Blog

Information asymmetries in extractive industries

What can be done?

by Alan R. Roe

In the second part of this blog, Alan R. Roe (/node/13579) discusses what is known about the informational failures that pose challenges for governments in projecting revenues from extractive industries. Read the first part here (/node/155713) .

Important new light has been thrown on information gaps faced by governments in making revenue predictions for the extractive industries by a recent research report (https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/anrc/Running_the_Numbers_Analytical_report.pdf) from the African Development Bank (2017). The AfDB evidence base was constructed by surveying some 50 officials in 19 African countries, with analysis related to five main potential uses of longer-term financial models for extractives:

- to quantitatively assess the outcomes of different designs for a country's **fiscal framework**
- to assess the consequences of adopting different possible **model contracts** for the companies
- to assess the pros and cons of different terms during **contract negotiations**
- to **forecast fiscal outcomes** longer term
- to help in the ongoing **administration of tax and royalty collection** by assessing the 'correct' levels of fiscal payments due in any given year.

The headline findings of the research that deserve attention:

15 of the 19 countries surveyed (79%) reported having some kind of financial model for extractives, while 21% had no such model. However in cases where there was one, only about half of the countries had any model relevant to project analysis; the other countries had merely aggregate sector-level and macroeconomic models that were not integrated with in-depth project details. Such models are not particularly helpful in terms of some of the five uses of models listed above, for example, revenue forecasting.

Most financial models that did exist (73%) had been developed with assistance. This came from some external multilateral or bilateral agency (with the technical work often carried out by a third-party consultancy company); or an extractive company, as in the case of three countries. Only 10% of models had been developed mainly in-house by local modellers.

Most models are run not according to any predetermined schedule. They are typically only in response to particular policy issues or information requests from senior management. Only *one* country in the sample reported running a project-level model on a regular predetermined basis — which means that it was the only country that could potentially draw benefits in most of the five ways listed earlier.

Most models seemed to be used predominantly at the front end of the value chain (e.g. during contract negotiations). It was much rarer to see ongoing uses during the much longer production stages of a project; for example, to monitor compliance with agreements and to check on fiscal receipts. This fits with another set of responses that clearly showed that the use of models in negotiating contracts was perceived to be their most important function, although several other functions were also accorded high levels of importance by respondents.

What these gaps imply

In only about half the respondent countries are the outputs from models shared beyond the sector agencies mainly responsible for mining and/or oil and gas. As a consequence, there was a very large divergence in the access to key model data reported by central agencies (such as finance, planning and revenue administration) compared to that reported by sectoral agencies — the latter being relatively much better informed even though they still suffer from a significant information gap in absolute terms. For example, the perceived information gaps for the central agencies in terms of data on production levels, reserves (of the resource), and non-capital costs were all 30% or greater, whereas those for the sector agencies were lower; typically less than 20% (see Figure 6 in the report (https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/anrc/Running_the_Numbers_Analytical_report.pdf)).[1]

One very clear conclusion of the AfDB research is that an information asymmetry is indeed a significant problem, at least in the African countries to which their results relate. As they note, ‘The study … found significant gaps in access to and availability of key data, in particular for cost data, reserves data and production data. These data are typically generated and controlled by extractive companies, and the study findings underscore the information asymmetry faced by governments’ (p. 38).

However, it was not only the failure of governments in gaining access to these corporate data that accounts for the disadvantageous situation of host governments. The AfDB research also found a surprisingly low utilization by government officials of publicly available corporate reports. It also found an only infrequent use of commercial databases which are sometimes costly to access, even though ad hoc, and equally expensive, consultancy reports were often used.

How can we address the gaps?

What, if anything, can be done to close the informational gaps between the extractive companies and governments? A basic problem is that the detailed forward-looking data used by extractive companies is typically commercially restricted because it contains sensitive information about planned investment and costs that would be of value to competitor companies.

Government themselves cannot easily obtain such solidly-based information about future outlooks — for production levels, revenues, and so on — unless they are substantial owners of the extractive resources in their own right. However, there are emerging examples of how sanitized versions of company data can be made available for government planning purposes.

Sanitizing company data for governments: an example from Tanzania

In 2008/9, five mining companies in Tanzania provided anonymized versions of their detailed planning data for all years from 2010 through to 2034 to an independent 'aggregator' who then produced an aggregated version of those data that could be made public without revealing any commercially sensitive data about any one company. Details of the methodology used and the main results are published in ICMM (2009 (http://www.opml.co.uk/sites/default/files/REi-Mining-in-Tanzania-v6%5B1%5D_0.pdf)).

Similar approaches have subsequently been used in case studies of both Zambia (ICMM 2014 (https://www.icmm.com/en-gb/publications/mining-partnerships-for-development/enhancing-mining-s-contribution-to-the-zambian-economy-and-society)) and in relation to the British Gas Group's large potential investment in Indian Ocean gas (OPM and Uongozi 2013). Although these studies have been conducted mainly by organizations external to the country, they nonetheless demonstrate the possibilities that some governments might wish to employ to ensure that they base their own projections on the fullest possible information.

This might be seen as complementing the specific suggestions made in the AfDB report itself, which recommends that governments should consider 'specific legislative requirements and contractual clauses relating to data sharing with extractive companies, clearly defining the boundaries of proprietary data and specifying templates and standards' (p. 38). Of course, legislation has a place but given the obvious limitations on what listed international companies can reveal, more consensual approaches like those above will also have a role to play.

In an industry that is both complex but often critical to the long-term prospects of an economy, the assembly of good-quality, forward-looking and longer-term data is but one component needed for the formulation of sensible strategies and the design of sound policies. It is only the first step in the making wise long-term decisions — but an essential one, which the evidence shows is not yet being well handled in the African context.

In-text reference

Uongozi Institute and Oxford Policy Management (2013), *LNG in Tanzania: Likely impact & issues arising*. Uongozi Institute Workshop Report, Dar es Salaam, August 2013.

Endnote

[1] The definition of these information gaps and how they were calculated by the AfDB researchers is explained in the report. In brief, they measure the difference between the perceived need (of the respondent) for certain types of data, and the actual availability of those data to them.

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Context

PROJECT

Extractives for development (E4D) (/project/extractives-development-e4d) is part of Macro-economic management (M-EM) (/project/macro-economic-management-m-em)

KEYWORDS

EXTRACTIVE INDUSTRIES (/?F%5B%5D=FIELD_LOC1%253ANAME%3AEXTRACTIVE%20INDUSTRIES)

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Previous

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› Next

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