Negotiating for Development:
A New Paradigm for Natural Resource Agreements

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January 2011

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The business of natural resource extraction has become increasingly intertwined with economic development, particularly in Africa. Business models of world-class resource extraction firms have largely kept pace with these changes, as firms have built new capacities to work with communities and host-country governments. However, many initial engagements of resource firms with developing-country hosts have ignored the potential role that the resource firm can play in the economic development of the host country. By leaving development off the negotiating table, both the firm and the host country forego opportunities to reduce costs and increase benefits.

This article suggests a solution to this problem: the counting of Tax Dollar Equivalents (TDEs). TDEs are the in-kind contributions of a company, usually to a project with economic development benefits, counted in the dollar-value terms to the host country. This article proposes that firms and governments of countries that look to natural resource firms for economic development contributions should count TDEs at the time of negotiating the resource agreement. By so doing, the actors could identify the development contributions that might be achieved at the lowest cost by the resource company and include them in the negotiations as part of the benefits to the host country. This exercise has the potential to increase both firm profits and economic growth in the host country, as well as to reduce the likelihood of future renegotiations.

The role of natural resource firms in economic development

The growth in demand for natural resources from the rapid industrialization of India and China combined with the depletion of the lowest-cost resource bodies in the developed world has led mining and hydrocarbon firms to emerging and frontier economies, many of them in the continent of Africa. In the last decade alone, Sub-Saharan Africa's mineral fuel exports rose from $11 billion to $96 billion.[1] McKinsey estimates that by 2015, 13 percent of global oil production will take place in Africa, compared with 9 percent in 1998. Moreover, economists believe that once further untapped resources have been discovered, Africa's commodity exports will be around five times their present level.

A major ore body or hydrocarbon deposit in a frontier economy may be valued at multiples of the GNP of the host economy. For example, the exploration of offshore oil and gas reserves discovered in Equatorial Guinea in the mid-1990s accounted for approximately 84% of GDP, 93% of tax revenue and almost 100% of exports by 2007.[2] In the Republic of Guinea, the development of the Simandou iron ore mine and infrastructure project is expected to require up-front capital

investment of over US$6 billion. Once in production, the project expects to pay hundreds of millions of dollars each year in taxes and royalties to the Government of Guinea—many times what the Government currently receives from all mining taxes.[3] Such activities translate into capital investments and revenue that can make a resource extractor the biggest game in town—sometimes even bigger than the entire government of its hosts.

Moreover, the managerial and engineering expertise brought in by the foreign investor can sometimes stand in stark contrast to the limited capacity of the host government to undertake fairly basic functions of the state. Foreign firms may bring in high-technology equipment and global experts, and set up sophisticated supply chains. During the course of their investment they may build a needed piece of infrastructure, the delivery of which may have eluded the host government for decades. If an impediment stands in the way of the investment, they may summon technical, human, and financial resources to overcome it, whereas a similar challenge faced by the host government may have remained mired in legislative deadlock or tripped up by limited financials. All this may lead to public perception of the resource investor in the host country as a competent and deep-pocketed actor.

When these characteristics are added to the sensible notion that exhaustible resource wealth ought to be used to promote long-term prosperity, the end result is that the public holds high expectations of the natural resource investor in areas outside its core competencies. In exchange for being able to extract and market the natural resource, the foreign investor is expected to play an active role in promoting host country economic development—above and beyond paying taxes. (However, in some countries, the government and population are too wary of foreign firms for real partnership in development to occur; this limits the usefulness of non-fiscal responsibilities of the firm.)

Top-notch resource companies themselves are approaching this challenge with vigor. They regularly engage host communities, offering (more commonly in Africa) to build and staff clinics and schools. Foreign companies make commitments to employ as many local citizens as possible, often going to great lengths to groom locals for management positions. They also buy from local suppliers when possible, sometimes helping to develop them when none exist. Occasionally resource companies will "overbuild" their infrastructure, donating the excess capacity to the host country—for example, by widening an access road to allow for local commercial traffic, or by introducing general cargo capabilities into an iron ore or coal port. Finally, building off of their procurement and

management expertise, resource companies may even undertake unrelated development activity such as building a road or government building, unconnected to the resource supply chain.

The net result of these types of activities is the involvement of the resource company in the developmental policies and projects of the host country. As they undertake the above activities, some companies staff their local offices with government relations and corporate social responsibility experts. However, given how intertwined the resource extraction has become with economic development, it is often the country and field managers of the company—working with whomever they must—who implement much of the development agenda.

A fiscal focus at the negotiating table

Both host governments and natural resource companies take it as a given that the company will take on a number of developmental responsibilities as it conducts its operations. To be sure, there are differences across companies and countries: a host government will have higher expectations of a global diversified mining operator than it will of a junior exploration company that may just flip the project once it establishes the resource. But those differences affect the pre- and post-agreement period more than they do the negotiations themselves. Companies with better reputations as development partners are more likely to be awarded long-term mining licenses by responsible governments. They will also be held to higher standards after the contract has been signed.

At the negotiation table, however, the focus often is not on the developmental role that the company can play. Rather, it may be limited to straightforward fiscal considerations. From the company's perspective, the objective is to minimize fiscal, or tax, obligations while agreeing to the "requisite" developmental obligations. The company prepares an elaborate financial model including expected revenues, capital and operating expenditures, and taxes and royalties. The treatment of fiscal obligations is highly sophisticated: income and withholding taxes are allowed to vary under different market assumptions, and scenario analysis on the overall rate of return is conducted as those assumptions are varied. In contrast, economic and social development expenditures enter as a simple cost, reflecting the perceived static obligations of the firm.

On the government's side (if the team is well prepared), negotiators will undertake their own analysis of the investment and model the fiscal parameters in order to understand the tradeoffs involved. For example, if the firm requests a reduction in the service withholding tax rate, the

government will be able to quantify the foregone revenue from such a concession. However, like the firm, the government will not undertake any sophisticated analysis of the non-fiscal aspects of the negotiation. It may argue for a certain level of health care for dependents of workers, or for a certain number of local citizens to be given management positions, but it will not subject those policies to the same level of quantitative analysis that it does the fiscal items.

The net result is that negotiations center around the fiscal variables—tax and withholding rates, royalties, etc.—whereas an easy consensus is reached on variables of a developmental nature—like infrastructure development, local procurement, and education/health contributions. One might be inclined to see this consensus as a good thing: both sides, after all, see the benefits of a resource company "doing good" while doing well. But it also reflects a lack of creativity. Some obligations are in fact in the firm's direct financial interest and therefore hardly need to be included in the agreement at all. Others reflect the curious coalition of development professionals advising the government and corporate social responsibility voices inside and outside the company as well as the local community's representatives (depending on the government sensitivity to communities). This coalition has produced various lists of accepted "obligations" that are ultimately relatively cheap for the firm to honor in letter, if not in spirit.[4]

A more creative negotiation would bring developmental variables to the core of the negotiation. At the end of the day, the company and the government are co-producing economic development. The firm is better suited to some tasks, whereas the government is better suited to others. It therefore makes sense to divide the efforts among them as efficiently as possible.

Counting TDEs

The basics of analyzing natural resource agreements from the perspective of the government are to calculate the likely revenue of the resource body, subtract the costs and taxes, and then estimate what the financial rate of return is to the company. If the return is above the likely threshold for a corporate to invest in the country, then the government may decide not to entertain a company's requests for tax concessions. Of course, the threshold financial rate of return for the firm will be higher when the investor perceives a higher political risk.

While the fiscal metric described above is useful to set out basic strategy for a negotiation, its basic structure ignores the possibility for gains from specialization on economic development activities. For example, if a coal-mining company were to contribute $150 million towards an

infrastructure fund of the government, that would get picked up as a $150 million expense for the company. But if the company were to spend $150 million extra to install excess capacity on its own power plant in order to hand over additional capacity to the national electricity company, an investment which may have cost the government $250 million to build from scratch, the analysis would also book the extra cost as a $150 million expenditure, not a $250 million gain. However, it is clear from this simple example that the government's actual benefits (assuming it needs additional power generation) are $250 million, not $150 million. Since both the infrastructure fund contribution and the power plant investment have an identical effect on the rate of return for the firm, there is nowhere in the analysis for the government to choose the better transaction.

A simple solution is to price out potential development contributions in TDEs, or tax dollar equivalents. Thus, at the time of negotiating and signing an agreement to develop and export the natural resources, the firm would put forward a menu of potential developmental contributions as well as their estimated cost in TDEs. The government might wish to develop the TDE value jointly with the firm, since it would be the government that would broker the project if the firm was not undertaking it. These projects would of course be in addition to the usual instruments conforming to the fiscal regime of the host country—taxes, royalties, withholdings, land rental, etc—whose "TDEs" are much simpler to measure since they are simply tax dollars. Importantly, for gains of trade to benefit both parties, the company would need to reveal which TDEs were the cheapest for it to provide. The government could then request some substitution out of simple tax dollars and into those development projects that the company had a comparative advantage in supplying (i.e., whose TDEs cost the company less than the equivalent cost to the government paying for them in taxes) and that the host population would need and value.

An illustration: OreCo in Ferroland

As an example, imagine that the mining company OreCo intends to develop an iron ore body in the country Ferroland. Ferroland is a frontier economy with a low GDP per capita and a government that only provides basic services, sporadically. The government is looking to OreCo to provide much-needed tax revenue as well as to assist the government with providing electricity and social services. OreCo would like to do all of these things, but must also generate a high enough rate of return on its investment that will justify the political risk in Ferroland. This means that it will ask for concessions from some of the government's demands. In order to maximize its contribution

while minimizing the costs, OreCo and the government calculate the TDEs of the various programs the government has requested, while OreCo lets the government know which of those it can provide at a lower cost.

Assume that under Ferroland's revenue code, the mining operations will generate $500 million in tax revenue over their lifetime (measured in net present value). This, obviously, generates $500 million in TDEs. How much does this cost to OreCo? On the surface, it would seem that it would cost $500 million in foregone profits. However, since taxes paid in the host country are considered a business expense when calculating dividends to investors in the home tax jurisdiction, the actual cost in foregone profits may be substantially lower—particularly when OreCo generates tax credits at home for the tax payments in Ferroland. OreCo's international tax advisors calculate the liability at home and find that the marginal tax dollar costs $.67 in foregone profits.

Next, assume that OreCo will build a hydroelectric plant in order to assist with its mining operations. OreCo only needs 50 MW of power, which its engineers have estimated will cost $250 million to build. However, OreCo could also build a 100 MW hydro plant for only $400 million, and completely hand over the additional 50 MW to the national power company of Ferroland. Since it would have cost the government at least $250 million (again, in net present value) to build a plant capable of generating 50 MW, but it costs OreCo only $150 million to generate the same capacity due to economies of scale, there is an economic argument for letting OreCo build the $400 million 100MW plant and transferring the excess capacity to the government. Of course, the additional costs of construction can be deducted from OreCo's taxable income in the home country (for simplicity here, the government of Ferroland specifies this would be a non-deductible expense), and OreCo's tax advisors estimate the actual cost in foregone profits would be only $100 million. In other words, it costs the company only $100 million in profits to generate $250 million in TDEs by expanding the capacity of the power plant to 100MW; this represents only $.40 per tax dollar equivalent.

Finally, assume that the government wishes for OreCo to build and operate a school and hospital to serve the community in the vicinity of the mine. OreCo's community development team calculates this will cost $60 million, or $40 million in foregone profits. How many TDEs would this generate for Ferroland? The answer depends on how much it would cost the government to provide the same services. Assume that the government has a poorly functioning healthcare and educational system, but that there is a vigorous nonprofit sector in Ferroland that can competently manage schools and hospitals on a shoestring budget. The government has the ability to construct the buildings and hire nonprofits to manage the school and hospital at a total cost of $20 million over

the life of the mine. This means that it costs the company $40 million to generate only $20 million in TDEs, or $2.00 per tax dollar equivalent.

Having done these calculations, OreCo communicates to the government of Ferroland that it can provide 50 MW of power (worth $250 million TDEs) cheaper than it can provide tax revenue, however to build and run the school and hospital (generating $20 million TDEs) would cost the company more than if it simply financed the government to provide education and healthcare. For its part, the government wants the 50 MW of power as a high priority, and knows that it can save money by having OreCo construct a larger hydroelectric facility as part of the mining agreement. As a result, when the two sides meet to negotiate, both sides leave the power plant on the table and the first obligation discarded in the company's favor is the school and hospital. The remainder of the negotiation focuses on the tax bill itself, and how much of the proposed $500 million in expected lifetime tax revenue OreCo is liable for in actual cash.

Benefits of TDE analysis

A government seeking to maximize the returns on its natural resource wealth should seek to maximize the TDEs of all the development contributions from investors engaged in the extractive sector. To be sure, costs alone should not drive the government's priorities, as the government should carefully analyze the benefits to society that might result from any particular program and compare those with a hurdle rate that it would expect to generate from spending tax revenue on projects that it designs on its own. But when the host government has already identified a priority that it would spend on—irrespective of whether it could convince a foreign company to undertake the project—then it makes sense to ask a foreign company to undertake that project if it can do so at a cheaper cost than the government can.

This approach is by no means a panacea to the complex challenge of generating real economic development from primary commodity exports. In general, and particularly in frontier economies, the development and export of natural resources is correlated with corruption and even conflict, as described by the so-called resource curse. Implementing a discretionary "wish list" rather than sticking with an inflexible minerals code and development checklist, even if analyzed according to the TDE approach described in this article, opens up opportunities for rent-seeking by individual officials. Moreover, the TDE approach requires fairly sophisticated analysis on the part of the host government; as always, the devil is in the details for how much gain is actually produced. At the

extreme, if the company undertook too many development projects, it could undermine the government's own capacity development. Nevertheless, the potential for gains is often there, and it may make sense for host governments to see whether a win-win situation is attainable.

By comparing their cost from each potential development contribution with the benefit in TDEs to the host government, resource extraction companies can identify their comparative advantage in promoting local economic development. If the cost of the development contribution is lower to the company than to the government, this opens up the possibility for mutual gains. At the negotiating table, the company and the government can agree easily to move ahead with those projects that are the cheapest for the company to provide, and look for alternative ways for the government to be able to meet its needs for those projects that are especially expensive for the company to produce. To be sure, the negotiations will remain complex, and how the gains from this process are split between the company and the government will ultimately depend on the skill of the negotiators. But it is to each side's advantage to introduce these gains, particularly in those countries where extractive industry firms are expected to undertake development activities, as they increase the total value of the mining project. A more valuable mining project will benefit the bottom line, and higher valued development contributions will benefit the relationship between the investor and the host country, improving investor perception and investor security in the host country.

[1] Ngozi Okonjo-Iweala, "Fulfilling the Promise of Sub-Saharan Africa," June 2010 in the *McKinsey Quarterly*.
[2] Republic of Equatorial Guinea, "First Report on the Extractive Industries Transparency Initiative (EITI)," March 2010.
[3] Rio Tinto Simandou Project Information, accessed at www.riotintosimandou.com.
[4] See, for example, International Council on Mining & Metals' *10 Principles*, URL: http://www.icmm.com/our-work/sustainable-development-framework/10-principles, or African Union's *Africa Mining Vision,* URL: http://www.eac.int/environment/index.php?option=com_docman&task=doc_download&gid=111&Itemid=143