



## Financing for Development Series: Increasing Government Revenues from the Extractive Sector in Sub-Saharan Africa

The extractive sector gives sub-Saharan African countries the opportunity to raise domestic funds to help achieve the Millennium Development Goals. However, generating government revenues from the mining and oil sectors is not easy, and revenues are highly volatile owing to changing world market prices.

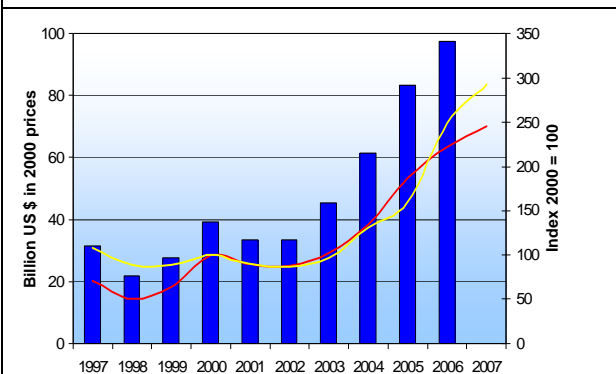
Most sub-Saharan African countries are failing to tap the full potential for government revenues from the extractive sector because of a lack of transparency, widespread corruption and inadequate tax administration and collection. Agreements between governments and private investors are often unsatisfactory with regard to the government revenues because of power imbalances. There is also a lack of revenue management and of good investment conditions, such as a functioning infrastructure.

Overall, the extractive sector could play an important role in generating domestic public revenues for achieving the MDGs, but short-term contributions should not be overestimated. Advanced mining countries, such as Canada and Australia, show that good public and corporate governance determine whether the extractive sector contributes to a country's development or not. Sub-Saharan African countries need help with the generation of government revenues and the long-term development of the extractive sector. Transparency is one of the first cornerstones. Good investment conditions, sound taxation systems, effective tax collection, better deals with private investors and optimised revenue management are necessary complements. Social and environmental standards must be further key elements if the sector is to be made part of the sustainable development of sub-Saharan African countries.

### 1. Booms and busts of commodity prices

Mineral commodity markets move in strong cycles. During the past five years rapid economic growth, especially in such emerging economies as China, has increased prices sharply. This has boosted export revenues, economic growth, terms of trade and foreign direct investment in many mineral-exporting sub-Saharan African countries.

**Figure 1: Mineral (yellow) and energy (red) commodity price indices (2000 = 100) and total export revenues from mineral and energy commodities for 38 countries in sub-Saharan Africa (real 2000 US\$)**



Source: IMF / WTO

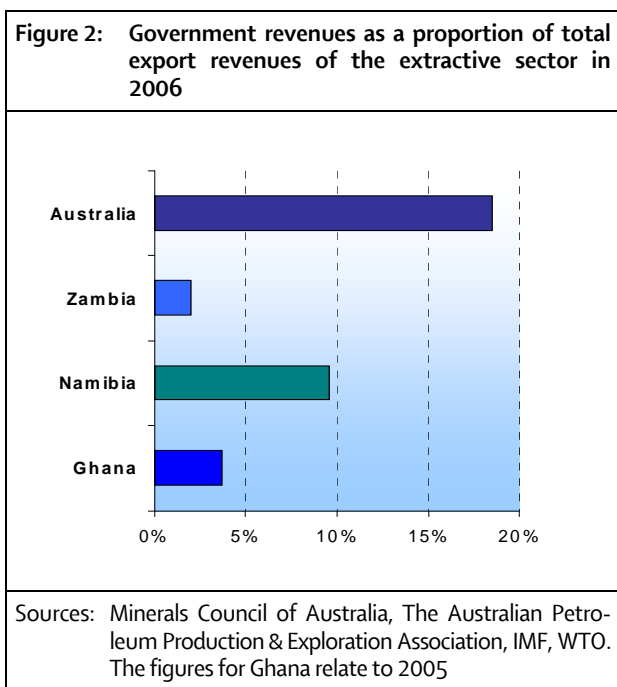
The recent financial and economic turmoil has depressed mineral commodity prices to pre-boom levels. The outlook is highly uncertain. Demand from rapidly industrialising economies and new supply capacities largely depends on the policy environment, the pace of technological change and global economic development. Despite the uncertainty about the development of world market prices, the extractive sector remains an important source of potential income for many sub-Saharan African countries.

### 2. Low actual government revenues

Export revenues from the extractive sector have increased significantly in recent years. At the same time, government revenues from this sector in sub-Saharan Africa are quite low when compared to those of such advanced mining countries as Canada and Australia. In 2006 Zambia exported minerals for over US\$ 3 billion, but only US\$ 61 million went into the government's coffers.

In Namibia the government received about US\$ 175 million in 2006, while exports were worth about US\$ 1.5 billion. Most of these revenues come from diamond mining. Zinc, copper, uranium, lead and other mining companies did not pay any royalties. The DR Congo has received US\$ 16.4 million in tax revenues from the extractive sectors, while the country officially exported

mineral commodities worth nearly US\$ 1 billion in 2004. The German Federal Institute for Geosciences and Natural Resources (BGR) estimates that mineral commodities worth an additional US\$ 1 billion have been smuggled out of the country.



Such large emerging countries as China and India are playing an increasingly important role in financing infrastructure in exchange for access to raw materials. China has offered export guarantee facilities worth up to US\$ 50 billion for a period of three years to encourage investment in Nigeria. In the DR Congo, China will build infrastructure including 2,400 miles of road, 2,000 miles of railway, 32 hospitals, 145 health centres and two universities worth US\$ 6 billion in return for imports of copper and cobalt.

All in all, sub-Saharan African countries are far from acquiring a ratio of government take to turnover in the sector similar to that achieved in such western mining countries as Canada and Australia.

### 3. Potential government revenues up to 2015

Potential government revenue is much higher than that actually received. A study by BGR shows that under certain assumptions government revenues from the extractive sector could contribute significantly to financing the MDGs. In the four countries covered by the study, Namibia, Ghana, Zambia and Mozambique, the estimated financial gap to be filled by their governments totals over US\$ 33 billion for the period 2008–2015. In the same period, these governments could generate over US\$ 15 billion in revenues from the extractive sector, even in a scenario with falling commodity prices.

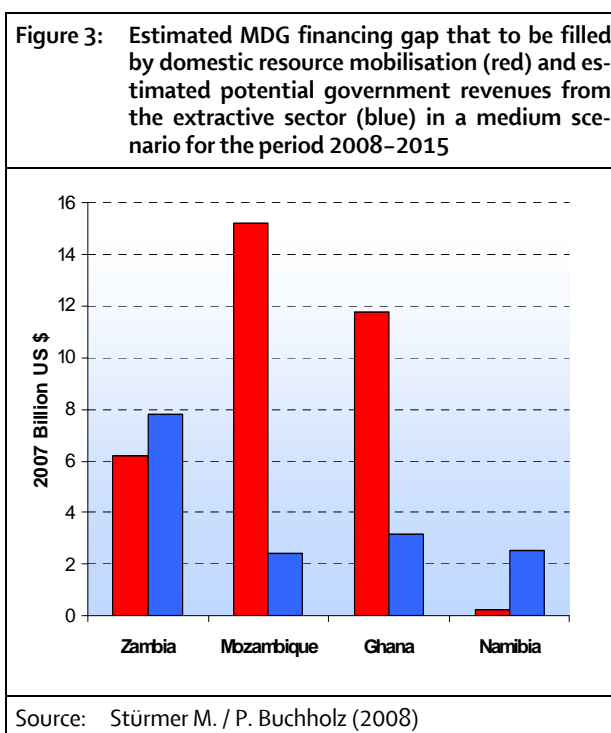
The Overseas Development Institute estimates that Nigeria, Equatorial Guinea, Sudan, Angola, Congo Braz-

zaville and Gabon could each generate more annual public revenue from the oil sector than that needed to achieve the Millennium Development Goals (MDGs).

Thanks to Africa's favourable geology, the long-term economic potential of its extractive sector is fairly good. This is especially true of such countries as the DR Congo and Angola, where civil wars have hindered the development of the extractive sector. In terms of exports from the extractive sector, Africa lags well behind such mining countries as Canada and Australia. While Canada exported minerals worth US\$ 10,000 per km<sup>2</sup> in 2005, Africa managed only US\$ 1,600 per km<sup>2</sup>.

Why is it so hard for sub-Saharan African governments to tap this potential for government revenue from the extractive sector?

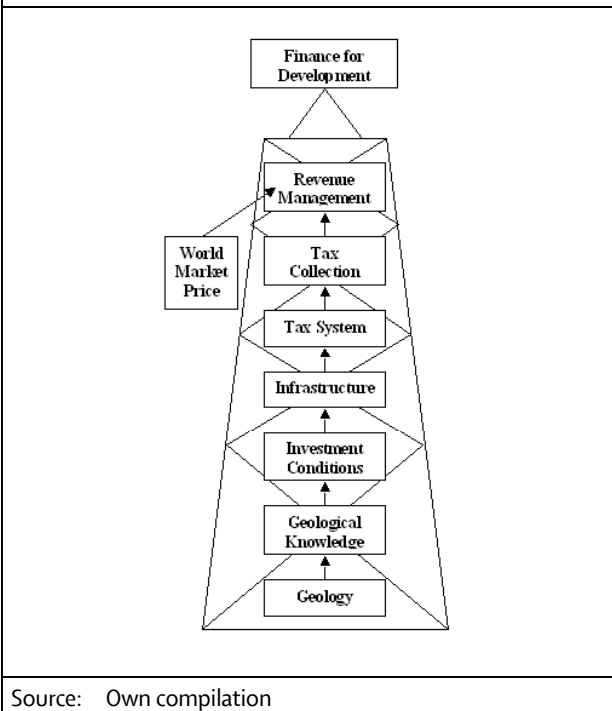
### 4. Investment conditions



As capital intensity is high and investment decisions are taken for the long term, stable investment conditions are crucial for the generation of long-term government revenue from the sector. The Fraser Index, which provides information on a country's attractiveness in terms of mining investment, shows that many sub-Saharan African states lack predictable taxation systems, legal certainty with regard to mining licences, predefined reclamation obligations and political stability.

As a result, Africa has undergone far less geological exploration than, say, Canada. Over the period 1991 to 2007, Canada attracted an average of US\$ 55 of exploration investment per km<sup>2</sup> whereas the corresponding figure for Africa was US\$ 16 per km<sup>2</sup>. Accessible basic geological data are often inadequate.

**Figure 4: A long way to generate government revenues from the extractive sector**



Source: Own compilation

## 5. Lack of infrastructure

Many African countries currently lack such infrastructure as electricity and transport needed for the expansion of the extractive sector. For example, the shortage of electricity makes the establishment of new mines in Zambia difficult. The same is true of South Africa and Ghana. Most mineral commodities also require such bulk transport facilities as railways, highways, inland waterway transport and adequate harbour facilities. In Mozambique, for example, the whole infrastructure of roads, railways and harbours must be built before mining production can begin. These problems have delayed many projects, although prices have been high and geological conditions are good.

## 6. Mining tax system

Many states lack the capacity to develop sound taxation systems and to negotiate favourable agreements with enterprises. For example, Zambia negotiated a number of "development agreements" when it privatised its copper sector in the late 1990s. These agreements lowered the royalty rate applied to 0.6 per cent in order to attract foreign investment. As a consequence, government revenues in the past few years have been quite low even though copper prices reached record levels from 2004 to 2008. A similar case is Mozambique, where agreements have granted tax holidays to a number of "megaprojects," such as the Corridor Sands titanium dioxide project.

Overall, it is difficult to strike the right balance between a fair share of income for the state and a fair level of taxation for the sector. The price cycles of mineral commodity markets make it especially challenging to

strike this balance. Several African countries are currently reforming their mineral taxation systems (e.g. DR Congo, Sierra Leone and Zambia) with a view to obtaining a higher government share. At the same time, the rapid change in tax systems in combination with easing world market prices may chase away potential investors who fear a lack of regulatory stability.

## 7. Ineffective tax collection

A key problem is the implementation and enforcement of tax regimes. Many countries lack a sound tax and mining administration owing to shortages of equipment and poor training, as well as corruption and unclear divisions of responsibility. In addition, skilled workers move from the public to the private sector (which pays better), depriving the country of important public management capacities. While international mining companies engage high-profile lawyers, the local administration is often unable to check their tax statements owing to a lack of knowledge of geology and mining operations. The revenue from the corporate taxes paid by mining companies is often small because statements on depreciation and the carrying forward of losses from other concessions cannot be adequately checked. An additional problem is the lack of uniformity in the pricing of minerals, which leads to variations in the calculation of royalty payments. In many cases, such taxes as capital gains tax are simply not paid. The lack of transparency in the sector has long concealed these problems. The Extractive Industries Transparency Initiative (EITI) is therefore a major step towards making these problems visible.

## 8. Revenue management for sustainable development

Owing to the strong commodity price cycles, revenue management is a key challenge for resource-rich sub-Saharan African countries.

Many have difficulty collecting government revenues at times of high world market prices and distributing them in an anti-cyclical way. Yet Norway, for instance, has established a Petroleum Fund (known in Norwegian as Oljefondet) with the aim of investing some of the large surplus generated by the Norwegian petroleum sector to counter the effects of the forthcoming decline in income and to smooth out the disrupting effects of wildly fluctuating oil prices. The knowledge to set up such funds is thus available, and some countries, São Tomé and Zambia being examples, are already making use of it.

Furthermore, government revenues are often not spent in a way that precludes Dutch disease, and corruption is rife. Developing the extractive sector can also have severe detrimental effects on the environment. Long-term sustainability should therefore be encouraged by appropriate social and environmental standards. Investments designed to avoid adverse effects on the environment in such activities as waste water treatment and recultivation must be effected throughout

the life of a project. The revenues generated should also benefit local communities.

#### Box 1: EITI, the Kimberley Process and other initiatives

The aim of the Extractive Industries Transparency Initiative (EITI) is to provide a better insight into the financial flows from the mining and oil business to governments. It establishes voluntary standards for the publication of these government revenues. Although there are over 20 candidate countries, none has yet managed to implement them fully.

The World Bank's recently launched an initiative that seeks to establish good governance all along the value chains of the extractive sector. Still in the pilot phase, it provides training and advice aimed at improving investment conditions, tax collection and revenue management.

The Kimberley Process (KPCS) was set up in 2002 by governments, NGOs and the international diamond industry in order to prevent "conflict diamonds" from entering the world market. The Kimberley Process has created a certified trading chain. As a result, the percentage of conflict diamonds in international trade has shrunk from 15 to less than 1 per cent and export revenues have soared, according to KPCS.

The German Federal Institute for Geosciences and Natural Resources is conducting several technical cooperation projects in support of geological surveys and mining inspectorates for the sustainable development of the sector. It is also currently developing in mineral production including an analytical "finger-print" of coltan.

Further initiatives are Norway's Oil for Development Fund, the Revenue Watch Institute and Publish What You Pay. UNDP is providing support through the Regional Bureau for Africa project for "Capacity Development for Negotiating and Regulating Large-scale Investment Contracts" and a "Global Programme on Governance of Non-Renewable Natural Resources for Sustainable Development."

## 9. Conclusions for development financing

Government revenues from the extractive sector in sub-Saharan Africa can make an important contribution to funding the MDGs, although the size of the contribution may differ from one country to another. There is an opportunity for these countries to increase the mobilisation of domestic funds. However, government revenue from the extractive sector is not "quick money," and world market prices fluctuate considerably. Short-term contributions to government revenues should not therefore be overestimated. The development of the extractive sector is a long-term exercise since it is a highly capital-intensive sector subject to long-term investment cycles. Sub-Saharan African countries need a great deal of support in facing this challenge. The EITI is already an important step forward since it reveals the problems that exist in tax collection.

Further help in enhancing investment conditions, improving infrastructure, designing sound taxation systems, negotiating agreements, improving tax collection and establishing a functioning revenue management system is crucial for the generation of government revenues in the long run. Countries also need help in strengthening their negotiating positions vis-à-vis foreign investors. Finally, the negative side-effects of developing the sector, such as environmental degradation, should be dealt with in a responsible manner.



**Martin Stürmer**

Research Associate in the  
Department "World Economy  
and Development Financing

With the assistance of Johan Karlsson

#### Literature

Humphreys, M. / J.D. Sachs / J.E. Stiglitz (2007): Escaping the resource curse. New York: Columbia University Press

Otto, J. et al (2006): Mining royalties. A global study of their impact on investors, government, and civil society. Washington DC: World Bank

ODI (2005): Does the Sustained Global Demand for Oil, Gas and Minerals mean that Africa can now fund its Own MDG Financing Gap? ODI Briefing Note, Nr. 6

Stürmer, M. / P. Buchholz (2008): Government revenues from the extractive sector in Africa. A potential for funding the Millennium Development Goals? Hannover: Federal Institute for Geosciences and Natural Resources.

#### Financing for Development Series:

- 8/2008 The Financial Crisis and Developing Countries
- 9/2008 Increasing Government Revenues from the Extractive Sector in Sub-Saharan Africa – Conclusions for Development Financing
- 10/2008 Development Finance by Regional Development Banks – Combining Regional Ownership with Multilateral Governance
- 11/2008 Are Cash Transfers a Suitable Alternative to Energy and Food Subsidies?
- 12/2008 Foreign Direct Investment – A Means to Foster Sustainable
- 13/2008 Southern Non-DAC Actors in Development Cooperation
- 14/2008 Increasing Domestic Resource Mobilization by Tackling Tax Flight
- 15/2008 Leveraging Private Investments in Climate Change Mitigation