

CHAPTER 2 – www.eisourcebook.org

2.1 The Opportunities arising from Resource Abundance

Wealth on the scale experienced in some resource-rich states, both absolute and relative, can reasonably be expected to generate significant positive development outcomes. Even for states with modest abundance or prospects in their petroleum or mineral deposits, the outcomes from their resource development could be transformative. The potential to attract significant investment is also there. In the first decade of the 21st century, investments in mining were estimated at about US\$80 billion, with much of this destined for iron ore and copper. Investments in hydrocarbons exploration and development by the largest 70 international oil companies increased over the same period from US\$315 billion in 2007 to US\$480 billion in 2011¹.

It is scale more than anything else that is the key to the flow of revenues in the EI sector. For lower income countries, revenues resulting directly from the exploitation of resource wealth have the potential to exceed official aid flows by a very wide margin. In principle, such revenues could unlock the constraints of foreign exchange, savings and public finance, and support a broad range of social and physical infrastructure priorities common to developing states, such as those in the health, education, transport, and telecoms sectors. Increased, well-designed public expenditure of resource revenues can promote both local employment and local ownership in economic activities, contributing not only to economic diversification, growth and well-being, but also to social and political stability. More and more countries face this prospect.

Figure 2.1 of receipts from natural resources in 57 countries shows² that oil, gas and mining revenues made a significant contribution to the public finances of a growing number of countries from 2000 onwards. In a study of 36 petroleum rich countries the fraction of government revenues drawn from oil and gas operations ranges from between 10 per cent and 97 per cent, with the average at 50 per cent overall³. A separate listing of 10 mining-rich countries showed that mining's share of total government revenue ranged from between one

¹ Ernst & Young (2012), Global Oil and Gas Reserves Study: [www.ey.com/Publication/vwLUAssets/Global_oil_and_gas_reserves_study/\\$FILE/Global_oil_and_gas_reserves_study.pdf](http://www.ey.com/Publication/vwLUAssets/Global_oil_and_gas_reserves_study/$FILE/Global_oil_and_gas_reserves_study.pdf) (available online, last visited 12 April 2016)

² IMF Fiscal Affairs Department, Fiscal Regimes for Extractive Industries – Design and Implementation, 15 August 2012 : <http://www.imf.org/external/np/pp/eng/2012/081512.pdf> (last visited 11 January 2014).

³ R Boadway and M Keen, Theoretical Perspectives on Resource Tax Design, in 'The Taxation of Petroleum and Minerals: Principles, problems and practice' (2010), eds. P Daniel, M Keen and C McPherson (London: Routledge); cited in James L Smith, Issues in Extractive Resource Taxation: A Review of Research Methods and Models, IMF Working Paper WP/12/287, December 2012.

per cent and 44 per cent, averaging 11 per cent overall. Of the 35 countries most dependent upon mining, all but Australia and South Korea can be classified as developing countries, and of the top 70, no less than 63 are low income countries that could leverage their development prospects through mining⁴.

The literature on resource development notes the many states that have already benefitted from the development of their petroleum and mineral resources. As Alan Gelb comments, “(d)eveloping countries as a whole have been remarkably successful in diversifying their economies and their export structures”⁵. In the 1960s about 80 per cent of developing country exports were primary commodities; fifty years later, almost 80 per cent were industrial products⁶. Some have become major industrial powers; others have diversified within resource-based sectors (fresh produce, fish, and tourism, for example). For developing countries that are dependent upon the export of minerals however, it has proved harder to break free from dependence upon their dominant resource. Indeed, the number of countries heavily dependent upon minerals for fiscal revenue and exports appears to be increasing⁷. Even so, in terms of economic development based on the extractive sector, there are undeniable success stories, including selected states in the Middle East and North Africa, Columbia and Peru in South America, and Malaysia in Southeast Asia. In the mining sector, Chile, Botswana, Brazil, Ghana, and South Africa are much cited examples of states that have used their resource wealth beneficially. In both India and China, the rapid pace of economic growth in recent years is largely attributable to their access to large amounts of inexpensive energy through coal mining (which nonetheless internalizes environmental externalities). In later chapters, the *Source Book* will elaborate on some of these examples of positive development.

Within this group, *there are important differences in the development and diversification options open to countries in particular regions*, a fact that has generated significant comment. Exporters of oil, gas and other minerals can differ in many respects, such as population, labour force and skills, location, levels of income, reserves and the potential for other employment. This must have a major impact on development and diversification policies. The oil rich but labour importing countries of the Gulf will have different priorities and challenges from oil rich

⁴ ICMM (2015), The role of mining in national economies (second edition): <http://www.euromines.org/news/new-icmm-report-role-mining-national-economies>.

⁵ Economic Diversification in Resource Rich Countries, presentation to IMF, 2010: <http://www.imf.org/external/np/seminars/eng/2010/afrfin/pdf/Gelb2.pdf> (last visited 7 February 2014).

⁶ Gelb (2010).

⁷ A Gelb, K Kaiser and L Vinuela (2012), ‘How Much Does Natural Resource Extraction Really Diminish National Wealth? The Implications of Discovery’, Center for Global Development Working Paper 290: www.cgdev.org; about 35 countries are heavily dependent on oil and gas which includes one third of the area and population of sub-Saharan Africa, and another 12 on hard minerals. True dependence is often higher due to non-oil taxes arising from oil-fuelled spending: A Gelb, ‘Economic Diversification in Resource Rich Countries’, presentation to World Bank, 15 December 2011.

but labour abundant countries in sub-Saharan Africa. For low- or middle-income countries with substantial populations, large development needs and a dominant resource sector, the entire approach to benefitting from resource development will be different. In their cases, a policy of short to medium term industrialization is unlikely to be the driving force. Moreover, the shortage of capital in such countries will encourage them to draw upon resource revenues for domestic investment; in turn they will need strategies for ‘investing in investing’, or building up an institutional capacity to make good investments⁸.

Nonetheless, there is an increasing appreciation among established and prospective resource-rich countries, civil society and donors, that EI sector development can generate further benefits to the economy beyond the direct contribution of revenues, through its links to other sectors. It can act as a catalyst for job creation, poverty reduction and the establishment of forward and backward linkages⁹. The former can entail support for local or national small and medium-sized enterprises in building a role in the investors’ supply chains and developing non-resource dependent clusters of industrial activity. Backward linkages entail measures to process the resources or to use the resources to build local industry. Although the idea that governments should intervene to support broad-based economic growth is not new, the extent and type of intervention has evolved into *policies designed to establish these linkages*.

Benefits for the Host Country

The guiding idea is that in the long run a diversified economy can do better than one locked in to resource exports. *Three kinds of initiative* for harnessing a growing EI sector to development goals are reviewed briefly below:

Local Content Policies These are now seen as one way to create favourable linkages and build economic capital at the national and sub-national levels¹⁰. Large EI companies with millions of dollars of annual procurement can provide a significant business opportunity to stimulate the local economy if they are prepared or encouraged to include local SME companies in their supply chain. In many respects, the EI sector is a very small contributor to employment creation but through indirect and induced employment in the supply chain and through the provision of support services, a specialized labour force may be built up. It presents a window of opportunity which nonetheless requires attention to be paid to its long-term sustainability (for example, when facilities close down).

⁸ P Collier (2011): ‘The Plundered Planet: Why we must – and how we can – Manage Nature for Global Prosperity’, Oxford University Press, Oxford, pp.127-149.

⁹ Liebenthal, A., et al. (2005). *Extractive Industries and Sustainable Development: An Evaluation of the World Bank Group Experience*. Washington, D.C.: World Bank Publications, p. 1.

¹⁰ Local Content in the Oil and Gas Sector (2013), World Bank, Washington DC; A Practical Guide to Increasing Mining Local Procurement in West Africa (2015), World Bank, Washington DC; AM Esteves, B Coyne, A Moreno, Enhancing the Sub-national Benefits of the Oil, Gas and Mining Sectors (2013), Revenue Watch Institute, New York: www.revenuewatch.org.

Resources for Infrastructure In seeking multiplier effects in the local economy from EI development, infrastructure plays a key role. Its expansion can open up opportunities in other industries, including agricultural exports and tourism. Yet gaps in infrastructure are one of the main bottlenecks to growth in developing countries. By leveraging investments as well as developing new initiatives, the EI large infrastructure projects can create or expand critical infrastructure and unlock regional development potential¹¹. This can include power, roads, rail, ports and information and communication grids. In practical terms, financing is a key issue. In Africa this has been a particularly acute problem with a shortage of infrastructure and lack of financing. Some new investors have been willing to finance infrastructure (mostly hydropower projects, railways) in return for rights to natural resource exploitation and contracts in 'resource for infrastructure' transactions, and for diplomatic ties with the host government concerned. Some of the major transactions have been government-to-government ones between the China Export-Import Bank and countries in Africa such as the DRC that are unable to provide adequate financial guarantees to back their loan commitments. The thrust of such transactions is that the country's resources act as collateral to expand production, to rationalize transport and to make exports more efficient through the grant of finance.

Resource Corridors The catalytic effect of investment opportunities in infrastructure can be both long-term and regional in character, creating multi-state zones and so-called 'resource corridors'. The idea behind this spatial development initiative is to counter the enclave (small-scale, local, geographically limited) impact that is typical of hydrocarbons and mining projects by using large, commercial oil, gas and mineral investments (and their need for infrastructure and goods and services) to anchor opportunities for broader economic growth and diversification within the immediately impacted communities. The policy goal is a viable and diversified economic space, *which would not occur through market forces alone*¹². This involves two key elements: the establishment of a viable financial framework based upon the expected increase of government revenues as a result of EI activity, and capacity building among government, private sector and civil society to develop and implement agreed development plans. This approach would be *inclusive* with respect to the impacted communities.

¹¹ Initiatives have been undertaken to foster infrastructure development such as the African Union Commission and United Nations Commission for Africa joint initiative, 'Exploiting Natural Resources for Financing Infrastructure Development'; the OECD Development Centre's 'Perspectives on Global Development' and the 'Guiding Principles' issued by the World Bank, which touch on the subject of mine-related infrastructure. A contribution has also been made by the International Finance Corporation and Public-Private Infrastructure Advisory Facility: 'Fostering the Development of Greenfield Mining-Related Transport Infrastructure through Project Financing', April 2013: Washington DC, World Bank, PPIAF.

¹² This subject is considered at length in a Source Book paper, 'Resources Corridors: Experiences, Economics and Engagement: A Typology of Sub-Saharan African Corridors' (2012) by Hudson Mtegha et al: www.eisourcebook.org, under 'Documents'. It considers in depth the cases of resource corridors in Mozambique, Tanzania and the DRC.

For an ambitious government then, EI sector activities can be leveraged to generate economic development that may be wider and longer lasting than the EI sector activities themselves.

Box 2.1: Changing Perspectives: re-framing the ASM debate

Artisanal and small-scale mining (ASM) has undergone ‘re-framing’ by the international community over the last few decades. This is likely to affect understandings of what constitutes ASM, how it is organized, and what type of activity it constitutes. These understandings have had significant impacts on approaches towards resolving challenges facing this mineral sub-sector. This has inevitably led to a variety of different approaches towards engagement with this economic activity. For instance, if one considers ASM a poverty-alleviation strategy, then strategies typically focus on it as a development opportunity, or as in need of a policing exercise, or requiring ways to transition miners out of mining and into economic alternatives. By contrast, if ASM is considered a viable economic activity, then the focus of the agenda becomes increasing productivity through technology, access to finance, and better organizational representation. Policy choices may cover a range of these perspectives depending on the national ASM demographic. The first question to ask is whether the people wish to remain as miners, or to leave for opportunities elsewhere. Research is emerging to suggest that in fact a large category of miners now consider such mining a profession (Hilson, 2010; Perks, 2011). This has implications for the design of policy.

The challenge of the ASM sector becomes a question of how one sees ASM in the first place: as an opportunity or a problem?

This includes beneficial impacts that may well be regional as well as national in character. In combination, they provide an important justification for supporting the EI sector in spite of the challenges which this presents to many governments (discussed below in Section 2.2).

Local benefits are considered at greater length in **Chapter 5** of the *Source Book*. Separately, we may note the shifts in thinking about mining, and particularly the sector known as artisanal and small-scale mining (ASM), that have taken place in recent years, creating the potential to open up opportunities for the inclusion of this sector in overall plans for the development of the mining sector in resource-rich countries (see **Box 2.1**). Grounds for optimism about the likely success of these linkages to development policy are provided by the following considerations:

The Contribution of Investors The ‘resources for infrastructure’ transactions underline an important trend over the last decade: the growing participation of private and other corporate investors in promoting integrated sustainable development at local regional levels, locating their transformative investments in a development context. An early lead role in this

was taken by Chinese companies in Africa (see discussion in **Chapter 9**). However, industry associations in oil, gas and mining sectors remain very active in developing guidelines, toolkits and manuals for (and with) their members to raise the level of best practice in their operations, especially in terms of their social and environmental impacts.

A failure to do so is increasingly perceived by investors as creating a risk to their ‘social licence to operate’. The synergies between public and private investment in ensuring that EI projects in poor regions contribute to optimizing the development potential of local, national and regional communities affected by these transformative projects. This requires industry as well as government to engage in avoidance, mitigation and amelioration of environmental and social damage, community consultations at the very least¹³. Oil, gas and mining companies could also demonstrate good corporate citizenship through policies of local sourcing. The *Source Book* includes examples of their willingness to engage with host governments in maximizing social benefits from EI activities.

Discovery and Development Recent research has documented the frequency and scale of new discoveries of hydrocarbons and minerals and the role of enhanced development in expanding known resource reserves¹⁴ and supplementing them with, for example, shale gas and oil. Further, as a result of technological changes, the market value of known natural resources can change by making them easier to extract or by increasing the amounts that may be discovered. Calculating a resource horizon for extractive industries can therefore be a challenge as the horizon often recedes into the future¹⁵. Many parts of Africa are also known to be seriously under-mapped in their geology. This suggests that a great deal of resources remain to be developed.

¹³ An example of this is the dialogue involving the World Gold Council and the World Bank and civil society partners: ‘Gold for Development’ (2012), conference proceedings. The focus was on the contribution of large-scale gold mining to economic and social development, with case studies from Tanzania, Peru and Ghana; the ICMM has produced a number of reports summarizing its activities in this respect such as the Minerals and Metals Management 2020 Report (2012).

¹⁴ For example, A Gelb, K Kaiser and L Vinuela (2012), ‘How Much Does Natural Resource Extraction Really Diminish National Wealth? The Implications of Discovery’, Center for Global Development Working Paper 290: www.cgdev.org.

¹⁵ P Daniel, S Gupta, T Mattina and A Segura-Ubiergo, ‘Extracting Resource Revenue’, Finance & Development, September 2013, 19-22.