NRGI Reader
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Natural Resource Governance Institute

Commodity Trading

Converting Natural Resources into Revenues

KEY MESSAGES

- Commodity sales transfer natural resources physical assets into revenues. The sales can generate a large portion of government revenues in a country that is paid in kind, participates in production sharing, or has a state-owned company that produces itself.
- Prices for sales of a commodity depend on many factors, including the grade or quality of the mineral. As a result, getting the best price for minerals or oil from a specific extraction point can be a complicated process that requires extensive expertise.
- Buyers of natural resources vary in part based on their capacity to convert, or refine, the raw resource into a format that can be used by a consumer. Commodity traders do not convert resources themselves but instead make a profit off buying from national governments and selling to those who can supply end users.

"A particularly critical area for transparency is the sale of petroleum by national companies on behalf of the state. Disclosure should cover the amount of oil the company receives, and the price, grade, volume and date at which it is sold."

— Natural Resource Charter, Precept 6

WHAT IS COMMODITY TRADING?

A *commodity* is something that can be bought or sold to meet needs in the market. Raw materials, such as oil, gas and minerals, are considered commodities. In order to make a profit, the owner of the raw material—either the company or the government—must decide what to do with it. When a mineral comes out of the ground unaltered, referred to as *raw*, it is rarely in a form that is ready to be used. Usually the owner must decide whether to *refine* the raw material into a product that can be sold for a higher price or to sell the raw material to foreign or domestic buyers. When natural resources are discovered, often the government and company that decide to extract the resources do not have the desire, capacity or need to convert the commodity to its end-use product. The purchase and sale of commodities, including raw materials, is called *commodity trading*.

Understanding how commodities are bought and sold, who is involved, and the factors in pricing is key to ensuring that a country is able to capitalize on the benefits from its resource extraction. This reader describes who buys commodities, how the prices are determined, and the role of state-owned enterprises (SOEs). It focuses on the sale of oil but may be applicable to other commodities. Additional information on SOEs can be found in the reader on "State Participation and State-Owned Enterprises".

This reader is intended for use in conjunction with Precepts 2, 6 and 11 of the Natural Resource Charter.

WHO BUYS COMMODITIES?

There are a range of potential buyers of extracted products, including the following:

- **Commodity trading companies**. Bringing in annual revenues of more than $100 billion per year, large commodity trading companies seek to make profit from buying and selling resources. Traders can offer financing and flexibility that end users sometimes lack, and they are accustomed to operating in logistically or politically difficult environments. However, traders get a margin that theoretically could have been captured by the government or extraction company if it marketed the commodity itself. Many of the largest trading companies operate from Switzerland.

- **Refineries**. Producers' preferred customers are often refineries, which use a chemical process to transform the raw commodity into refined products. Refineries should pay the best price, because they make their money from processing oil and selling refined products rather than reselling oil to other entities.

- **Integrated companies**. These companies, like major Western oil corporations, will transform a raw commodity into something to be purchased by an end user. Sometimes they have a trading arm that trades the product to downstream subsidiaries. If a seller has the sophistication to market to these companies, it can often capitalize on a profit otherwise captured by traders. Angola's national oil company, Sonangol, for example, explicitly seeks to sell to integrated companies and end users.

- **Traders as marketers**. Some small exporters choose to hire a trading company to market their oil or minerals on their behalf. The traders have the experience to find customers for the specific crude or mineral produced. These traders are also experts in dealing with the challenging logistics and extraordinarily complex nature of the global commodities market. Traders' fees lower the government's profits from the sale of crude, but this can be beneficial when the government has low capacity to find good buyers. For example, the government of Ghana hired trading companies in 2011 and 2012 to sell all of its crude to other companies, such as Total, Sun, and China Oil.

- **End users**. Some companies and countries decide to invest in the supply chain so that they can convert the commodity that is taken out of the ground into something that can be sold to an end user, like gasoline purchased to fuel a vehicle. This often involves investing in refining, distribution and marketing with the hopes of capturing the increased value of the product at each step in the value chain.

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Swiss commodity trading companies

Swiss commodity trading companies represent an increasingly large percentage of those buying and selling commodities, including from government entities. From 2011 to 2013, they accounted for over $55 billion in payments to sub-Saharan Africa's top 10 oil-exporting countries for commodities—nearly double the amount those countries received in development assistance. In Chad, for example, one Swiss trading company, Glencore, buys 100 percent of the oil sold by the government, making payments accounting for 16 percent of the government's revenues. These companies often have a high appetite for risk and will purchase oil from those that others might avoid, like the Libyan rebels in 2011. In many small or new producing countries, governments have negotiated long-term deals with Swiss companies to market their crude.

For a more complete assessment of the role of Swiss commodity trading companies in Africa, please see *Big Spenders: Swiss Trading Companies, African Oil, and the Risk of Opacity*.

DETERMINING THE PRICE

In addition to understanding who buys the product, it is important to understand the factors considered in determining a price.

The *grade*, or quality, of the commodity has a large impact on the price. In oil, for example, there are two main factors: *sweetness* and *heaviness*. The sweetness of oil refers to the amount of sulfur in it. Oil with less sulfur is sweeter, requires less processing to be used, and is therefore more valuable. The heaviness of oil refers to its density. Lighter crude can be refined into higher-value products, such as the gasoline used by car owners. Minerals have similar variations in quality. Coal, for example, ranges from *brown coal*, used for electric power plants, to *anthracite* coal, used for residential space heating.

The price of a particular commodity is often linked to, or *benchmarked* with, a known grade of the commodity elsewhere. *Dated Brent*, for example, is a market term for a cargo of North Sea Brent-blend crude oil. Dated Brent prices are used, directly and indirectly, as a benchmark for a large proportion of the crude that is traded internationally. Often a contract specifically links the price of sale of oil to the benchmark price, with terms like "Brent minus $7.15" or "Ural plus $3.42." This phrasing, called *formula pricing*, allows the price to fluctuate with the market without creating a separate fluctuation scheme for each extraction point. When media refers to the "price of oil," it is usually referring to the Brent price as an indication of a global trend.

Sellers often have a minimum price at which they are willing to sell their commodity. This is often tied to what they believe to be the value of the commodity and the cost of extraction. The cost of extraction can vary greatly from site to site, even for the same commodity. Shale oil in the United States costs nearly $60 per barrel to extract, while oil in Iraq can cost as little as $5 to extract. Those who are trying to sell oil that cost them more to extract may have more limited options to sell if the prices drop. Other site-specific factors can also influence the price, including distance to market, weather, political stability, sudden swings in distribution or quality, and skills of buyers and sellers.

Rise and fall of oil prices

Basic economic theory suggests that oil prices rise and fall because of changes in supply and demand. As oil has become an asset class, speculators buy and sell the oil not to use it but as a way of making money. Many economists now think that speculators influence the price and speed at which prices change. This can make it difficult for sellers to predict what a fair price will be for oil under production.

STATE-OWNED ENTERPRISES' ROLE IN THE COMMODITY MARKET

In many resource-rich countries, a SOE receives and sells a portion of the oil or mineral production. When they are focused on oil and natural gas extraction, SOEs are called NOCs (national oil companies). Sales by SOEs can generate a large portion of the government's revenues: From 2011 to 2013, the total value of NOC crude sales equaled 56 percent of combined government revenues for sub-Saharan Africa's top 10 oil producers.

THE PROCESS OF SELLING OIL

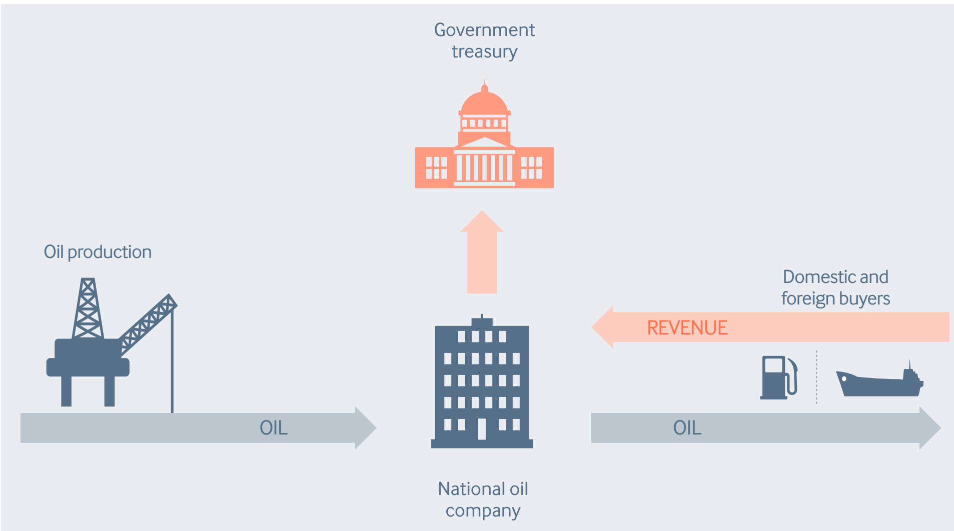

Figure 1. Flows of oil and money associated with national oil company oil sales

Source: Gilles, A. et al, *Big Spenders: Swiss Trading Companies, African Oil, and the Risk of Opacity* (NRGI, 2014)

While some of these steps are applicable to all types of commodities, the process below focuses the discussion on oil. There are four basic steps national oil companies follow to sell oil.

1 **Receipt of a production share**. NOCs are often in a position to sell a commodity from a variety of sources, including extraction by the NOC itself, ownership shares in a joint venture, participation in a production sharing agreement, and in-kind payments for royalties or tax liabilities (see reader on fiscal terms for further explanation). Before arranging for the sale, the NOC may be part of the extraction process or simply receive the commodity from the extraction company.

2 **Making a sale.** Making a sale involves deciding how to sell the commodity, identifying a buyer and agreeing on a price. Finding the right price, finding the right buyer, thinking about the sales' conditions, directing the paperwork, arranging the payment and organizing transportation are all highly specialized skills. Two of the most common ways to sell a commodity include *term sales* and *spot sales*. In term sales, the NOC negotiates a contract with a buyer for a longer period, typically a year, and the agreement stipulates how the price will be determined against a specified benchmark. In spot sales, the buyers and sellers of individual cargoes find each other and transact a deal *on the spot*. Many countries prefer *term contracts* for their predictability and lower staffing requirements for each shipment. Selecting a buyer should feature a similar kind of open and competitive process to awarding a contract,

so that no company receives an undue advantage and that the NOC is assured that it's receiving the best possible price.

3 **Receiving the revenue.** The NOC should receive revenue in exchange for the crude that it sells to a buyer. This cash could be paid to the NOC or to another branch of the government.

4 **Distributing the revenue.** Once the NOC receives revenue, it can reinvest it in the company, transfer it to the national treasury or spend it directly in development projects. When or how the revenues are transferred to the national treasury can differ based on the stream of oil.

For example, the proceeds from the sale of the NOC's own production or equity oil usually remain within the company (assuming it is a commercialized entity). The NOC pays taxes and royalties like any other company, and it pays dividends to its shareholders. Because the government owns some or all of the shares, it usually receives most or all of the dividend payments. The Mexican SOE Pemex, for example, retained all its export sale earnings but in 2010 paid $52 billion in taxes to the state—$4 billion more than its earnings that year.

When the government's share of production is sold, some or all of the proceeds are transferred from the NOC to the treasury. Some NOCs charge a fee for this service, leading them to retain a small portion of the revenue.

Given their often unparalleled access to funds, NOCs frequently spend for reasons other than their core business, usually acting on behalf of government. These are called *quasi-fiscal expenditures* (QFEs). NOCs pay for infrastructure, repay the government's debt, fund fuel subsidies, provide resources for social programs and acquire assets for other government entities. These expenditures require extensive oversight because they bypass the central budget and are often highly discretionary. See the reader on state participation and state-owned companies for more detail.

GOVERNANCE LESSONS

NRGI's research into the sale of commodities by NOCs has led to some early lessons in maximizing the benefit to the country. Overall, to be successful, NOCs should sell crude oil at the highest possible price, conduct the transaction at the lowest possible costs, and eliminate opportunities for corruption and abuses of authority. Some suggestions of good practice include:

- **Optimizing price within available means**. Successful NOCs have invested in the personnel to create sophisticated trading desks that can follow changes in the markets and identify buyers.

- **Use middlemen with care**. Most major NOCs focus their sales on end users or companies that will process their crude into petroleum products. While traders can offer flexibility and competitive pricing, their business model favors aggressive negotiation of sale terms, which can generate pressure on NOCs to grant favorable treatment. Without strong management and transparency, using middlemen creates risks for unfavorable deals that are not in the best interest of the country.

- **Promote autonomy and accountability**. SOEs should be kept separate from other government agencies, with clear rules and strong oversight. Trading in particular should be kept free from political influence. Strong corporate governance practices, including thorough reporting, can help protect SOEs from potential corrupting government influences. In addition, rigorous audits of physical and financial flows should be used to encourage accountability.

- **Transparency and oversight by home countries**. As with other types of extractive companies, commodity traders and the other companies that buy from governments and NOCs should be required to fully report on these transactions. Switzerland and other countries where traders are based should require this kind of reporting through mandatory reporting legislation.

QUESTIONS TO ASK

- What commodities are sold in my country? What is their grade?
- Who buys most of the commodities from my country? What type of contract is used? How is the price determined? Is information about this publicly available?
- Does an SOE or government agency sell commodities from my country? If so, what is the capacity of their trading desk? Do they make information about the process of trades publicly available?
- If there is an SOE, how are the revenues it collects distributed? What is the relationship between the SOE and other branches of government?

ADDITIONAL RESOURCES

Natural Resource Charter, Precept 6, available at: http://www.resourcegovernance.org/sites/default/files/NRCJ1193_natural_resource_charter_19.6.14.pdf.

Fattouh, Bassam, *The Anatomy of the Crude Oil Pricing System* (The Oxford Institute for Energy Studies, 2012), available at: http://www.oxfordenergy.org/wpcms/wp-content/uploads/2011/03/WPM40-AnAnatomyoftheCrudeOilPricingSystem-BassamFattouh-2011.pdf.

Gillies, A., *The Case for Transparency in National Oil Company Crude Sales* (NRGI, 2012), available at:http://www.revenuewatch.org/sites/default/files/OilSales-Transparency.pdf.

Gillies, A. and J. van Schaik, *The Governance of Oil Sales: Early Lessons on Good Practice* (NRGI, 2012), available at:http://www.revenuewatch.org/sites/default/files/OilSales-Governance.pdf.

Gilles, A. et al, *Big Spenders: Swiss Trading Companies, African Oil, and the Risk of Opacity* (NRGI, 2014), available at: http://www.resourcegovernance.org/publications/big-spenders-swiss-trading-companies-african-oil-and-risks-opacity.

Van Schaik, J., *When the Price Is Right* (NRGI, 2012), available at: http://www.revenuewatch.org/sites/default/files/OilSales-PriceisRight.pdf.

Van Schaik, J., How Governments Sell Their Oil (NRGI, 2012), available at: http://www.revenuewatch.org/sites/default/files/OilSales-HowGovtsSellOil.pdf.