

Revenue Management and Distribution

Addressing the Special Challenges of Resource Revenues To Generate Lasting Benefits

KEY MESSAGES

- Oil, gas and mineral revenues are special because they are finite, volatile and, if large enough, can negatively impact other industries. They also generate large economic rents and are location-specific, which can lead to conflict over their control. As a result, they may need to be managed and distributed differently from other types of government revenue.
- There are various techniques governments can employ to respond to the special challenges of natural resource revenues, including distributing revenues to natural resource funds, state-owned enterprises, subnational jurisdictions, the national budget, or directly to citizens in the form of cash. Each of these institutions requires a unique management strategy.
- Large and volatile capital inflows also have special implications for monetary policy. It may need to be adjusted to control inflation, exchange rate appreciation or macroeconomic volatility.

“Sustainable economic development cannot come from merely extracting a resource. Authorities must invest revenues so that current and future generations enjoy the bounty.”

— Natural Resource Charter,
Introduction

NATURAL RESOURCE REVENUES ARE SPECIAL

Many countries do not see their expected returns of social and economic development when they discover natural resources. This challenge is in part linked to how the countries manage the *natural resource revenues*, or the money received by the government because of the extraction or sale of natural resources. Before understanding the options for managing natural resource revenues, it is useful to understand what makes them unique:

- **They are finite.** Each extraction project cycle has a limited time span, usually between 20-50 years. While new technology or exploration generates new discoveries, ultimately extractive resources are finite. Many countries have seen large economic booms during their peak production phase only to fall into poverty as soon as the resources are fully exploited. The graph above shows the revenue cycle of a typical oil and gas project.

This reader is intended for use in conjunction with Precepts 7, 8, 9 and 10 of the Natural Resource Charter.

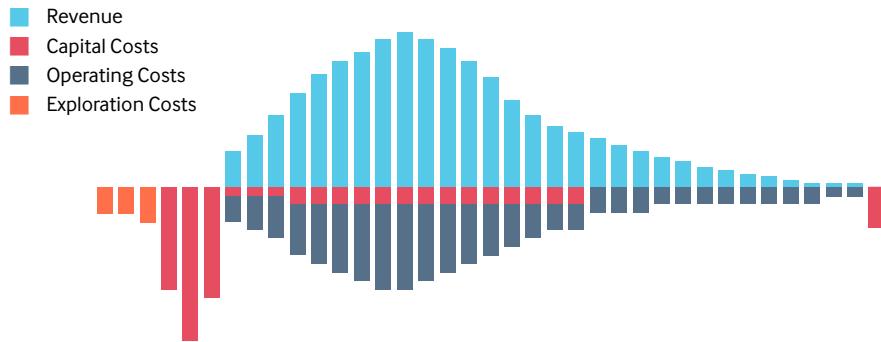


Figure 1. Illustrative project timeline for a typical oil and gas project.

Source: Bauer, Andrew, *Subnational Oil, Gas and Mineral Revenue Management* (NRGI, 2013), 9

- **They are volatile.** Prices of natural resources, called *commodity prices*, fluctuate according to market forces. When government revenues are tied to natural resources, their revenues will fluctuate accordingly. Volatility is amplified by extraction production cycles and unexpected stoppages. This makes development planning difficult. It also leads to incentives to overspend on grandiose legacy projects when prices rise and go into debt when revenues decline in order to maintain the same standard of living as before the slump. The consequence is poor investment decisions and higher probability of debt crises.

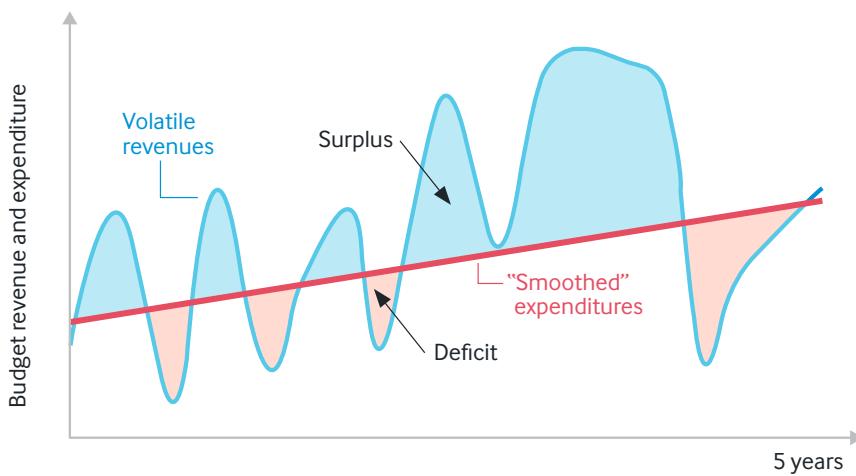


Figure 2. Volatile revenues

Source: Bauer, 12

- **They can damage other industries.** When natural resources are discovered, they can represent a large percentage of the country's GDP and government revenues. If the economy does not have the *absorptive capacity* to make efficient use of these revenues, the result can be inflation or exchange rate appreciation. This increases the cost of domestically produced goods in foreign markets, especially manufactured goods, harming exporters. Also, the large revenues in the private sector often attract skilled workers to extractive industries. When the number of skilled workers in a country is small, this can make it more difficult for other sectors to find expertise. Together these trends can make it more difficult for other industries to successfully operate and can make a country more dependant on natural resources. Together, these effects are often referred to as *Dutch disease*.

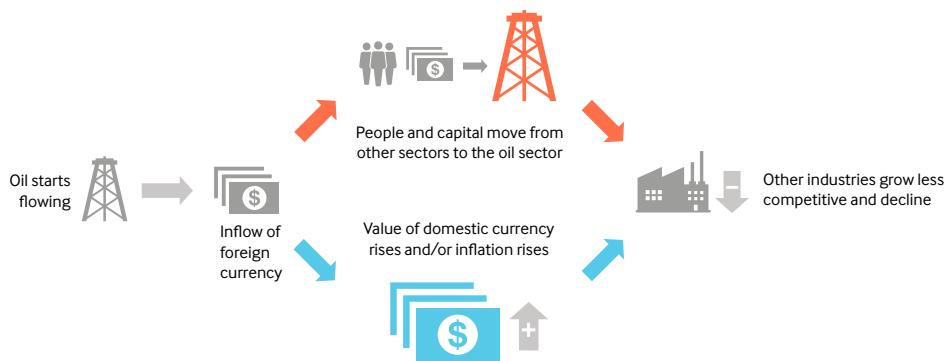


Figure 3. Dutch disease and drain effect

Source: NRG!

- **They can be large and geographically concentrated.** Natural resource revenues can be enormous relative to the size of an economy, yet, as a capital-intensive rather than labor-intensive industry, they tend to employ only a very small portion of the population. This is often misaligned with the expectations of the communities that surround the extraction point. Furthermore, the profits can be captured by a select few or be exported to foreign investors. This can cause frustration and unmet expectations among locals, leading to conflict, especially in the region where the mines or oil fields are located. The large amount of profits from a single source is vulnerable to elite capture or government mismanagement unless oversight mechanisms are in place.

REVENUE MANAGEMENT GOALS

Despite the challenges listed above, governments can make decisions to use their natural resource revenues in a manner that has long-term positive social and economic impact on the country. The discussion about how to create that outcome from resource revenues mixes questions about policy, revenue distribution and management tools, and the political and economic impacts of different revenue management choices. Here are some of the major policy considerations that are often raised in deciding how to best manage and allocate natural resource revenues:

- **Benefits across generations.** This question considers how much revenue should benefit the current generation versus how much should be invested for future generations. Because natural resources are finite, this is a more stark policy decision than for other industries. In countries with low levels of education and inadequate infrastructure and a government capable of transforming resource revenues into development, immediate spending to raise economic growth and improve livelihoods may be wise. Where these conditions do not exist, a more spread-out spending plan may be appropriate. Spreading out spending over time may imply *parking* resource revenues in foreign assets for a short period of time.
- **Benefit across the nation.** In addition to questions about generations, the government must decide who within the current population should benefit from the resources. Should the benefits be distributed in such a way that all people benefit equally, or should they be distributed in a manner such that some, like the poor or high potential industries, stand to benefit more? Also, should producing regions benefit to a greater degree than non-producing regions? Some of the revenue management and distribution tools discussed below, such as direct distribution, tend to benefit the poor more relative to the rich. However, the details of how

these projects are implemented can have undesired impacts. For example, if a direct distribution plan is not conditional on, for instance, sending children to school, the policy can spur wasteful consumption and starve the government of needed financing for infrastructure and social services.

- **Domestic vs. foreign investments.** The end goal of extracting oil, gas or minerals from the ground is to increase government revenues and improve livelihoods through things such as better access to healthcare, education and electricity. The best way to do this is not necessarily by directly investing in domestic public services. There are three reasons governments may wish to invest in foreign assets, for instance, in overseas stocks and bonds, for a time. First, if the economy is highly developed, there may only be a marginal social return of investing inside the country, which could be less than the financial return on foreign investments. Second, some governments do not have the *absorptive capacity* to invest all resource revenues efficiently, because they lack managerial capacity or because of lack of workforce and tools to effectively deliver on government projects. Third, governments may wish to create an endowment for future generations and live off the interest. In these scenarios, governments may wish to *park* some of their revenues in foreign investments.
- **Managing volatility.** Volatile resource revenues do not necessarily mean the government has volatile expenditures. A government can choose to use tools, such as the *fiscal rules* discussed below, to stabilize the amount of revenues that are spent in any given year. Alternatively or additionally, governments can adjust the amount spent in *capital expenditures* versus *recurrent expenditures*. Capital expenditures are onetime allocations, such as building a new bridge. Recurrent expenditures are spending decisions that are likely to return each year, such as teacher salaries. While volatility in recurrent expenditures is extremely problematic, investment expenditures are inherently uneven.
- **Growing the domestic economy.** Improving the domestic economy, with the potential to increase jobs and tax collection, should be the goal of investing natural resource revenues. One of the debates about how to invest is whether to invest in the enabling environment, for example, port infrastructure, or a specific sector, such as tourism. Another major question is whether to invest in *local content*, that is, job creation related to extractive industries, or economic diversification. Local content takes advantage of the presence of the extractive industries, while economic diversification reduces the reliance on the sector.
- **Managing expectations.** As noted above, large resource revenues often come with large expectations for quick returns, creating risk for conflict or turbulent governance. Some governments respond to these expectations by investing in projects that provide a quick tangible return to citizens, such as large infrastructure projects. In some countries, this practice has led to wasteful spending on popular but often unproductive projects, such as multiple football stadiums. Improvements to public spending and management processes are another way to respond to expectation challenges. An open and transparent revenue management and distribution process can also aid the government in managing expectations.

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The study of impacts and best practices in this field is ongoing, and therefore each policy decision is taken with a potential risk of impact.

TOOLS AND INSTITUTIONS FOR REVENUE MANAGEMENT AND DISTRIBUTION

Revenue distribution refers to the manner in which a government *allocates*, or distributes, natural resource revenues to different levels of government, institutions, or directly to citizens. Some of the decisions of where to allocate revenues are fundamentally political, but economic efficiency criteria can also help determine how much should be allocated to which institution. *Economic efficiency criteria* consider questions of the absorptive capacity of different levels of government, whether individual citizens have access to the ability to save transfers, and how costs differ over different locations or sectors. Combining the economic theory with the political analysis can be challenging, particularly when trying to respond to the special qualities of natural resource revenues listed above. For instance, allocating an appropriate percentage of revenues, determined by an economic formula, to a long-term savings fund can help mitigate Dutch disease and improve national spending efficiency, though it can also starve the government of much-needed development financing. Allocating some revenues to subnational governments may reduce interregional income inequality or improve local service delivery, though the opposite can also be true. Allocating resource revenues directly to citizens may reduce poverty and improve natural resource revenue accountability, though it may also starve the government of revenues for public investments. Governments, with input from citizens, must decide how to manage risks and opportunities between these potential outcomes.

Allocation of revenues is only part of the picture. Each institution that receives resource revenues should have established procedures or principles to plan, organize, staff and control their operations. These activities are referred to as *revenue management*, as opposed to *revenue distribution*, which simply refers to the allocation of revenues. Below is a list of key institutions that manage resource revenues and how they function.

- **Budget allocations.** Resource-rich countries have the opportunity to invest their revenues in development through public spending. The principal institution used is the *annual budget process*, though many countries also have multi-year expenditure frameworks or multi-year *development plans*. Which sectors a country chooses as investment priorities can have a large influence on the sustainability of the investment. Malaysia, for example, found success in prioritizing education and infrastructure. In resource-rich countries, one challenge of large domestic spending and low *absorptive capacity*, or the rate at which a government can efficiently spend money, is that spending can perpetuate Dutch disease.

The *budget process*, that is, the process by which governments decide when, where and how much to spend which resources, is equally important. Development plans and budgets tend to be most successful when they are both *participatory* and *aligned*. *Participatory* development plans are created with input from multiple actors, including citizens. A plan that is *aligned* incorporates input from the private sector into the government plan. For example, if a mining company is going to be building a railway to export its minerals, then the plan should at the least include that railway and potentially set out to partner with the company so that the most overall useful railway is constructed.

The plans and budgets must then be monitored throughout implementation and properly audited. Because resource-rich governments have a tendency to spend

What not to do: Nauru

Nauru, an island state, used to be mineral-rich but did not plan well. In 1973, due to its phosphate mining boom, it had gone from one of the world's poorest countries to one of the richest, with GDP per capita exceeding \$25,000 (2005 dollars). Overconsumption and underinvestment, however, meant that by 2007, it had once again become one of the world's poorest countries, with GDP per capita at less than \$1,900.

heavily on capital projects, it is especially important that projects be subject to a full cost-benefit analysis, that procurement is transparent and competitive, and that the government monitors delivery.

- **Natural resource funds and other special funds** (see reader on natural resource funds). Governments can establish special *extrabudgetary funds*—outside the regular budget process—to manage natural resource revenues. When these funds have macroeconomic objectives and invest at least partly in foreign assets, they are referred to as *sovereign wealth funds* or *natural resource funds*. Ideally, the government dictates how much to deposit and withdraw from these funds by *fiscal rules*, multi-year constraints on government finances. Often, however, governments, especially authoritarian ones, manage natural resource funds on an *ad hoc* basis, without clear rules or objectives. Countries have shown the most success when funds are established with clear objectives, strong fiscal and investment rules, a division of responsibilities between actors, and sufficient disclosure for proper oversight. Half of all natural resource funds do not publish quarterly financial statements and are therefore hard to assess.

Governments often establish other types of extrabudgetary funds to earmark resource revenues for specific expenditure items. When operating outside of the normal budget process, they are often designed to skirt budget rules or avoid public scrutiny.

- **State-owned enterprises (SOEs).** State-owned enterprises are companies that are more than 50 percent owned and operated by the government. Resource-rich countries often establish sector-specific SOEs, such as a national oil company (NOC). SOEs can play an important role in revenue management, as natural resource revenues often pass through them on their way to the budget, or there are large budget allocations of oil or mineral revenue to the SOE. Countries often find SOEs attractive, as NOCs and national mining companies (NMCs) can generate revenues for the state and serve other functions, such as training domestic workers and improving sector control. There is a risk, however, that NOCs and NMCs can act as a drain on government finances or become a financial risk. For instance, NOCs and NMCs represent further investment in an industry that already has some tendency to crowd out other industries, and thus they can divert scarce government revenues away from public investments in other sectors. Also, if national companies go bankrupt, taxpayers are on the hook to pay their debt.

In addition, SOEs often are responsible for non-fiscal expenditures that can be an inefficient use of public resources, such as fuel subsidies or corporate social responsibility (CSR) projects. When these *quasi-fiscal* spending tools are under the control of the SOE, it can be difficult to align with the national budget. If a government clearly establishes the fiscal relationship between the SOE and the budget, it can work to avoid such problems. For example, if all the revenue from an SOE flows into the budget and then parliamentarians allocate an SOE's annual budget, they can oversee and monitor the mandate and quasi-fiscal activities.

- **Subnational distribution.** Some governments choose to share the national revenues with subnational government. More than 30 countries, such as Indonesia, Peru, and Nigeria, allocate a percentage of natural resource revenues to producing subnational distributions as a means to allow those most directly impacted by resource extraction to have enhanced revenue benefits. The amount distributed is

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often a function of the degree of fiscal federalism in the country and of the political power of subnational versus national governments.

- **Direct distribution.** A small number of governments (e.g., Alaska, Mongolia) have sought to share revenue benefits directly with citizens via cash transfers. Proponents argue that this form of distribution increases citizen engagement and can disproportionately benefit the poor. However, this form of revenue distribution can have unintended consequences, such as increasing household consumption at the expense of public investment. A more targeted approach to cash transfers—for example, by allocating resource revenues to the poor—may offer a more efficient alternative.

MONETARY POLICY

Another important aspect of revenue management is monetary policy, the process by which the government of a country controls the supply of money. Tools at its disposal include certain interest rates, government bond purchases/sales, and purchase/sale of other assets. Central banks often use these tools to target economic growth, unemployment, inflation or the exchange rate with other currencies.

“Macroeconomic volatility can be controlled by fixing or managing the exchange rate.”

Resource-dependent countries are particularly susceptible to two monetary problems: a large inflow of foreign capital causing an overvaluation of the real exchange rate (inflation and nominal exchange rate), and macroeconomic volatility. Macroeconomic volatility refers to volatility of prices, exchange rates and GDP. The large capital inflow can lead to Dutch disease. This problem can be overcome through monetary sterilization, that is, the central bank buying foreign currency and saving it as official reserves or selling domestic bonds. Macroeconomic volatility can be controlled by fixing or managing the exchange rate through the same mechanisms. Nearly every oil-rich country's central bank manages its exchange rate..

OVERSIGHT

Revenue management schemes are most successful when they are designed to allow for strong oversight. Oversight can protect these revenues from the challenges of popular political demands and corruption. Good oversight systems should include the following:

- Transparency of revenues entering the system and where they are allocated
- Transparency of the rules that regulate decisions on when, where and how revenues are allocated
- Regular reporting and audits of all government and investments by an external accounting firm
- Separation between decision makers and oversight boards
- Strong legal sanctions brought against anyone who takes government funds or misuses the power of their office

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QUESTIONS TO ASK

- What are my country's goals for how to use natural resource revenues?
- Is the distribution of resource revenues in my country efficient? Does it encourage efficient spending across regions and institutions?
- Are revenues in my country focused on spending for current or future generations?
- Does my country have a coherent medium- or long-term national development plan? If not, why? If so, does it address my country's challenges, and is it used in annual budget planning?
- Does my country have a natural resource fund? If so, what is its purpose?
- Is the government actively pursuing a policy of economic diversification?
- How is my country working to control macroeconomic volatility or Dutch disease?

ADDITIONAL RESOURCES

Allen, Richard, and Dimitar Radev, *Extrabudgetary Funds* (2010), available at:
<https://www.imf.org/external/pubs/ft/tnm/2010/tnm1009.pdf>

Bauer, Andrew, *Managing the Public Trust: How to Make Natural Resource Funds Work for Citizens* (NRGI and Columbia Center of Sustainable Investment, 2014), available at:
http://www.resourcegovernance.org/sites/default/files/NRF_RWI_Complete_Report_EN.pdf

Bauer, Andrew, *Subnational Oil, Gas and Mineral Revenue Management* (RWI, 2013), available at:
http://www.resourcegovernance.org/publications/fact_sheets/subnational-oil-gas-and-mineral-revenue-management

Collier, Paul, and Anthony Venebles, *Plundered Nations? Successes and Failures in Natural Resource Extraction* (Palgrave Macmillan, 2011).

Heller, Patrick, Paasha Mahdavi, and Johannes Schreuder, *Reforming National Oil Companies: Nine Recommendations* (2014), available at: <http://www.resourcegovernance.org/publications/reforming-national-oil-companies-nine-recommendations>

Morgandi, Matteo, *Extractive Industries Revenues Distribution at the Sub-National Level* (RWI, 2008), available at: <http://www.revenuewatch.org/publications/extractive-industries-revenues-distribution-subnational-level>.

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