b>                      | -6.1      | 22.2 | 2.7  | -2.8      | 21.1 | 2.1  |
| SANE                                  | -7.3      | 27.7 | -3.4 | -0.8      | 22.1 | 7.3  |

FD= Fiscal Deficit-GDP Ratio; INV= Domestic Investment Rate; and TOT=Change in Terms of Trade.

Source: AfDB Statistical Department. Computed from IMF (2007), and World Bank (2007b) data.

Tanzania went into gold mining. Indeed, the primary sector was the largest recipient of accumulated FDI flows to Africa, with a 55 percent share for the 1996–2000 period.<sup>7</sup> As shown in Table 4.1, by 2006, about 64 percent of FDI was concentrated in resource-rich countries in Africa. Furthermore, of the total FDI that came into the continent during that year, 92 percent went to coastal countries, with resource-rich countries dominating at about 60 percent.

#### ***Growth Performance of Africa's Resource-Rich Countries is Poor (compared to Resource-scarce Countries)***

Before the first oil shock on the 1970s, the average oil-rich African country 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 booms of the 1970s and 1980s were intended to use the oil bonanza for economic 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. The same was true of most other mineral (metals and non-metals) exporters, with exceptions like Botswana.<sup>8</sup>

<sup>7</sup> See Anyanwu (2006)

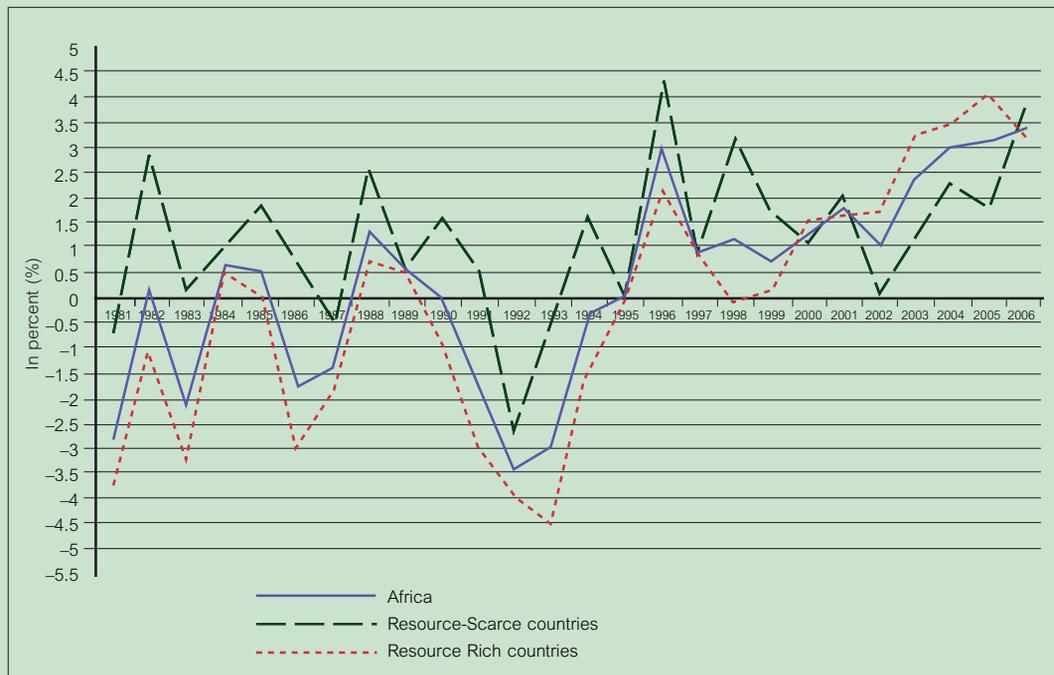
<sup>8</sup> IMF (2006)

Indeed, as Figure 4.1 shows, resource-scarce African countries out-performed resource-rich countries in terms of real per capita GDP growth during the 1981 to 2001 period, with a reversal occurring thereafter, reflecting the current boom. It should also be noted that there were three major collapses in real per capita GDP growth during the period — in 1983, 1985, and 1993 — with the latter being the worst.

The GDP per capita of oil- and mineral-rich countries were considerably higher than that of resource-scarce countries in 1980, and it still is today (Figure 4.2), but the real

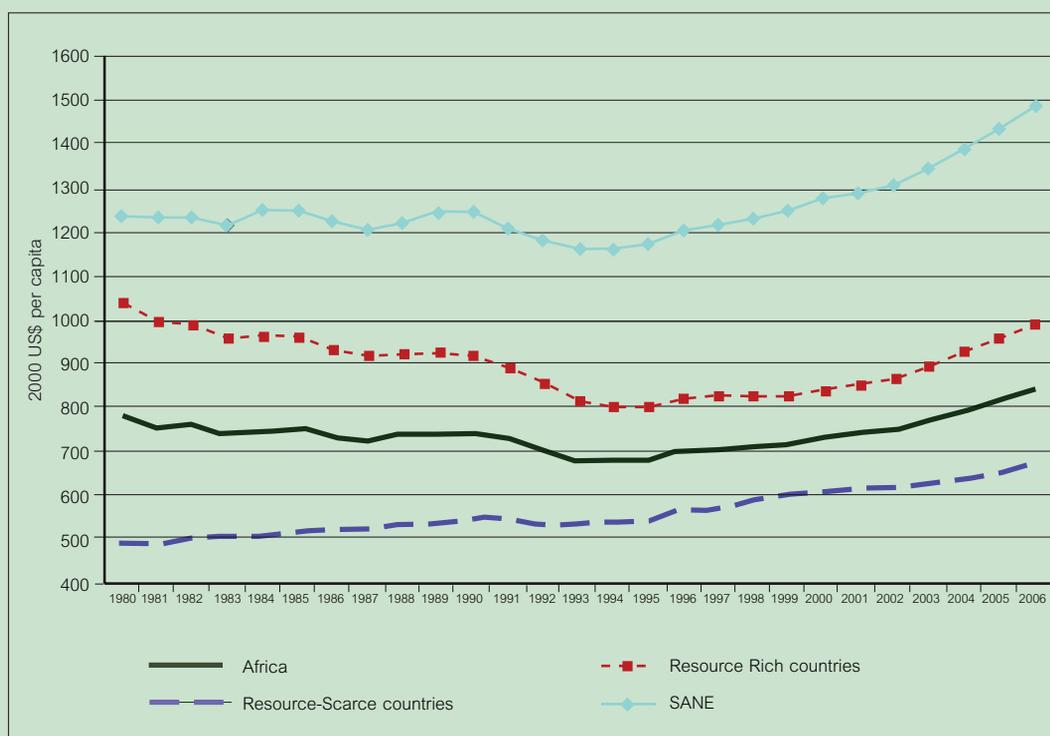
per capita GDP of oil-rich African countries has remained resolutely stuck below US\$1000 for more than 20 years — first dropping to US\$800 in the mid 90's before rising again. On the contrary, resource-scarce countries were able to achieve real growth during nearly the whole 1980–2005 period, albeit at a modest rate, and have thus significantly narrowed the gap with resource-rich countries. Nevertheless, it is important to stress that resource-rich countries in Africa — as measured by GDP per capita — are much better off than resource-scarce countries. Besides the better

Figure 4.1: Real GDP per Capita Growth — Resource-Rich vs. Resource-Scarce Countries



Source: AfDB Statistics Department, Computed from AfDB Database, 2007.

Figure 4.2: Natural Resource Abundance and Real GDP per Capita (at year 2000; US\$)



Source: AfDB Statistics Department, Computed from AfDB Database, 2007.

growth experienced by resource-rich countries in the 1960s and 1970s, another very significant factor, as outlined earlier, is geography (many resource-scarce countries are further disfavored by being landlocked).

### **Analysis — Evidence of Stylized Features**

Based on the data, tables and figures presented, the following trends and conclusions can be drawn:

- Resource-rich African countries are richer than their resource-scarce peers. The gap narrowed during the 1980–2000 period but is widening again in conjunction with the recent resource boom.
- However, cumulatively, resource-rich countries only experienced an average growth rate of 2.4 percent from 1981–2006, considerably lower than the average of 3.8 percent for resource-scarce countries.

- Resource-scarce coastal countries, which have almost a quarter of Africa's population, have experienced an average growth rate of 4.1 percent, much higher than the 2.3 percent recorded by resource-rich coastal countries. These findings indicate that being resource-rich does *not* make a significant difference for coastal countries. Indeed, resource-scarce coastal countries have a somewhat higher GDP per capita.
- The four SANE countries are by far the wealthiest in terms of GDP and have sustained a significant growth rate since 1995.
- Land-locked resource-scarce countries are the poorest, by a significant factor. These countries are five times poorer than resource-rich countries, and almost six times poorer than resource-scarce coastal countries. Furthermore, the growth rate in this group of countries only averaged 2.5 percent from 1981–2006. In other words, the most important of all factors is whether a country is land-locked or not, — more important than being resource-rich or not, or than any other aspect reviewed in this analysis.

Another feature that deserves attention is the fact that over a long-term period, both accumulation and factor productivity are significantly higher in resource-scarce countries than in resource-rich countries (see Figure 4.3).

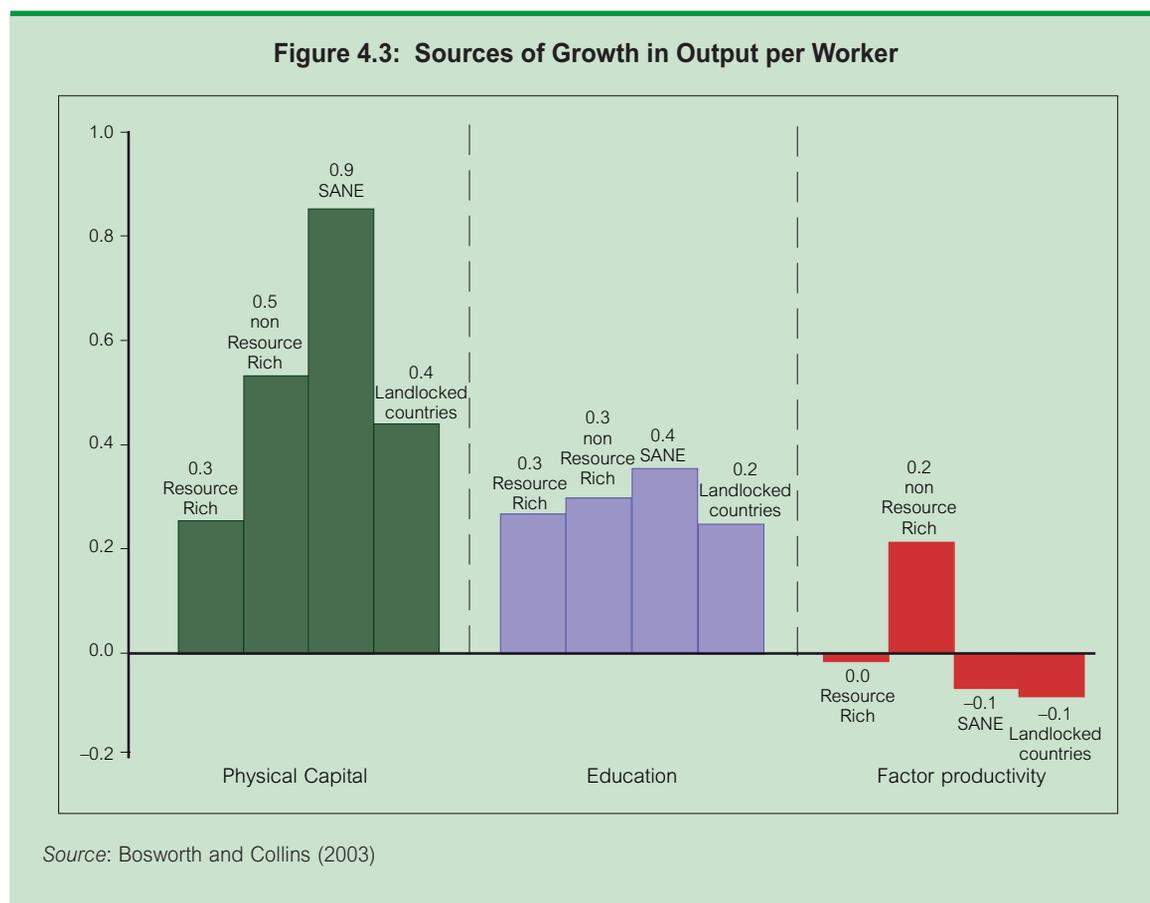
Further analysis of the pace of productivity expansion (rate of growth in labor productivity versus rate of technical progress)

in 23 diverse African countries reveal some marked differences (Figure 4.4). Countries such as Egypt, Tunisia and Mauritius have done very well — especially compared with countries such as Madagascar, Zambia, Ghana, Rwanda and Nigeria. It is thus noted that the best performing countries are all relatively resource-scarce.

### ***Resource-Rich African Countries Have Negative Genuine Saving***

One of the features of many countries endowed with abundant natural resources is that they generally 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.

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). Genuine saving, thus defined, corresponds to an increase in the wealth of the nation. The so-called *Hartwick rule* demands that any depletion of natural resources or damage done 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 countries adopt a strategy for transforming their natural



resource wealth into other forms of productive capital.<sup>9</sup>

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

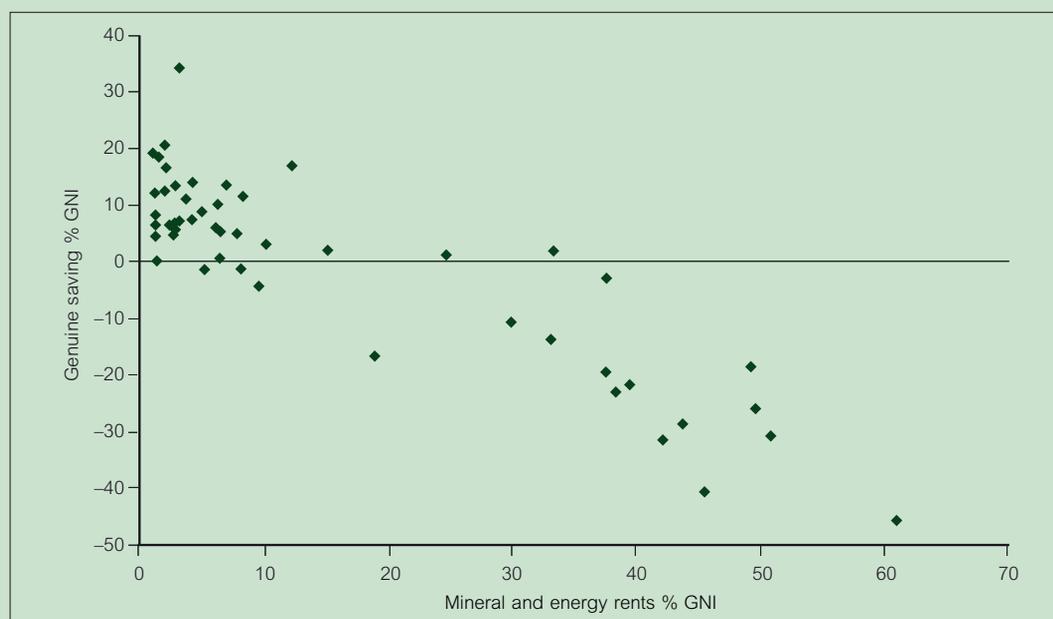
head. They thus need to save more than their exhaustible resource rents — but only rarely manage to. Figure 4.5 paints a gloomy picture of resource-rich countries (worldwide analysis in this case). Countries with a large percentage of mineral and energy rents (of Gross National Income, GNI) typically have *negative* genuine saving rates. This means that many resource-rich countries become poorer each year despite their abundant natural resources<sup>10</sup>. Figure 4.6 suggests that

<sup>9</sup> See i.e. World Bank (2006c) and Ploeg (2007)

<sup>10</sup> Ibid.



Figure 4.5: Negative Genuine Saving in Resource-Rich Countries



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

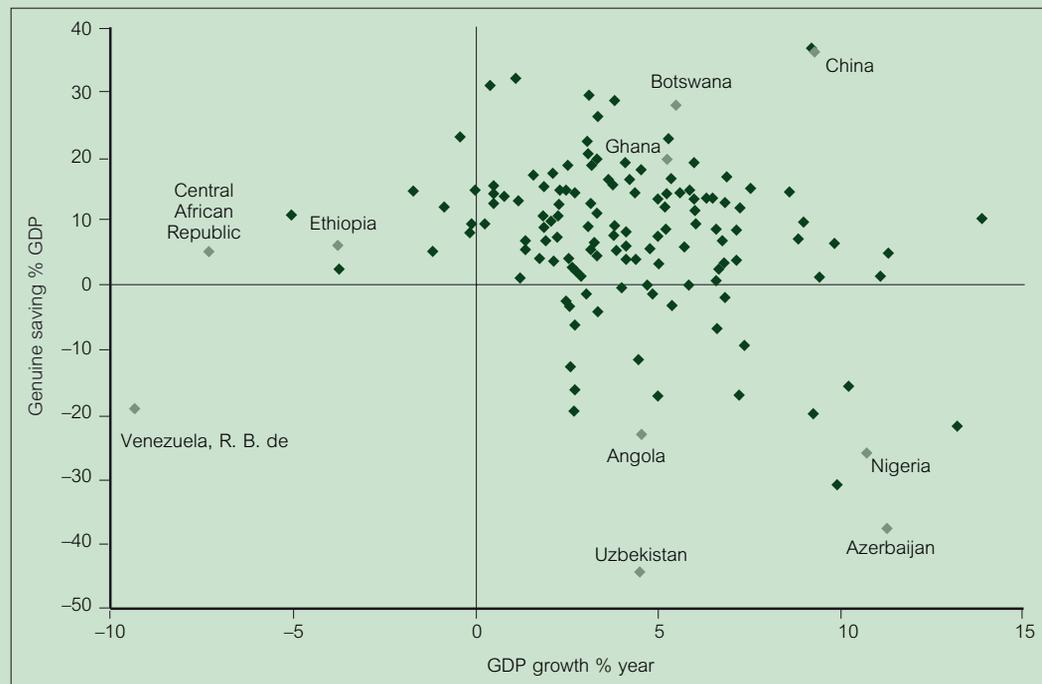
### **Low Human Capital Development and Worsened Income Inequality**

One of the dilemmas of natural resource abundance is that it *may* pervasively cause a country to neglect 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.<sup>11</sup> The logical expression of such a potential correlation between resource abundance and neglect of human

<sup>11</sup> Ibid.

capital development would, in the medium-long term at least, 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 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

Figure 4.6: Genuine Saving Rates versus Economic Growth, 2003



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

the North African Arab states, have a middle level human development. It is also worth noting that oil-rich Norway has the highest HDI among all countries in the world.<sup>12</sup>

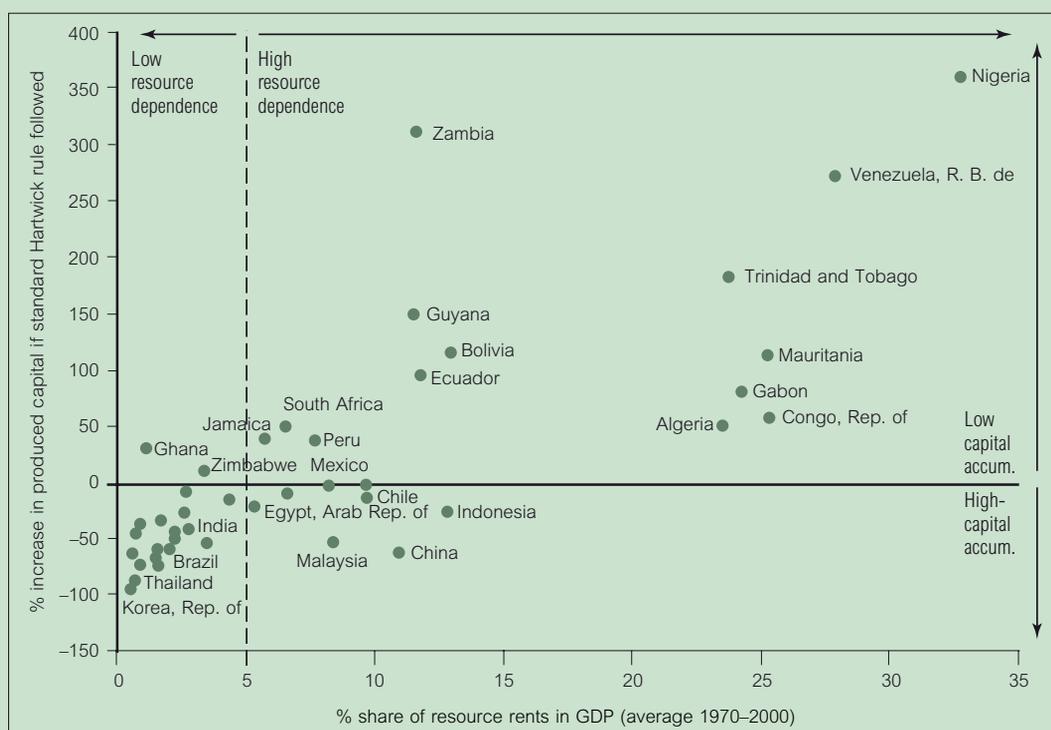
A deeper analysis of the HDI data (Table 4.3) indicates that the primary factor of the human development status seems to be *geography* and not resource abundance — that is, whether a country is landlocked or not — as landlocked countries as a group score very low in this index calculation

<sup>12</sup> UNDP (2006) — <http://hdr.undp.org/hdr2006/statistics/documents/hdi2004.pdf>

(average 0.42). There is no difference between resource-rich and resource-scarce countries (0.51), but it should be noted that oil-rich countries are doing considerably better in this aspect than primarily mineral-rich countries (0.55 vs. 0.46).

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 exploitation and production, such industries employ only a relatively

Figure 4.7: Counterfactual Exercise — Imposing the Hartwick Rule



Source: AfDB Development Research Department, with data from Bosworth and Collins (2003)

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.<sup>13</sup> As shown in Table 4.3, income inequality in resource-rich African countries is, indeed, noticeably higher (Gini Coefficient of 31.1) than in resource-scarce countries (Gini Coefficient of 26.8). Furthermore, it is worth noting that income inequality is comparatively higher in mineral-exporting countries, in landlocked countries, and in the SANE country group.

<sup>13</sup> Overseas Development Institute (2006)

Table 4.3: Resource Abundance and Social Performance

|                                      | Human Development Index<br>(HDI) (Scale 0–1; Niger<br>lowest with 0.31; Seychelles<br>highest with 0.84) | Income Inequality<br>(GINI Coefficient Index;<br>scale 0–100)* |
|--------------------------------------|--|--|
| <b>1- Resource-rich countries</b>    | 0.51   | 31.1   |
| Oil-exporting countries              | 0.55   | 15.3   |
| Mineral-exporting countries          | 0.46   | 46.8   |
| <b>2- Resource-scarce countries</b>  | 0.51   | 26.8   |
| <b>3- Landlocked countries</b>       | 0.42   | 45.0   |
| Resource-rich landlocked countries   | 0.42   | 41.6   |
| Resource-scarce landlocked countries | 0.40   | 42.8   |
| <b>4- Coastal countries</b>          | 0.55   | 22.1   |
| Resource-rich coastal countries      | 0.52   | 28.7   |
| Resource-scarce coastal countries    | 0.58   | 14.7   |
| <b>5- Africa</b>                     | 0.51   | 45.9   |
| SANE                                 | 0.63   | 42.8   |

\* For the GINI Co-efficient Index; 0 corresponds to perfect equality

Sources: UNDP (2006), Human Development Report 2006; World Bank (2006d)

### ***Stylized Features for Africa — Summary***

The features and issues described and analyzed above further illustrate that resource-rich African countries have *not* fully exploited the true (potential) benefits of having significant natural resource wealth. However, geographic factors — most importantly, whether a country is landlocked or not — also play a very significant role in the present-day status as landlocked countries perform worse in nearly all aspects analyzed.

Overall, the 20-year period from 1980–2000, in particular, was disappointing for resource-rich countries in Africa. Hard lessons have been learned from the past resource boom and bust cycles and from two decades of very disappointing growth rates. These lessons need to be reviewed

and used for the future, especially now that a new boom has gained traction in Africa. The following sections further explore these issues, taking into account relevant theoretical aspects and empirical data.

### **Explaining the Resource Curse: Main Causes, Drivers, and Sustainers**

There is a large body of literature on the reasons why countries may suffer a “curse” rather than a “blessing” following large inflows of oil, gas, or mineral revenues. Some authors<sup>14</sup> cite three exogenous causes: (1) structuralist policies, (2) Dutch Disease, and (3) export-based theory; and three

<sup>14</sup> For example, Auty (2001)

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endogenous causes: (1) policy failures, (2) inefficient investment, and (3) rent seeking. This Report further examines these causes, which, for analytical purposes, are grouped as follows<sup>15</sup>:

- revenue and macroeconomic volatility;
- Dutch Disease and crowding out effects;
- the role of the state; and
- socio-cultural and political impacts.

### ***Revenue and Macroeconomic Volatility***

Commodity booms are typically not permanent and prices tend to show at least some degree of mean reversion over time. As a result, countries that have experienced one or more commodity export price booms will typically also have faced high volatility of export prices. In many cases, resource booms have encouraged less prudent fiscal policies with limited control and inflation, further hampering growth, equity, and the alleviation of poverty.<sup>16</sup> The majority of resource-rich countries tend to have limited transparency in the management of natural resource revenues, leading to the creation of parallel budgets. As a result, price stability and budgetary discipline suffer. Thus, even as natural resource money is “pouring in”, countries often have fiscal deficits, and, sometimes, double-digit inflation. Such volatility can be detrimental to growth in several respects: It is harmful to investment, income distribution, educational attainment and poverty alleviation. It also hampers exchange rate unification and trade liberalization. Furthermore, it makes invest-

ments more risky, while public spending decisions tend to become compromised, with extravagant commitments made during booms that subsequently lead to drastic cuts in vital expenditures during troughs.<sup>17</sup>

Evidence from recent years shows that both oil and non-fuel commodity (including metals) prices have experienced extreme volatility. Indeed, resource-rich African countries have experienced repeated boom-bust cycles over the past decades (as demonstrated in Figure 4.8). Despite recent increases, the prices of most non-fuel commodities remain below their historical peaks in real terms. Over the past five decades, commodity prices have fallen relative to consumer prices at the rate of about 1.6 percent a year<sup>18</sup>. This downward trend is usually attributed to large productivity gains in the agricultural and metals sectors relative to other parts of the economy.

However, compared with the prices of manufactured goods, commodity prices stopped falling in the 1990s as the growing globalization of the manufacturing sector slowed producer price inflation. Indeed, metal prices increased by over 75 percent during previous cyclical upturns, reflecting long gestation lags for increasing capacity in the industry and the low price elasticity of demand. Over the past five years, commodity prices have evolved very differently across various subgroups of the non-fuel index. For example, the prices of some non-fuel commodities have increased more than oil prices — the metals index has risen by 180 percent in real terms since 2002, while oil

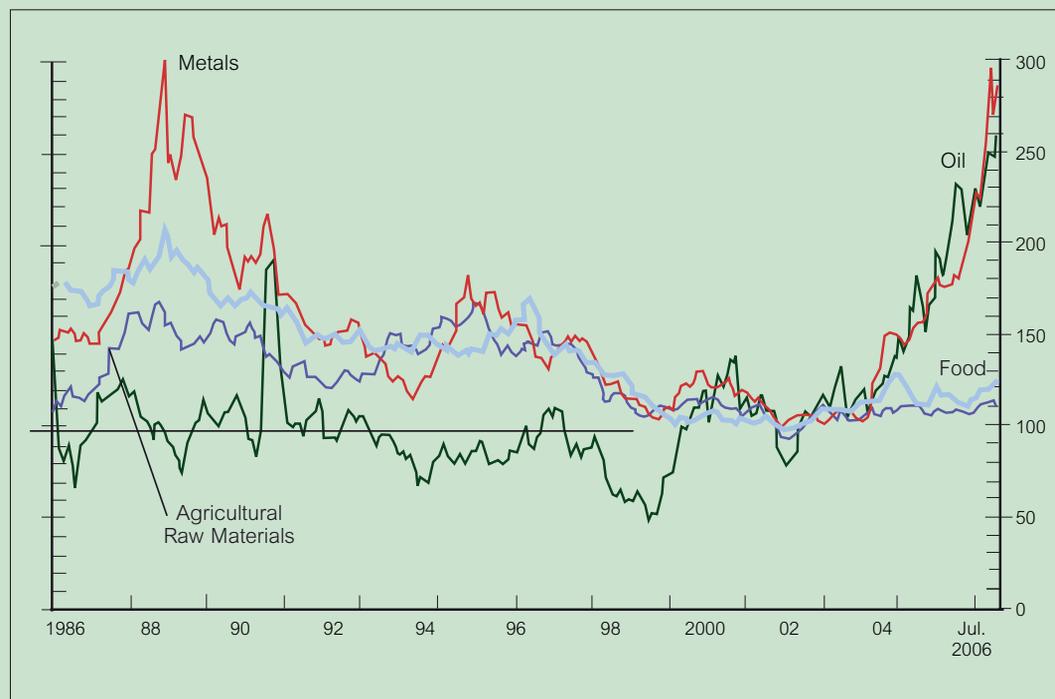
<sup>15</sup> See Stevens (2003)

<sup>16</sup> Ploeg (2007)

<sup>17</sup> Ibid.

<sup>18</sup> See Stevens (2003)

**Figure 4.8 Recent Volatility in Commodity Prices**  
(2002 = 100; monthly data prices deflated by U.S. CPI)



Source: AfDB Statistical Department — Computed from IMF (2007) data.

prices have increased by 157 percent. The prices of food and agricultural raw materials increased much less (by 20 and 4 percent, respectively). As a result, metals have contributed almost 90 percent to the cumulative 60 percent real increase in the non-fuel commodity index since 2002.<sup>19</sup>

Part of the unusually strong run-up in metal prices experienced in recent years can be attributed to the low investment in the metals sector in the late 1990s and early 2000s

— following a period of earlier price declines. Some analysts have also suggested that the intensity of the price upswing in this cycle is amplified by new factors — the increasing weight of rapidly growing emerging markets (most notably China and India) in the world economy and the investment activity of financial investors in commodity markets.

#### ***Dutch Disease and Crowding Out Effects***

Originally, Dutch Disease was used to refer to the appreciation of the real exchange rate:

<sup>19</sup> IMF (2006)

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the result of inflation arising from the spending of revenues, leading to an overheated economy and an appreciation of the nominal exchange rate as the domestic currency attracted higher demand. This usually leads to a contraction in the non-oil, gas, or mineral traded sector. Some scholars use the “Dutch Disease concept” in a narrow sense to explain the failure of resource-abundant economies to promote a competitive manufacturing sector. However, in most cases, Dutch Disease has taken on a much wider meaning and is usually meant to encompass all of the negative macro-economic effects associated with “resource curses”.<sup>20</sup>

Two effects of the Dutch Disease have evolved as key elements of the resource curse: the “resource movement effect” and the “spending effect”. In the case of the resource movement effect, a higher marginal product in the booming resource sector draws resources out of other sectors<sup>21</sup>, causing the latter to contract. The spending effect occurs when, as a result of the revenue windfall, demand rises in both tradable and non-tradable sectors of the economy. Since prices in tradable sectors are largely determined by the international market, greater demand is met by higher imports. However, prices in non-tradables rise relative to tradables and, consequently, resources shift from tradables to non-tradables.

Other dimensions of the Dutch Disease syndrome, conceptualized as the contraction of the tradable sector, have emerged. A

first dimension of this detrimental development occurs when subsidies used to protect non-resource tradable sectors — that are weakened by the boom — aggravate the sector’s problems and eventually become unsustainable. A second dimension is the “leap frog effect” which occurs when governments miss the labor-intensive phase of industrialization and move straight to a heavy, capital intensive phase with negative effects for the tradable sector. A third dimension relates to the issue of learning by doing in the context of Dutch Disease<sup>22</sup>, which assumes that because learning by doing benefits only accrue from tradable sectors, a contraction in these sectors implies lower productivity. The fourth dimension of the extension of the Dutch Disease syndrome relates to the impact of natural resources on social capital, whereby it has been suggested that resource-scarce countries accumulate social capital faster than resource-rich countries.<sup>23</sup> The rationale for this is that limited natural resources promote early industrialization and force earlier urbanization, which, in turn, stifles entrepreneurship and allows people to escape from villages into urban environments with greater anonymity and better functioning markets. At the same time, this confers a saving dividend by reducing the dependency ratio.

Based on a series of international rankings, it is evident that private investors in Africa face more hurdles than investors in other economies. Infrastructure constraints and unfavorable business environments

<sup>20</sup> Sarraf and Jiwanji (2001)

<sup>21</sup> Farmanesh (1991)

<sup>22</sup> Gylfason et al. (1997)

<sup>23</sup> Woollcock et al. (2001)

impose significant costs on the private sector in terms of starting a business, the time it takes to register property, and the rigidity of labor markets, and so on. These are some of the factors that, among others, have led to low business diversification in Africa, most significantly, in oil-rich countries. As Table 4.4 clearly shows, the diversification index of resource-rich countries as a whole is much lower than that of resource-scarce African countries (see also Figure 4.9). In 2005, for example, the diversification index of resource-rich countries was only 4.1, while that of resource-scarce countries was almost double this level, at 8.4. However, it is worth noting that low diversification is primarily a problem in oil-exporting countries (with a score of only 1.9 in 2005), whereas this issue is less problematic in mineral-exporting countries (a score averaging 6.3).

Fig 4.9: Diversification Index

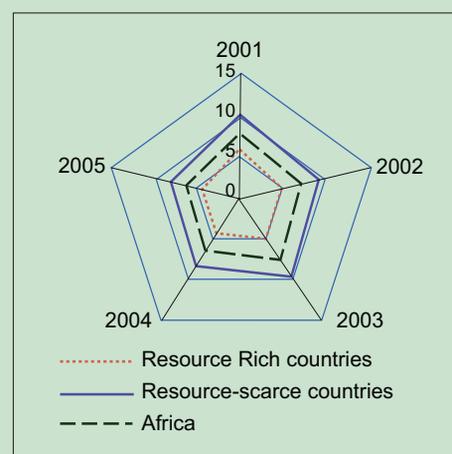


Table 4.4: Natural Resource Abundance and Diversification Index, 2001–2005

|                                      | 2001 | 2002 | 2003 | 2004 | 2005 |
|--------------------------------------|------|------|------|------|------|
| <b>1- Resource-rich countries</b>    | 5.5  | 5.1  | 5.1  | 4.5  | 4.1  |
| Oil-exporting countries              | 2.6  | 2.2  | 2.1  | 2.0  | 1.9  |
| Mineral-exporting countries          | 8.4  | 7.9  | 8.2  | 7.1  | 6.3  |
| <b>2- Resource-scarce countries</b>  | 10.1 | 9.4  | 9.5  | 8.6  | 8.4  |
| <b>3- Landlocked countries</b>       | 4.7  | 4.6  | 4.5  | 4.4  | 4.6  |
| Resource-rich landlocked countries   | 3.9  | 2.3  | 3.0  | 2.3  | 2.2  |
| Resource-scarce landlocked countries | 4.6  | 4.4  | 3.9  | 4.0  | 3.9  |
| <b>4- Coastal countries</b>          | 9.6  | 8.8  | 8.9  | 7.9  | 7.4  |
| Resource-rich coastal countries      | 5.8  | 5.7  | 5.6  | 5.0  | 4.5  |
| Resource-scarce coastal countries    | 13.0 | 11.5 | 11.7 | 10.2 | 9.8  |
| <b>5- Africa</b>                     | 8.2  | 7.6  | 7.7  | 6.9  | 6.6  |
| SANE                                 | 16.5 | 15.3 | 15.2 | 13.4 | 12.3 |

Source: OECD and AfDB (2007), African Economic Outlook 2007

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Table 4.5: Natural Resource Abundance and Competitiveness Index, 2007

|                                      | Overall Index | Basic requirements | Efficiency enhancers | Innovation enhancers |
|--------------------------------------|---------------|--------------------|----------------------|----------------------|
|                                      | Score         | Score              | Score                | Score                |
| <b>1- Resource-rich countries</b>    | 3.4           | 3.8                | 3.1                  | 3.1                  |
| Oil-exporting countries              | 3.3           | 3.7                | 2.9                  | 3.0                  |
| Mineral-exporting countries          | 3.5           | 3.9                | 3.3                  | 3.2                  |
| <b>2- Resource-scarce countries</b>  | 3.4           | 3.7                | 3.2                  | 3.3                  |
| <b>3- Landlocked countries</b>       | 3.1           | 3.3                | 2.9                  | 2.9                  |
| Resource-rich landlocked countries   | 3.2           | 3.6                | 3.0                  | 2.7                  |
| Resource-scarce Landlocked countries | 3.0           | 3.2                | 2.9                  | 3.0                  |
| <b>4- Coastal countries</b>          | 3.7           | 4.0                | 3.3                  | 3.4                  |
| Resource-rich coastal countries      | 3.5           | 3.9                | 3.2                  | 3.2                  |
| Resource-scarce Coastal countries    | 3.9           | 4.2                | 3.5                  | 3.6                  |
| <b>5- Africa</b>                     | 3.4           | 3.8                | 3.1                  | 3.2                  |
| SANE                                 | 4.0           | 4.4                | 3.6                  | 3.7                  |

Source: World Bank and AfDB (2007), The African Competitiveness Report

In terms of competitiveness in African countries, Table 4.5 shows that there is little difference between the performance of resource-rich and resource-scarce African countries. While landlocked countries underperform, the performance of mineral-exporting and resource-rich coastal countries is marginally better than that of the resource-rich group at large.

### ***Economic Policy Failures***

The effect that natural resource revenues have in exposing existing policy failures — including, on economic investment, regulatory reform, and trade — are also linked to the Dutch Disease. For example, policy decisions on economic diversification — choices governments make in supporting regulatory reform, skills development,

business support, and public investment in physical infrastructure such as ports and roads — have an impact on the way in which the Dutch Disease affects the economy. At least two features have a key impact here: the effect of resource booms (through government investments and industrial policy) on tradable versus non-tradable sectors; and, the differential effect of this impact depending on whether government policy is skewed towards sectors that are “close to”, or “far from”, the natural resource market.<sup>24</sup>

### ***Poor Industrial Policy***

In the 1970s and 1980s, in particular, many resource-rich countries adopted industrial

<sup>24</sup> Ploeg (2007)

policies that were based on import substitution characterized by the introduction of subsidies (based on the infant industry argument) and growing protectionism. This was seen initially as the means to break out of the circle of underdevelopment — a variant of the “big-push” argument. However, these subsidies became unsustainable when revenues fell (the bust cycle). In addition, with subsidies and protection in place, continuing resource revenues reduced the incentive to create competitive manufacturing industries. Given that many development economists regard competitive manufacturing as a key source of technological progress this has had serious implications on economic progress.<sup>25</sup>

Thus, the relaxation of market discipline and the associated accumulation of economic distortions retards competitive diversification and lies at the heart of the general underperformance observed in many resource-rich African countries in the 1980s and 1990s. However as described and outlined through empirical evidence earlier in this chapter, there are some indications that (thanks to the lessons learned) the policies pursued today in exploiting the current resource boom are, indeed, more sustainable — or, at least, less damaging to resource-rich economies. However, any firm conclusions in this regard will have to wait for a downtrend or the full completion of a resource boom-bust cycle.

### The Role of the State

In most countries and legal regimes, oil, gas, and minerals are the property of the state;

<sup>25</sup> Ibid.

the revenues in the first instance accrue to the government, inevitably inviting government action in one way or the other 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.

### Bad Decision-Making

The first strand argues that large windfall revenues lead to poor general decision-making by governments. This is attributable to several factors<sup>26</sup>:

- 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 a decline in productivity.
- The development of oil, gas, or minerals raises expectations among the population. This pressures government to “do something”, thus encouraging speedy responses. This often leads to quick, inappropriate, and poorly coordinated decisions.
- Having more money to “play with” tends to weaken prudence and normal procedures of “due diligence”. In particular, governments may decide on

<sup>26</sup> Also refer to Ploeg (2007); Auty (2001); Auty (2004); Stevens (2003)

capital spending without due thought to recurrent spending implications.

- Governments often dramatically increase public spending based on unrealistic revenue projections. In resource-dependent countries, wind-falls 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, different interests and groups continue to demand even larger shares of national income when natural resource revenues go into a downtrend.

### ***Enhanced Corruption and Rent-Seeking***

Natural resource booms often decrease the quality of public spending and encourage rent seeking.<sup>27</sup> The centralization and, hence, concentration of fiscal resources from resource booms fosters excessive and imprudent investment. It often also leads to some level of mismanagement and misallocation of resources and in the most severe cases, massive corruption.

The key issue is that natural resource revenues tend to replace more stable and sustainable revenue streams, exacerbating problems related to development, transparency and accountability. With sizeable resource revenues, the reliance 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 that are 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 many economies. Second, it distracts attention away from long-term development goals towards 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.<sup>28</sup>

Governance indicators such as government effectiveness, voice and accountability, political instability and violence, the rule of law, regulatory quality, and control

<sup>27</sup> Ibid.

<sup>28</sup> See Stevens (2003)

Table 4.6: Natural Resource Abundance and Governance Indicators

|   | Voice and<br>Accountability | Political<br>Stability | Government<br>Effectiveness | Regulatory<br>Quality | Rule<br>of Law | Control of<br>Corruption |
|---|-----------------------------|------------------------|-----------------------------|-----------------------|----------------|--------------------------|
|   | 2006                        | 2006                   | 2006                        | 2006                  | 2006           | 2006                     |
| <b>1- Resource- rich countries</b>      | -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                     |
| <b>2- Resource-scarce countries</b>     | -0.5                        | -0.4                   | -0.7                        | -0.7                  | -0.6           | -0.5                     |
| <b>3- Landlocked countries</b>          | -0.6                        | -0.6                   | -0.7                        | -0.7                  | -0.7           | -0.6                     |
| Resource-rich landlocked countries      | -0.6                        | -0.5                   | -0.7                        | -0.6                  | -0.7           | -0.6                     |
| Resource-scarce landlocked<br>countries | -0.5                        | -0.6                   | -0.7                        | -0.6                  | -0.6           | -0.7                     |
| <b>4- Coastal countries</b>             | -0.6                        | -0.4                   | -0.7                        | -0.7                  | -0.7           | -0.6                     |
| Resource-rich coastal countries         | -0.9                        | -0.7                   | -0.8                        | -0.8                  | -0.9           | -0.8                     |
| Resource-scarce coastal countries       | -0.4                        | -0.3                   | -0.6                        | -0.7                  | -0.5           | -0.4                     |
| <b>5- Africa</b>                        | -0.6                        | -0.5                   | -0.7                        | -0.7                  | -0.7           | -0.6                     |
| SANE                                    | -0.5                        | -1.0                   | -0.2                        | -0.3                  | -0.4           | -0.4                     |

Source: Kaufmann, D., Kraay, A and Mastruzzi, M (2007)

of corruption are markedly weaker in oil-rich African countries (see Table 4.6). Perhaps, surprisingly, mineral-rich countries actually perform much better and at the same level as resource-scarce countries, implying that this problem is by far most common in relation to oil exploration and revenue, at least at the present phase of the current resource boom.

#### **Revenue Misallocation and Poor Investment Decisions**

Relevant studies and literature emphasize the role of governments in the misallocation of resource revenues.<sup>29</sup> 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 they determine the extent to which politicians can respond to these perverse incentives. Nevertheless, 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.

<sup>29</sup> Ibid.

## Socio-Cultural and Political Impacts

As outlined above, countries that have abundant point-source natural resources (such as minerals or oil) tend to have less prudent policies and poor governance. They also tend to have weaker institutional capacities. In essence, natural resources are often associated with weak institutions.<sup>30</sup> Some of the reasons for this relationship and reflections on how it may be avoided are discussed in the following paragraphs.

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 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 strengthening — to minimize the impact of and damage caused by, the resource windfalls.

It has also been argued that countries in which governance (hence transparency) is initially poor face a substantial risk of turning resource windfalls into catastrophe (see Box 4.2). 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 government aspires to overall national goals and hence become accountable to citizens, regardless of its 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 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 and, 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.<sup>31</sup>

In addition, with weak institutions and legal system dysfunctions, there is a higher return on rent seeking, and a higher occurrence of crime, corruption, unfair company take-overs, and other shady

<sup>30</sup> See Stevens (2003)

<sup>31</sup> Collier and Goderis (2007)

**Box 4.2: Governance and Transparency**

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 transparent, fair, and accountable way, they are only one part of an intricate web of interests and relationships, which include multinational extractive companies foreign governments, and regional actors. The main governance-related challenges facing resource-rich countries can be summarized as follows:

*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:

- (1) Corruption in the allocation of resource concessions not only undermines governance in resource-rich countries and also entails a poor deal for their citizens. There is overwhelming evidence that concession allocation is obscure and involves a lot of corruption;
- (2) 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; and,
- (3) 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.

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

dealings. A resource bonanza thus elicits more rent seekers and reduces the number of productive entrepreneurs. In the long run, profits fall and, as a result, the economy is worse off. Weak institutions may explain the poor performance of oil-rich countries such as Angola, Nigeria, and Sudan; diamond-rich Sierra Leone, Liberia and Congo; and drug states like Columbia or Afghanistan. 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.<sup>32</sup>

The general recognition that many African countries have relatively weak institutions, low human development status, and poor governance raises great concern about how the current resource boom will affect development in the resource-rich parts of Africa. Current data is not all discouraging — as pointed out earlier, there are indeed resource-rich countries in Africa that have put in place strong institutions and enjoy consistent high economic and human development growth.

<sup>32</sup> Ross (1999); Ploeg (2007)

## Civil Wars and Other Forms of Conflict

There is strong evidence that resource abundance increases the incidence of civil conflicts and wars and stimulates violence, theft, looting, and fighting between rival groups.<sup>33</sup> Over half of the conflicts listed in Table 4.7 (see also Figure 4.10) are in Africa. Since many African states are highly dependent on oil, gas, and mineral exports, they are unusually prone to resource-related conflicts (Table 4.8). Conversely, the region's mineral abundance helps explain why a significant share of the world's civil wars has taken place in Africa. Furthermore, while mineral wealth is linked to the onset of non-separatist conflicts, evidence shows that booty futures have been used to prolong conflicts and wars. Booty futures refers to advance rights granted by a rebel group (and sometimes by governments) to companies to extract natural resources in areas that the rebels hope to capture during a civil conflict. However, it should be noted that another important reason for this trend is the persistence of poverty in Africa — poverty significantly raises the risk of civil war. A downtrend has been observed in recent years, but this should not mask the fact that Africa experienced seven civil wars in the 1970s, eight in the 1980s, and fourteen in the 1990s.<sup>34</sup>

Altogether, between the 1960s, when most African countries became independent, and the 1990s, there were more than 80

<sup>33</sup> E.g. Collier and Hoeffler (2004); (2005); Anyanwu (2002); Hodler (2006)

<sup>34</sup> Ross (2003); Collier and Hoeffler (2004); (2005); Hodler (2006)

**Table 4.7: Civil Wars Linked to Resource Wealth, 1990–2002**

| Country             | Duration  | Resources  |
|---------------------|-----------|--|
| Afghanistan         | 1978–2001 | Gems, opium  |
| Angola              | 1975–2002 | Oil, diamonds  |
| Angola (Cabinda)    | 1975–     | Oil  |
| Burma               | 1949–     | Timber, tin, gems, opium   |
| Cambodia            | 1978–97   | Timber, gems   |
| Colombia            | 1984–     | Oil, gold, coca  |
| Congo, Rep.         | 1997      | Oil  |
| Congo, Dem. Rep.    | 1996–97   | Copper, coltan, diamonds, gold, cobalt                                   |
| Congo, Dem. Rep.    | 1998–     | Copper, coltan, diamonds, gold, cobalt                                   |
| Indonesia (Aceh)    | 1975–     | Natural gas, marijuana   |
| Indonesia (W Papua) | 1969–     | Copper, gold   |
| Liberia             | 1989–96   | Timber, diamonds, iron, palm oil, cocoa, coffee, marijuana, rubber, gold |
| Morocco             | 1975–     | Phosphates, oil  |
| Papua New Guinea    | 1988–     | Copper, gold   |
| Peru                | 1980–1995 | Coca   |
| Sierra Leone        | 1991–2000 | Diamonds   |
| Sudan               | 1983–     | Oil  |

Source: Ross (2004), What do we know about natural resources and civil war?

violent changes of government in the continent. Country after country has been engaged in internal strife, conflict, or civil war.<sup>35</sup>

<sup>35</sup> Adedeji (1999)

**Table 4.8: Countries Ranked by Mineral Dependence, 2000**

| Rank | Country              | Mineral Dependence | Conflict 1990–2000 |
|------|----------------------|--------------------|--------------------|
| 1    | Bahrain              | 63.44              | 0                  |
| 2    | Qatar                | 53.37              | 0                  |
| 3    | Turkmenistan         | 49.91              | 0                  |
| 4    | Gabon                | 48.83              | 0                  |
| 5    | Nigeria              | 48.75              | 3                  |
| 6    | Saudi Arabia         | 44.74              | 0                  |
| 7    | Papua New Guinea     | 41.52              | 0                  |
| 8    | Trinidad and Tobago  | 41.16              | 0                  |
| 9    | Congo, Rep.          | 41.07              | 9                  |
| 10   | Brunei               | 37.65              | 0                  |
| 11   | Kazakhstan           | 36.11              | 0                  |
| 12   | Libya                | 35.91              | 3                  |
| 13   | Algeria              | 35.75              | 27                 |
| 14   | Botswana             | 35.10              | 0                  |
| 15   | Kuwait               | 32.41              | 3                  |
| 16   | Azerbaijan           | 28.83              | 9                  |
| 17   | Angola               | 27.88              | 74                 |
| 18   | Zambia               | 27.12              | 0                  |
| 19   | Liberia              | 26.76              | 14                 |
| 20   | Norway               | 25.97              | 0                  |
| 21   | Oman                 | 25.65              | 0                  |
| 22   | Iran, Islamic Rep.   | 25.55              | 42                 |
| 23   | Mongolia             | 25.45              | 0                  |
| 24   | Russian Federation   | 25.38              | 15                 |
| 25   | Venezuela, RB        | 23.54              | 0                  |
| 26   | Yemen, Rep.          | 22.32              | 2                  |
| 27   | United Arab Emirates | 22.13              | 0                  |

Source: Ross (2004), What do we know about natural resources and civil war?

A couple of salient characteristics distinguish the post-Cold War civil conflicts in Africa:

- 1) Natural resources figure as a prominent feature in the conflicts, both in situations of natural resource abundance (oil and minerals) and

environmental scarcities (land). In some countries, like Sudan, conflict is related to both types of resources, oil in the South and land in Darfur; and,

- 2) These conflicts involve local non-state actors, non-professional fighters, or combatants often challenging the authority and legitimacy of fragile states, regional actors, and neighboring states, and trans-global forces and networks.

Nature-based conflicts, including violent conflict, civil wars and secessionist movements, have thus been commonplace in Africa. The “blood diamonds” in Sierra Leone and Angola, timber conflicts in Liberia, oil conflicts in Nigeria and Sudan, and mineral wars in the Democratic Republic of Congo are popular examples.<sup>36</sup> Even so, local disputes over land, water, wildlife and forests are, in fact, far more common. In many places, such conflicts overwhelm rural courts and traditional mediation platforms.<sup>37</sup>

The root causes of civil wars in Africa are complex and lie in a combination of factors, whether in resource-rich or resource-scarce countries. However, there is a growing body of empirical evidence that rents on natural resources and primary commodities, especially oil and other point-source natural resources, increase chances of civil conflicts

<sup>36</sup> Bannon and Collier (2003); Lind and Sturman (2002); Cilliers and Dietrich (2000); Reno (2000); Lipschutz (1987)

<sup>37</sup> Wolf et al. (2005); Veit and Benson (2004); LHRC (2003); Newmann (1998); Shivji (1998); Shivji and Kapinga (1998); Lane (1996)

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and wars — especially in sub-Saharan Africa — by weakening the state or financing rebels. Sometimes this can even be related to engagements by multinational corporations. It is important to investigate whether civil strife and wars are the result of *grievance*, a sense of injustice about how a social group is treated (for example, systematic economic discrimination), or *greed* possibly induced by massive rents of point-source resources, as commonly highlighted in the cases of Angola, Congo, and Sierra Leone.<sup>38</sup>

Other studies show<sup>39</sup> that the largest single influence on the risk of conflict is the extent to which a country depends on primary commodity exports, and the effect is nonlinear. For instance, the probability of civil conflict in a country with no natural resources is only 0.5 percent, but it is more than 23 percent in a country with a share of natural resources (oil and minerals) of more than 25 percent in the GDP. This suggests that many conflicts are driven by greed rather than by grievance. Based on these results, the different variants of the “resource curse” theory attribute the poor resource exploitation record in resource-dependent states, either to the “predatory” inclinations of the state or to the “greed” of rebels. Apart from other empirical results pointing to the contrary, such conceptualization suggests irrational behavior by the main actors involved in the control and management of natural resources.

However, the above explanation misses the crucial point that waste and degradation

of natural resources in conflict-prone countries can most commonly be traced to government policy failures. Government officials sometimes induce and engage in unsound natural-resource exploitation in order to pursue economic and political objectives that are, in principle, *unrelated* to the natural-resource sector. Even rebel groups depending on the strength or weakness of their organizational structures, often pursue various broader programmatic and political objectives.<sup>40</sup>

As mentioned earlier, empirical evidence also strongly suggests that conflict is more likely to erupt in countries with a low level of GDP per capita and low rate of economic growth. The three factors that determine the onset of armed conflict — natural resources, low income per capita, and low growth — are prevalent in large parts of the African continent. The literature<sup>41</sup> highlights other factors that may be significant, such as vertical and horizontal inequality and religion. The conflicts in Rwanda and Burundi, for instance, were not primarily driven by economic factors.

The effect of natural resources on the incidence and duration of civil wars also features strongly in the political science literature.<sup>42</sup> In fractionalized countries, many rival groups fighting for natural resources may well harm the quality of the legal system and thus undermine property rights. The resulting destruction of output outweighs the increase in output due to the resource boom. Fractionalization and

<sup>38</sup> Murshed (2002); Olsson and Fors (2004)

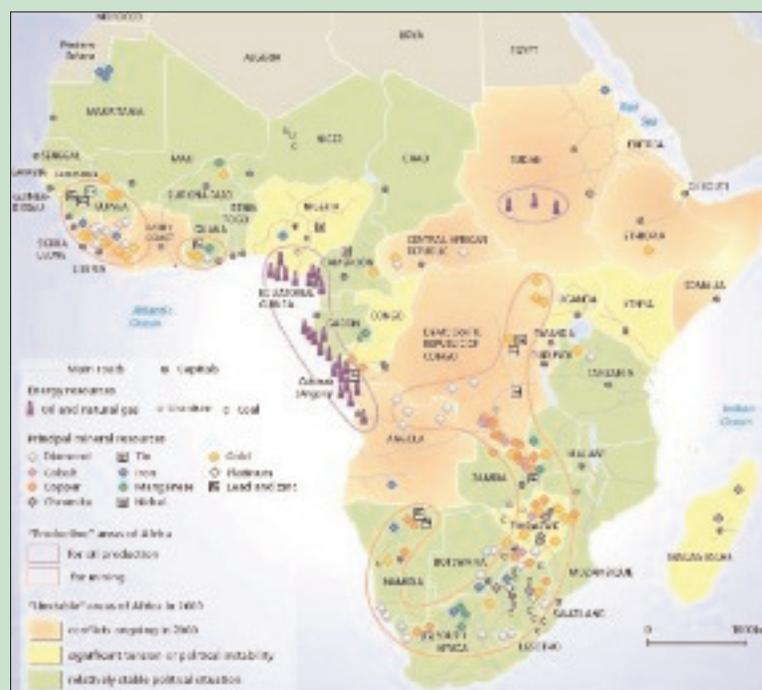
<sup>39</sup> Collier and Hoeffler (2004); (2005)

<sup>40</sup> Weinstein (2005)

<sup>41</sup> E.g. Stewart (2000; 2002)

<sup>42</sup> E.g. Ross (2004); Fearon and Laitin (2003)

Figure 4.10: Natural Resources and Conflict



Source: DFID (2006b)

fighting for natural resource bounties can thus lead to dissipation of natural resource rents. Erosion of property rights, when there are many natural resources, can easily lead to the resource curse, especially if there are many rival fractions.<sup>43</sup> The “idea” is that each group manages to appropriate more natural resources if it fights more and the quality of the legal system is poor, but fighting also undermines effective property rights. There is some cross-country empirical evidence that the resource curse is more

severe in countries that have many ethnic or religious fractions and many languages.

Easily lootable resources such as gemstones tend to prolong conflicts — that is, when rebel groups and rulers and their cronies fight each other over the control of point-based resources. For example, with the exception of Botswana, Namibia, and South Africa, diamond abundance on the African Continent has been shown to generally lead to depressed growth, mostly so in countries with weak institutions.<sup>44</sup>

<sup>43</sup> Hodler (2006)

<sup>44</sup> Ollson (2007)

## Natural Resource Wealth Management in Fragile African States

Africa has a considerable number of fragile states, by far the highest number of any continent. While there are several definitions of what a fragile state is, what is most important in the context of this Report is the strong overlap between underperforming, resource-rich countries and countries widely accepted as being fragile in one form or another. It is worth noting that fragile circumstances take different forms in different countries and even within the same country at different times. There are major differences in terms of political and public security environments, institutional capacity and performance, government accountability, and commitment to progress along a credible reform path. These differences have major implications for the scope and nature of engagement by development partners. Indeed, experience has shown that a uniform approach to widely differing circumstances on the ground often fails to produce desired results and, in many circumstances, has precluded forms of selective engagement that could be both justified and effective.<sup>45</sup>

A stylized categorization of these different circumstances illustrates a simplified continuum along which fragile circumstances typically fall — ranging from marked deterioration to active conflict or prolonged crisis, to post-crisis and transition, and, finally, to gradual improvement (Figure 4.11). The categorization also sets

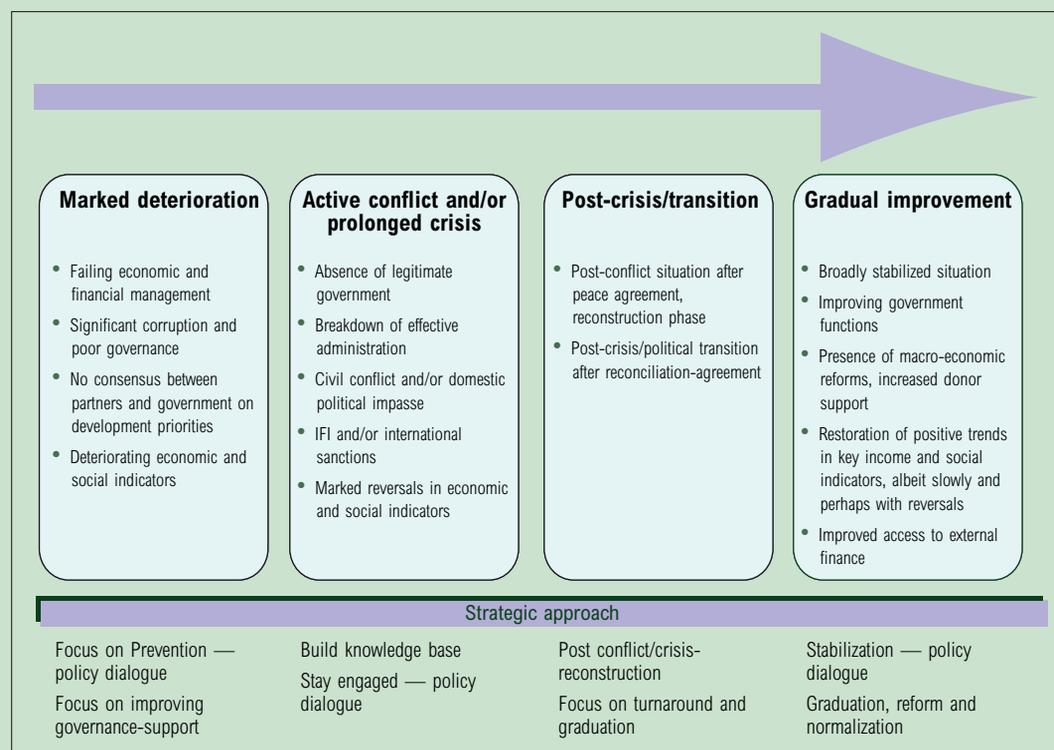
out, in broad terms, strategic avenues through which governments and donors might address development in a fragile state. Needless to say, for natural resource-rich countries, the natural resource sector is an extremely important focal point, considering the whole spectrum of opportunities and challenges natural resource wealth implies (as outlined in earlier sections).

In reality, movement along this continuum (Figure 4.11) is neither automatic nor unidirectional, as countries may move back and forth between various fragile situations. The goal is to help prevent countries at risk from slippage and to help countries in post-conflict and post-crisis situations move towards more stable political and economic development. Helping countries (resource-rich as well as resource-scarce) progress along the continuum requires an internationally coordinated strategic effort that covers a country's political, security, and socio-economic domains. The key, in this regard, is a differentiated and flexible response.

Analyzing the management of mineral (and oil) resources in fragile states further reveals that it has largely been molded by four interrelated conditions that are defined by the interplay of state power, contest, and conflict over the control of mineral resources. These are (1) public policy failures; (2) state predation or “shadow state”, where rent-seeking substitutes rent creation; (3) rebel-dominated war (shadow) economies; and, (4) vested interests of regional and international actors. Two of these conditions have been discussed in the earlier sections of this chapter. The following analysis thus focuses primarily on

<sup>45</sup> AfDB (2007c)

Figure 4.11: Continuum of Fragile States' Concept



Source: AfDB (2007c), Enhanced Engagement in Fragile States, Discussion Paper

state predation and on regional and international actors.

### **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, instead of transforming the state and making it relevant for the satisfaction of the needs and aspirations of the people, 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

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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.<sup>46</sup>

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.<sup>47</sup>

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 off-shore, 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. Similar practices have been identified in the management of uranium mines in Niger, phosphates in Togo, and bauxite and aluminum in Guinea. Only meager revenues reach the state treasury, if at all, while the real royalties are paid directly into the foreign bank accounts of politicians.<sup>48</sup>

### ***The Vested Interests of Regional and International Actors***

The plundering of natural resources is not always confined to the warring factions within the boundaries of a given fragile state, but sometimes involves neighboring countries. Regional actors become involved in the exploitation of a neighboring state's natural resources through (1) the inter-related processes of proliferation of "war economies" and regional conflict formations; and, (2) direct military intervention in support of either the incumbent government or of armed insurgents.

State fragility or failure produces a number of economic ripple effects that are felt by other states in the region, with war or "shadow" economies as direct consequences. The interlinked conflict processes in Liberia and Sierra Leone, for example, have allowed huge amounts of timber and diamonds to be smuggled out by miners and shadow economic entrepreneurs.<sup>49</sup> An

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<sup>46</sup> Castells (2000)

<sup>47</sup> Ibid.

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<sup>48</sup> Hibou (1999)

<sup>49</sup> Humphreys (2005)

important aspect of resources and conflict is the role of third-party governments seeking to profit from resource-rich neighbors. Of all the post-Cold War civil conflicts in Africa, none reflects the complexities of the connection between natural resources and conflict more than the civil war in the DRC — referred to as “Africa’s world war”.

The corporate business practices of international actors are another issue. Since the end of the Cold War, foreign involvement in African conflicts has changed, giving way to the more subtle activities of non-state actors, especially private security firms, multinational corporations (MNCs), and non-governmental organizations. This foreign involvement falls into two main categories. The first, and perhaps the most controversial, is by foreign mercenary firms, euphemistically described as private security organizations (PSOs). Economic globalization has led to greater profits from investments in natural resource extraction, particularly in fragile African states, where there are impressive opportunities for profits. This has spurred increased investment by MNCs.

The second, and perhaps most important, type of external involvement in African conflicts, is by foreign multinational extractive companies (MECs), many of which have exploited situations of conflict to maximize their own profits. Unlike manufacturing or other secondary or tertiary industries, extractive industries do not divest or relocate when conflicts erupt. Given the nature and strategic importance of natural resources (especially oil and gas), the potential profits, and the capital-intensive and long-term nature of the investment,

MECs are not deterred by unpredictable or dangerous situations. Although some MECs have been known to divest in situations of instability and violence, the typical pattern of these companies is to factor in the costs of extra risks and stay on course. The business practices of MECs in African fragile states have, in various ways, contributed to conflict promotion.<sup>50</sup>

### Transboundary Natural Resource Management

Africa faces numerous transboundary challenges, ranging from the continent’s shaky political and economic spectra, to sectoral issues related to health, agriculture, natural resources management, and the environment. Regional cooperation has a fairly long history in virtually all parts of Africa, although the focus had, for a long time, been on regional economic integration schemes. While some progress has been made in this direction, new challenges related to water scarcity, deforestation, desertification, droughts, floods, and other environmental and natural resource issues have emerged in recent years.

These challenges have focused attention on regional cooperation in addressing transboundary issues to an extent that is far beyond conventional political and trade-related dimensions. Global warming, among others, requires response strategies that go far beyond national borders. In the water sector, the Nile River Basin is a very good example of a common pool of resources, which can only be harnessed through effective cooperation across countries. Another example is the

<sup>50</sup> Ballentine (2004)

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observed coastal erosion in West Africa, which poses a transboundary challenge, as it is closely associated with deforestation in the tropical rainforests and in mangroves. Similar issues have emerged in East African coastal areas. Numerous examples can be provided on current *and potential* severe environmental and social impacts in Africa that are transboundary in nature (cause or effect). Some of the most important are related to *renewable* natural resources, such as water and land (described in Chapter 2). Others are related to non-renewable resources, for instance extraction of hydrocarbons (Box 4.3).

Sound “Transboundary Natural Resource Management” is essentially concerned with ensuring that goods, resources, and services of a transboundary nature — whose benefits

and costs spill over national borders — are effectively managed through shared commitment and collective action, or collective efforts from all individuals or groups that benefit directly or indirectly from the goods or services. In the absence of cooperation and collective action, problems of externalities (positive or negative) arise.<sup>51</sup>

### **Addressing the Challenges**

While sovereignty remains crucial in dealing with Africa’s transboundary challenges, the political will of countries to perceive common challenges and to conclude binding agreements is the key determining factor. Joint strategies, policies, frameworks and subsequent commitments to address transboundary issues only yield meaningful results if the commitments are honored, or the common rules mutually respected. While mechanisms for sanctioning violators may sometimes become incentives for cooperation on transboundary issues, lack of cooperation, in most cases in Africa, is related to lack of means for honoring the commitments. This is particularly the case for many of Africa’s small countries, which most often lack the technical, financial, and human resource capacity to honor transboundary commitments such as those related to river basin management, cross border trade in forest resources, conflict resources, international wildlife, and desertification. There is a clear need to strengthen African countries’ capacity to implement transboundary commitments.

#### **Box 4.3: Transboundary Cooperation in Extraction of Hydrocarbons**

Hydrocarbon reserves in East Africa have been the focus of considerable attention and speculation in recent years. If not managed carefully, the potentially rich reserves in the Great Lakes region risk becoming a destabilizing factor among the nations, rather than an opportunity for joint development. In March 2007, a summit of 22 of the region’s energy ministers was convened in Mozambique to discuss related issues. The hydrocarbons resources in the region have the potential to ameliorate the energy crisis significantly. However, successful exploitation of the resources will depend on security and stability, as well as on regional cooperation

Source: Oxford Analytica (2007), Africa: Middle East and Africa Executive Summary

<sup>51</sup> Bromley (1992)

**Box 4.4: The African Development Bank and Transboundary Issues**

As the leading development institution on the continent, the African Development Bank has long recognized its important role in helping Africa to overcome its transboundary challenges. In this regard, the Bank is actively providing support in critical areas of transboundary cooperation, which include river basin management, regional economic integration, regional cooperation on health, collaborative research (especially in agriculture), cooperation on infrastructure, and conflicts and conflict resolution. The Bank Group continues to deepen its focus on programs that provide opportunities for overcoming these challenges to improve the access of the poor to productive resources (notably water and land), technology and knowledge, and social services.

In the area of transboundary river basin management, the Bank is actively supporting river basin authorities and institutions. Examples include the Volta Basin Authority (West Africa), the Nile Basin Initiative (NBI) in Eastern and Northern Africa, and the Okavango and Limpopo Basins in Southern Africa, among others. The Bank's support is provided in the form of grants for project operations, as well as support extended through the African Water Facility.

With its current structure, which includes a "Knowledge Centre" (The Office of the Chief Economist), the Bank has further boosted its efforts in knowledge generation and dissemination, including research and training, and the provision of research and knowledge-related support to its RMCs. A key focus is transboundary issues.

*Source:* AfDB (2007b), Regional Cooperation: Addressing Trans-Boundary Challenges

Another important issue relates to the negotiation power of small and larger countries in Africa, with huge divergence in their technical, human, and financial capacities. In the case of river basin management, up-to-date technical knowledge of the short- and long-term dynamics of the water situation is required by all parties for equal bargaining power at negotiations. Thus, capacity building and technical assistance — to level the playing field — are crucial elements that should not be neglected in addressing transboundary issues. By its very nature, transboundary cooperation requires a lot of coordination and synchronization of activities, since everyone's participation and contribution are critical to minimizing externalities (positive and negative) and avoiding free riding on the efforts of others.

### The New Scramble for Africa's Natural Resources

The last decade has seen a rapid increase in trade and investment flows between Africa and Asia, especially with China and India. India has a long history of trade and foreign direct investment in East Africa, in particular, given the many expatriate Indian communities in the sub-region. China's trade and investment in Africa date back decades, with heavy early investments in infrastructure such as railway systems. The basic facts about trade relations between Asia and Africa are as follows:<sup>52</sup>

- The volume of African exports to Asia is accelerating. It grew by 15 percent

<sup>52</sup> Broadman (2007)

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between 1990 and 1995; and it has grown by 20 percent during the last five years (2000–2005).

- Since 2005, Asia's share of African exports (27 percent) has been on par with EU (32 percent) and the US (29 percent) shares.
- Asian exports to Africa are also growing rapidly. In the last five years, they have grown 18 percent more than exports from any other region, including from the European Union.
- Eighty-six (86) percent of Africa's exports to China and India are oil, metals, and agricultural raw materials.
- Five oil- and mineral-exporting African countries account for 85 percent of exports to China, while South Africa alone accounts for 68 percent of exports to India.

As illustrated in Figure 4.12, one of the most significant developments for Africa is the growing importance of capital flows from Asian countries such as China, India, South Korea, and Malaysia.

Foreign direct investment (FDI) from Asia to Africa has increased significantly in recent years. In 2005, Asian countries accounted for about 15 percent of the USD 31 billion FDI flows to Africa. Such investment contributes directly to the country's gross domestic product, generates employment, and reduces poverty. Africa is likely to benefit from Asian investments in a number of other ways:

- Asian investments facilitate the transfer of skills and technology to Africa. With their low-cost, low technology, Asian firms could create condi-

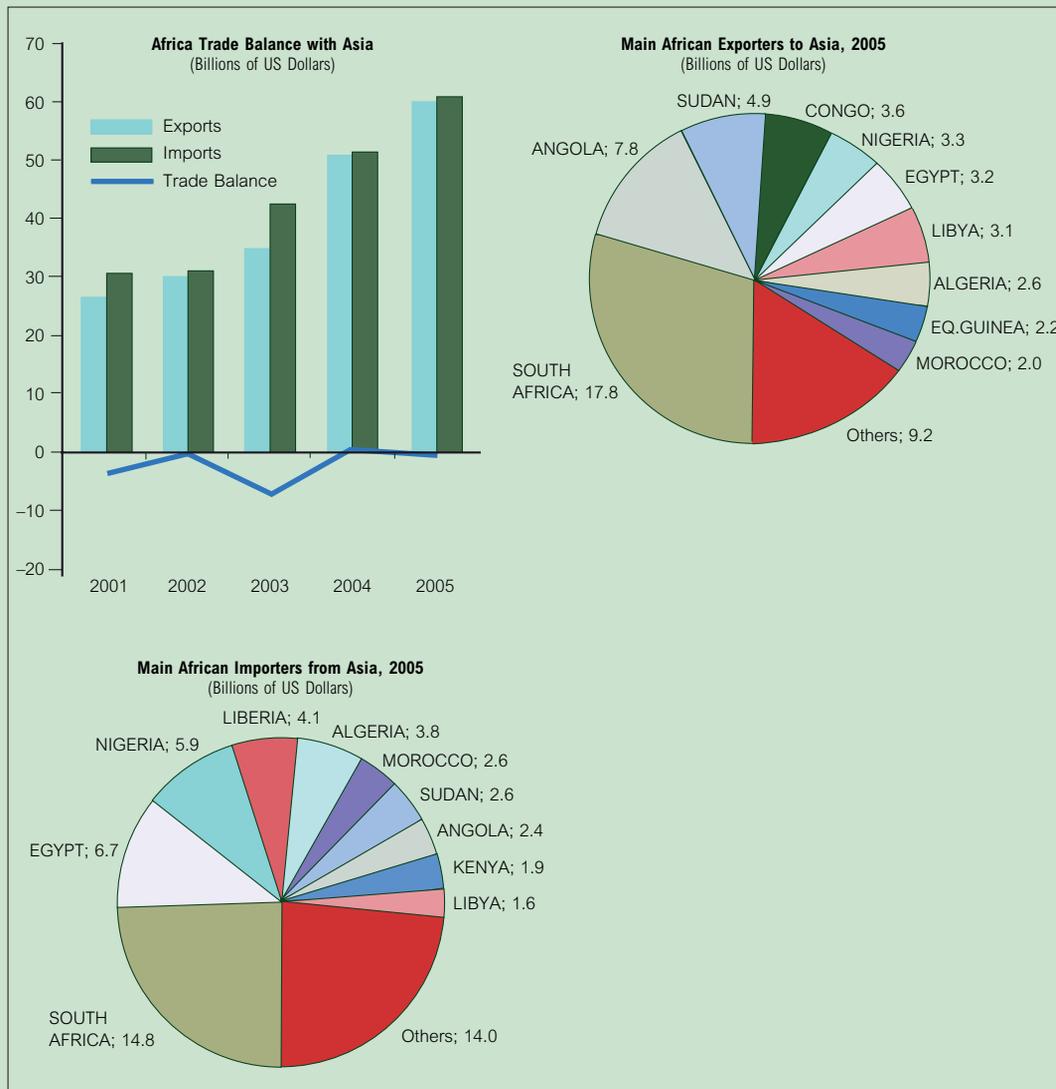
tions for facilitating competition for African domestic firms, thus enhancing productivity.

- Asian firms provide capital goods and intermediate inputs, which enable African firms to manufacture products potentially for exports, particularly to other developing countries, thereby boosting trade.
- Evidence suggests that Asian firms in Africa interact with Africa's informal business sector, thereby affecting demand and supply in the informal sector.

The discussion on the role of China and India in Africa has often highlighted the potential negative aspects of the growing demand for, and control of, natural resources by these emerging Asian powers. China and India have grown fast and have rapidly modernized their industries. As they develop and continue to grow, together with other rapidly expanding nations, the demand for natural resources, especially for oil and metals, is likely to increase even further.

The new interest in Africa, in particular, in the continent's resources, has certainly not bypassed the Western World. Systematic new efforts to tap further into this natural wealth became visible with the adoption of the African Growth and Opportunities Act by the out-going Clinton administration in the United States. Simultaneously, the European Union has sought to renegotiate its relations with the Africa, Caribbean, and Pacific countries under economic partnership agreements. These negotiations have since entered critical stages and provoked ongoing controversies, including the criticism that the

Figure 4.12: Development in Trade Relationship between Africa and Asia



Source: ADB (2007a), Africa and Asia: Partners in Development.

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EU's trade department is trying to bully through its own interests.<sup>53</sup> The positive news in this new scenario is that the days when Africa was considered a less important or forgotten continent — to some extent — are gone. Still, Africa remains on the “commodity supplying end”, with others on the receiving end in this scramble for the continent's minerals and fossil resources.

The new offensive pursued by China, India, and others (in particular, Russia and Brazil) seeking access to fossil energy resources and other minerals and metals to fuel their own rapid industrialization processes, is likely to add further pressure to the scramble for access to limited and often non-renewable resources. This new stage of competing forces on the African continent has resulted in a plethora of recent analyses dealing mainly, if not exclusively, with the Chinese impact and practices. In general, the analyses criticize China for being yet another example of predatory capitalism, and also for being non-transparent and supportive of autocratic regimes. However, many tend to ignore the effects that the existing socio-economic imbalances and power structures (in Africa) have long created and consolidated. The criticism of China seems to be more a reflection of fear of losing one's own interests than of a genuine concern for African people. Of course, this does not whitewash the current Chinese offensive and its potentially damaging impact. The emerging Chinese track record does not suggest that the majority of African people will benefit. Nevertheless, the medium- to long-term

interests of China and of other foreign investors in Africa have to be the creation of a calculable and “investor-friendly environment”. Ultimately, this must include the rule of law (in contrast with the law of the ruler) and other business-like practices.<sup>54</sup>

A recent World Bank study<sup>55</sup> uses a wealth of survey data on businesses in Africa to underline how China and India's growing trade with, and investment in, Africa presents an excellent opportunity for growth and international integration of Africa into the global economy. Although at present Africa mainly exports natural resources to China and India, it is becoming increasingly attractive with respect to labor-intensive manufacturing. There is growing Asian demand for processed commodities, light manufactured products, and tourism, and Africa has a great unused potential to fulfill this demand. The diagnosis cautions that the opportunities engendered by China and India's trade and investment in Africa will not necessarily be converted into growth and poverty reduction in the region. A critical finding of the study is that it is not just the quantity of these trades and investment flows that matters — but also the quality of the overall commercial relationships underlying as well as shaping these flows. Thus, both African and Asian policy makers need to devise appropriate policy responses to make the quality of these relationships even better. The World Bank study points to the following principles for reform (among others):

<sup>53</sup> Development Today (2007)

<sup>54</sup> Ibid.

<sup>55</sup> Broadman (2007)

**At-the-Border Policy Reforms** which include:

- lowering the overall level of tariffs (all countries);
- eliminating the escalating tariffs that limit Africa's leading exports (China and India);
- eliminating anti-export bias in import tariff policies, bias in investment decisions and disincentives for product diversification (for most African countries);
- eliminating trade barriers, including technical standards as protectionist measures (most countries);
- rationalizing and harmonizing existing "spaghetti bowl" bilateral and regional agreements (primarily for African countries);
- strengthening the role of investment promotion agencies and public-private investors' councils (African countries); and
- tailoring export and investment incentives to country-specific circumstances and in concert with World Trade Organization rules (African countries).

**Behind-the-Border Reforms** which include:

- enhancing domestic inter-enterprise competition by eliminating fundamental economic and policy barriers to entry and eliminating exit barriers (primarily for African countries);
- improving governance through greater transparency and accountability of public officials and establishing and securing efficient institutions that facilitate effective resolution of commercial disputes

(primarily for African countries); and

- reducing poverty impacts from domestic price/production changes by trade flows through promotion of labor mobility, including enhancing flexibility of labor markets and improving the effectiveness of social safety nets (all African countries).

**Between-the-Border Reforms** which include:

- further developing trade facilitation infrastructure for integration into the global market as well as regional integration within Africa, including improvement and modernization of ports, roads, and rail transport, and modernization of telecommunications/IT (primarily for African countries);
- implementing customs reform by improving coordination among border-related agencies, simplifying customs procedures and making customs codes rule-based, transparent, and commercially-oriented and introducing the use of IT into the customs system (primarily for African countries);
- addressing imperfections in the information market for trade and investment opportunities, including technical standards (most African countries); and
- reviewing measures that restrict the movement of professionals (primarily for African countries).

The dramatic new trend in South-South economic relations is transforming traditional patterns of economic development. As outlined above, this is nowhere more evident than in African-Asian trade and investment flows. Thus, while China and

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India are emerging as economic giants in Asia, Africa is coming into its own, finding a vital role in this transformation. These new South-South economic relations present real opportunities — as well as challenges — to African countries. It is important to emphasize that Africa does not need any one-size-fits-all policy reforms or approaches, since the available natural resources and the economies in Africa are highly heterogeneous. Reforms and policies should thus take into account country-specific circumstances.

### Summary

This chapter presented and analyzed some stylized features of Africa's resource-rich economies, offering explanations on why natural resource wealth may stunt growth and development prospects. However, actual analysis of the data, tables and figures presented reveals the following trends and conclusions:

- Resource-rich African countries are richer (in terms of revenues, GDP and per capita GDP) than their resource-scarce peers. The gap narrowed during the 1980–2000 period, but it is widening again in conjunction with the recent resource boom.
- However, cumulatively, resource-rich countries only experienced an average growth rate of 2.4 percent from 1981–2006, considerably lower than the average 3.8 percent for resource-scarce countries.
- The group of resource-scarce coastal countries, which have almost a quarter of Africa's population, has experienced an average growth rate of 4.1 percent, much higher than the 2.3 percent recorded by resource-rich coastal countries. Indeed, being resource-rich does *not* seem to make a significant difference for coastal countries.
- Land-locked resource-scarce countries are the poorest, by a significant factor. They are five times poorer than resource-rich countries, and almost six times poorer than resource-scarce coastal countries. Furthermore, the growth rate in this group of countries only averaged 2.5 percent from 1981 to 2006. In other words, the most important factor is whether a country is land-locked or not — this is even more important than being resource-rich or resource poor, or than any other aspect reviewed in this analysis.
- Available evidence also strongly suggests that the three factors that determine the onset of armed conflict — natural resources, low income per capita and low growth — are prevalent in large parts of the African continent. The literature also highlights other significant factors such as vertical and horizontal inequality, religion, and policy failures.
- The management of mineral (and oil) resources in fragile states has largely been molded by four interrelated conditions defined by the interplay of state power, contest, and conflict over the control of mineral resources. These conditions are public policy failures; state predation or 'shadow state', where rent-seeking substitutes rent creation; rebel-dominated war

(shadow) economies; and, vested interests of regional and international actors.

The analysis further illustrates that the true potential benefits of having significant natural resource wealth has *not* been fully exploited by resource-rich African countries. Overall, the performance of resource-rich countries in Africa has been disappointing, especially from 1980 to 2000. Hard lessons learned from past resource boom and bust cycles and from the disappointing growth rates of the two-decade period need to be reviewed and lessons drawn for future use, especially now that a new boom has gained traction in Africa.

The last part of this chapter reviewed two key aspects of future development in Africa: (1) transboundary natural resource

management, and (2) the new scramble for Africa's resources. The former calls for cooperation especially at the regional level, while the latter calls for a number of key reforms if Africa is to benefit from the scramble.

In conclusion, 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 countries in Africa have demonstrated this, and there is some reason for cautious optimism that more countries have learned hard lessons from the past resource booms, and, in future, will pursue strategies and policies that will allow them to fully reap the benefits of natural resource wealth.

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| Appendix Table 4A: List of Country Classifications  |  |  |   |  |   |
|---|--|--|---|--|---|
| Resource-Rich Countries   | Resource-Scarce Countries  | Landlocked Countries   | Coastal Countries   | SANE   |   |
| <b>Oil-Exporting Countries</b><br>Algeria<br>Angola<br>Cameroon<br>Chad<br>Congo<br>Côte d'Ivoire<br>Equatorial Guinea<br>Gabon<br>Libya<br>Nigeria<br>Sudan  | Benin<br>Burkina Faso<br>Burundi<br>Cape Verde<br>Comoros<br>Djibouti<br>Egypt<br>Eritrea<br>Ethiopia<br>Gambia<br>Ghana<br>Guinea Bissau<br>Kenya<br>Lesotho<br>Liberia<br>Madagascar<br>Malawi<br>Mali<br>Mauritius<br>Morocco<br>Niger<br>Rwanda<br>Sao Tome & Principe<br>Senegal<br>Seychelles<br>Somalia<br>Swaziland<br>Togo<br>Tunisia<br>Zimbabwe<br>Zambia | <b>Resource-Rich</b><br>Botswana<br>Central African Republic<br>Chad<br><br><b>Resource-Scarce</b><br>Burkina Faso<br>Burundi<br>Ethiopia<br>Lesotho<br>Malawi<br>Mali<br>Niger<br>Rwanda<br>Swaziland<br>Uganda<br>Zimbabwe<br>Zambia | <b>Resource-Rich</b><br>Algeria<br>Angola<br>Cameroon<br>Congo<br>Congo, Dem. Rep.<br>Côte d'Ivoire<br>Equatorial Guinea<br>Gabon<br>Guinea<br>Libya<br>Mauritania<br>Mozambique<br>Namibia<br>Nigeria<br>Sierra Leone<br>South Africa<br>Sudan<br>Tanzania | <b>Resource-Scarce</b><br>Benin<br>Cape Verde<br>Comoros<br>Djibouti<br>Egypt<br>Eritrea<br>Gambia<br>Ghana<br>Guinea Bissau<br>Liberia<br>Madagascar<br>Mauritius<br>Morocco<br>Sao Tome &<br>Principe<br>Senegal<br>Seychelles<br>Somalia<br>Togo<br>Tunisia | South Africa<br>Algeria<br>Nigeria<br>Egypt |
| <b>Mineral-Exporting Countries</b><br>Botswana<br>Central African Republic<br>Congo, Democratic Republic<br>Guinea<br>Mauritania<br>Mozambique<br>Namibia<br>Sierra Leone<br>South Africa<br>Tanzania |  |  |   |  |   |

Appendix Table 4B: African Exports, 2005

| Three main exports, with their share in total exports*<br>(in %) |                                       |                                       | No of products<br>accounting for more than<br>75 percent of exports |    |
|--|---------------------------------------|---------------------------------------|---|----|
| Product I  | Product II                            | Product III                           |   |    |
| Algeria  | Crude petroleum (67.2)                | Natural gas, liquefied (13.2)         | Natural gas, gaseous (5.6)  | 2  |
| Angola   | Crude petroleum (95.8)                |                                       |   | 1  |
| Benin  | Cotton, not carded,<br>combed (55.3)  | Edible nuts fresh, dried<br>(16.5)    | Oth. non-ferr. metal waste (6.4)                                    | 3  |
| Botswana   | Diamonds. excl. industrial<br>(88.2)  | Nickel mattes, sinters. etc<br>(8.1)  |   | 1  |
| Burkina Faso   | Cotton, not carded, combed<br>(84.5)  |                                       |   | 1  |
| Burundi  | Coffee, not roasted (88)              |                                       |   | 1  |
| Cameroon   | Crude petroleum (48.8)                | Wood, non-conifer, sawn<br>(14.1)     | Bananas, fresh or dried<br>(8.7)                                    | 4  |
| Cape Verde   | Fish, frozen ex. f filets<br>(61.4)   | Trousers, breeches, etc.<br>(6.3)     | Gas turbines, nes (4)   | 4  |
| Central<br>African<br>Republic                                   | Diamonds. excl. industrial<br>(40)    | Wood, non-conif, rough, unt<br>(33.8) | Cotton, not carded, combed<br>(8.9)                                 | 3  |
| Chad   | Crude petroleum (94.9)                |                                       |   | 1  |
| Comoros  | Spices, ex. pepper, pimento<br>(57.9) | Essential oils (14.2)                 | Fish, frozen ex.f illets (12.7)                                     | 3  |
| Congo  | Crude petroleum (88.7)                |                                       |   | 1  |
| Congo<br>Democratic<br>Republic                                  | Diamonds. excl. industrial<br>(42.6)  | Oth. non-ferr. ore, concntr<br>(17.2) | Crude petroleum (16.7)  | 3  |
| Cote d'Ivoire  | Cocoa beans (38.2)                    | Crude petroleum (12)                  | Cocoa paste (7.7)   | 7  |
| Djibouti   | Bovine animals, live (20)             | Trousers, breeches, etc.<br>(7.2)     | Oth. ferrous waste, scrap<br>(7)                                    | 17 |
| Egypt  | Natural gas, liquefied (15.8)         | Crude petroleum. (10.3)               | Portland cement, etc. (4.7)   | 46 |
| Equatorial<br>Guinea   | Crude petroleum (92.6)                |                                       |   | 1  |
| Eritrea  | Natural gums, resins, etc<br>(17.3)   | Sesame (sesamum) seeds<br>(8.7)       | Molluscs (7.6)  | 14 |

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Appendix Table 4B (continued)

| Three main exports, with their share in total exports*<br>(in %) |  |                                       | No of products<br>accounting for more than<br>75 per cent of exports |
|--|--|---------------------------------------|--|
| Product I  | Product II                             | Product III                           |  |
| Ethiopia   | Coffee, not roasted (47.8)<br>(20.2)   | Sesame (sesamum) seeds<br>(20.2)      | 5  |
| Gabon  | Crude petroleum (76.7)                 | Wood, non-conif, rough, unt<br>(10.6) | 1  |
| Gambia   | Edible nuts fresh, dried<br>(43.5)     | Mech.shovel etc.s-propold<br>(9.9)    | 6  |
| Ghana  | Cocoa beans (46.1)                     | Manganese ores, concentr<br>(7.2)     | 8  |
| Guinea   | Aluminum ore, concentrat<br>(50.9)     | Alumina (aluminum oxide)<br>(17.2)    | 3  |
| Guinea<br>Bissau   | Edible nuts fresh, dried<br>(93.5)     |                                       | 1  |
| Kenya  | Tea (16.8)                             | Cut flowers and foliage (14.2)        | 27   |
| Lesotho  | Jersys, pullovs, etc. knit<br>(29.2)   | Trousers, breeches, etc.<br>(22)      | 4  |
| Liberia  | Ships, boats, other. vessels<br>(73.9) | Spec. purpose vessels etc<br>(8.9)    | 2  |
| Libya  | Crude petroleum (95.3)                 |                                       | 1  |
| Madagascar   | Jersys, pullovs, etc. knit<br>(19.4)   | Crustaceans, frozen (13.2)            | 14   |
| Malawi   | Tobacco, stemmed,<br>stripped (59.2)   | Tea (7.6)                             | 4  |
| Mali   | Cotton, not carded ,combed<br>(81.8)   |                                       | 1  |
| Mauritania   | Iron ore, concentr. not agg<br>(51.3)  | Molluscs (24)                         | 2  |
| Mauritius  | Sugars, beet or cane, raw<br>(21.4)    | T-shirts, other. vests knit<br>(18.7) | 10   |
| Morocco  | Inorganic acid, oxide etc<br>(7.2)     | Insultid wire, etc. condctr.<br>(6.8) | 32   |
| Mozambique   | Alum., alum. alloy, unwrht<br>(73.4)   | Crustaceans, frozen (4.7)             | 2  |

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Appendix Table 4B (continued)

|                       |                                     |   |  |    |
|-----------------------|-------------------------------------|---|--|----|
| Namibia               | Diamonds, excl. industrial (39.1)   | Radio-active chemicals (11.4)           | Zinc, zinc alloy, unwrht. (9.7)        | 5  |
| Niger                 | Radio-active chemicals (79.5)       |   |  | 1  |
| Nigeria               | Crude petroleum (92.2)              |   |  | 1  |
| Rwanda                | Coffee, not roasted (51.9)          | Ore etc. molybdn. niob. etc (19)        | Tin ores, concentrates (9.8)           | 3  |
| Sao Tome and Principe | Cocoa beans (55.2)                  | Vessels, oth. float. struct (10.9)      | Drawing, measurg. instrmnt (7.6)       | 4  |
| Senegal               | Inorganic acid, oxide etc (38.8)    | Molluscs (9.8)                          | Fish, fresh, chilled, whole (6.4)      | 8  |
| Seychelles            | Fish, preparad, presrvd, nes (44.1) | Fish, frozen ex.f illets (27.5)         | Ships, boats, othr. vessels (11)       | 3  |
| Sierra Leone          | Diamonds, excl. industrial (62.7)   | Cocoa beans (7.2)                       | Cultivating machinery, etc (4.1)       | 4  |
| Somalia               | Sheep and goats, live (34.6)        | Bovine animals, live (19.7)             | Fish, frozen ex. filets (7.8)          | 5  |
| South Africa          | Platinum (12.5)                     | Oth. coal, not agglomeratd (8)          | Gold, nonmontry excl ores (7.9)        | 39 |
| Sudan                 | Crude petroleum (89.2)              |   |  | 1  |
| Swaziland             | Sugars, beet or cane, raw (14.1)    | Food preparations, nes (9.3)            | Flavours, Industrial use (9)           | 20 |
| Tanzania              | Gold, nonmontry excl ores (10.9)    | Fish filets, frsh, chilld (9.7)         | Copper ores, concentrates (8.6)        | 15 |
| Togo                  | Cocoa beans (22.4)                  | Natural calc. phosphates (19.8)         | Cotton, not carded, combed (18.6)      | 8  |
| Tunisia               | Crude petroleum (9)                 | Trousers, breeches, etc. (8.7)          | Insultd wire, etc. condctr (6.7)       | 36 |
| Uganda                | Coffee, not roasted (31.1)          | Fish filets, frsh, chilld (24.3)        | Tobacco, stemmed, stripped (7.5)       | 5  |
| Zambia                | Copper; anodes; alloys (55.8)       | Cobalt, cadmium, etc. unwrt (7)         | Cotton, not carded, combed (5.7)       | 5  |
| Zimbabwe              | Tobacco, stemmed, stripped (13.9)   | Nickel, nckl. alloy, unwrht (12.6)      | Nickel ores, concentrates (12.3)       | 16 |
| Africa                | Crude petroleum (49.2) [18]         | Diamonds, excl. industrial (3.7) [12.6] | Nickel ores, concentrates (2.8) [17.5] | 26 |

Notes: \* Products are reported when accounting for more than 4 percent of total exports.

\*\* Figures in [ ] represent the share of Africa in the World export for each product.

ADB Statistics Department; PC-TAS 2001-2005 International Trade Center UNCTAD/WTO-UN Statistics Division