

CHAPTER 7

What Can We Learn from Oil Contracts? Clarifying the Links Between Transparency and Accountability

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Releasing historically confidential oil contracts into the public sphere is becoming a key part of the global transparency movement, but there has been little explanation of *how* contract transparency can improve resource governance. To fill this gap, this chapter addresses how accountability can develop over both fiscal and nonfiscal contractual clauses. Using data from over one hundred real oil contracts signed in eight Latin American countries between 1955 and 2002, this chapter shows that citizens need supplementary contextual information to evaluate and interpret fiscal clauses, such as the government's share of profits. Social and environmental clauses are more easily interpreted, but they are often too vague to immediately enhance accountability through transparency. Moreover, for

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both fiscal and nonfiscal clauses, optimal design is not always obvious, and citizens need to weigh complex trade-offs. The link between transparency and accountability, therefore, will likely only develop over time, as information about the resource sector and resource governance increases, and as countries develop robust mechanisms for incorporating citizens' feedback into contractual negotiations. Whereas much of the existing literature posits that contract transparency will promote accountability, this chapter builds on that concept by illustrating how to use specific clauses to promote different aspects of accountability and information from real contracts to support these claims.

INTRODUCTION

Almost every country in Latin America—even those with poor geological conditions for oil discovery—has attempted to attract investment in oil exploration at some point in its history.¹ Those countries fortunate enough to find large stocks, however, confront challenges associated with the rewards of resource wealth. These challenges surface even before revenues from oil development begin to flow. While a country's petroleum stocks may be a gift of nature, "translating this resource into saleable crude requires investment and effort" (Tordo et al., 2010: ix). Governments need to find ways to engage the capital and expertise of oil companies while still getting a fair deal for their citizens.

The terms of these deals have historically been set through confidential contracts, making oil revenues comparatively easy for governments to hide (Ross, 2012). Secrecy gives government officials opportunities to make deals that facilitate private rather than public gain. Thus, vast oil

revenues can fuel corruption, undermining accountability.² Transparency is increasingly viewed as an effective tool for improving governance and reducing corruption in resource-rich countries. Global initiatives promoting increased transparency, such as the Kimberley Process Certification Scheme (KPCS), the Publish What You Pay Coalition (PWYP), and the Extractive Industries Transparency Initiative (EITI), have thus gained widespread support. To date, transparency initiatives have primarily focused on revenue transparency, that is, information on companies' payments to governments.

The problem is that revenue transparency alone does not allow citizens to assess, for example, the return that governments are receiving for the extraction of public natural resources or how payments are structured over time. Did their government collect a large signatory bonus, which the private company will later recover through the sale of oil, effectively

¹ Even countries that are not typically thought of as oil producers have signed exploration and production agreements with private oil companies in the hopes of discovering oil. For example, Belize, Costa Rica, El Salvador, Guatemala, Honduras, and Paraguay have all initiated exploration efforts.

² The academic literature contests whether access to resource rents erodes the quality of institutions or whether countries with weak institutions are more likely to seek resource rents. Ross (2012) argues that, after the wave of nationalizations in the 1970s, the size, volatility, and secrecy of oil revenues reduces accountability in oil-producing countries. Menaldo (2013), on the other hand, argues that cash-strapped countries with weak institutions are more likely to initiate oil exploration efforts.

lowering future tax obligations?³ Or, are payments low initially but expected to rise over time? Who will be liable in the case of environmental damage caused by resource production? Answering these questions is crucial for citizens to determine whether government-reported payments represent a fair value for the extraction of their resources. In theory, oil contracts and the laws and regulations that govern them can answer these questions. For these reasons, transparency advocates are beginning to include contract transparency as a key tenet in good resource governance.

Accountability requires both that citizens can access and understand disclosed information and that there are robust mechanisms for incorporating their preferences into contractual design.

³ Signatory bonuses act as a loan from the oil company to the government. The current government receives revenues up front, and companies typically recover this money through later sales of oil (Stiglitz, 2007). Even if bonuses are not tax deductible, governments would sacrifice later revenues in exchange for up-front revenues for the net present value of the negotiated contract to remain constant. This is not necessarily a poor decision if governments are investing revenues with a high rate of return.

This chapter illustrates both the limitations and the opportunities of contract transparency as a means of improving resource governance in Latin America. Despite the growing popularity of contract transparency as a tool to improve resource governance, *how* contract transparency can improve accountability is poorly understood. This chapter separately considers fiscal and nonfiscal clauses and how transparency over existing fiscal and nonfiscal clauses could enhance accountability. Using information from historical oil contracts, this chapter shows that contract transparency is unlikely to immediately improve accountability. Interpreting information from contracts, especially fiscal clauses, requires supplementary information about project economics (e.g., field size, extraction costs, capital costs). Further, both fiscal and nonfiscal clauses involve making complex trade-offs, and optimal design depends on citizens' preferences regarding the trade-offs. Accountability requires both that citizens can access and understand disclosed information and that there are robust mechanisms for incorporating their preferences into contractual design. By illustrating *how* contract transparency can improve different dimensions of accountability, this chapter bolsters calls for contract transparency policies and points to how such policies can be effective.

CONTRACT TRANSPARENCY AS THE NEXT STEP IN THE GLOBAL TRANSPARENCY MOVEMENT

The idea that transparency can improve governance is not a recent one, nor is it specific to the resource sector. Louis D. Brandeis (1914: 26), a United States Supreme Court Justice, argued that “sunlight (...) is the best of disinfectants” in his support of financial disclosure laws. Woodrow Wilson (1884: 26) similarly avowed that “light is the only thing that can sweeten our political atmosphere—light thrown upon every detail of administration in the departments; light diffused through every passage of policy.” Despite the long-standing notion that information is essential to good governance, transparency initiatives only recently took hold in the resource sector. Skyrocketing commodity prices in the mid-2000s highlighted deficiencies in national and international frameworks to adequately address the economic and governance challenges that accompanied the wealth influx. Transparency and accountability initiatives like EITI sought to improve governance by empowering civil society actors with more information.

Transparency and accountability initiatives began by following the money, tracking how much revenue flowed from companies to governments. As revenue transparency gained strength, it became clear that many other links in the resource extraction value chain remained opaque.

Governments must first decide if and when to begin extracting resources. License areas used for resource extraction, particularly during exploration phases, can be quite large, and governments need to carefully weigh the costs and benefits of resource production in each license area, which will vary based on local environmental conditions. Without transparency, citizens lack the opportunity to weigh in on the fundamental decision about whether and when to convert assets in the ground into monetary benefits. Once the government has decided to extract resources from a given area, it must define the legal and financial terms governing extraction. Then, it must award the right to extract. Without transparency over the licensing and allocation process, citizens cannot know whether the allocation process was competitive or whether it was designed to ensure the best deal for the government. Chapter 6 of this publication discusses transparency in the licensing and allocation process in depth.

Without contract transparency, “citizens have no way of knowing whether they are getting a fair deal for their resources and no means of finding out where the money goes” (PWYP, 2013).

After the licensing and allocation process is complete, a written contract is signed. Along with national laws and regulations, this written contract defines the obligations of the resource extractor to the government and vice versa. Without contract transparency, “citizens have no way of knowing whether they are getting a fair deal for their resources and no means of finding out where the money goes” (PWYP, 2013). Thus, contract transparency is becoming an increasingly important component of the agenda for greater transparency in natural resource governance. The IMF included contract disclosure as one of the best practices of budget-making in its 2007 Code of Good Practices on Fiscal Transparency. In July 2013, EITI added contract disclosure to its list of suggested transparency policies (EITI, 2013). In one of the strongest endorsements of contract transparency, the European Bank for Reconstruction and Development (EBRD) will require all recipients of extractive sector loans to disclose terms and conditions of contracts governing resource extraction by the end of 2014 (EBRD, 2013).

This chapter focuses exclusively on the role of contract transparency in improving resource governance. In doing so, it sets aside discussions of how and whether particular contracts can legally be made transparent, a process that can be technically challenging, as illustrated in Chapter 8 of this book in the case of Trinidad and Tobago. Proponents of contract transparency cite two main arguments in support

of contract disclosure. The first argument is based on citizens’ democratic right to access contracts. In a typical contract, each party is a commercial entity answerable to shareholders. In this context, contract confidentiality can protect proprietary information. However, in the case of oil contracts, one of the signatories is a government or state-owned oil company, which signs contracts as a representative of citizens. Governments owe citizens more than mere profit maximization: citizens may value environmental conservation and local employment, for example, in addition to profits. Citizens have a right to see whether their governments are serving their interests in contract negotiations (Rosenblum and Maples, 2009).

Not only do citizens have a democratic right to access contracts, but keeping contracts confidential may erode trust between citizens and their governments, undermining democratic institutions. When contracts are confidential, citizens may assume that contracts contain evidence of corruption and bad deals. For example, Argentine citizens are currently demanding contract disclosure of the recent deal struck with Chevron for US\$1.24 billion in investments in shale gas, investments that could reach US\$15 billion over the next 17 years (Romero and Krauss, 2013a). Over 5,000 residents of the resource-producing province protested the deal. Many believe that this investment was secured by offering Chevron overly generous terms, including an alleged “secret clause” in the contract that would extend Chevron special

coverage for losses (Romero and Krauss, 2013b). It is possible that there is no such clause within the contract or that there is a commercial logic behind special provisions for losses. For example, fields with exceptionally high up-front capital costs and risky geology often allow more generous terms for writing down capital expenditures. The actual terms of the deal remain opaque, so it is impossible to know at this juncture whether or not citizens are correct in their assessment that the terms of the deal were overly generous. However, confidentiality may make citizens more prone to distrust governments and oil companies, and governments do not have the opportunity to explain terms to the public. By disclosing contracts, governments and companies could increase citizens' confidence in negotiated deals. Anticipating disclosure, governments would be prevented *ex ante* from negotiating contracts unpalatable to citizens (Radon, 2007). Indeed, building trust that the state is pursuing the public interest is the first reason cited by a group of NGOs—including PWYP, the Natural Resource Governance Institution (formerly the Revenue Watch Institute, or RWI), and Grupo Propuesta Ciudadana in Peru, among others—in a position paper leading up to the 2013 EITI Global Conference, which supported adding contract disclosure as a mandatory component of EITI (EITI International Board, 2012).

The second argument supports contract disclosure as an accountability mechanism. Corruption can occur at every stage

of the transaction between governments or state-owned oil companies and private resource developers, from the allocation of contracts, to the negotiation of fiscal terms, to the enforcement of fiscal terms. During each of these stages, various agents have incentives to divert resources for private gain. Citizens (principals) cannot induce agents (government officials) to serve their interests without information on what agents are doing.⁴ Secrecy makes it more difficult and costly for citizens to obtain that information. More information in the public sphere should enable citizens to punish governments for failing to respond to their interests in contract negotiations.

Notwithstanding the growing popularity of contract transparency arguments within the overall agenda for transparent management of natural resource revenues, many actors oppose contract transparency. Opposition typically comes from actors that benefit from secrecy. For example, when British Petroleum (BP) famously published details about the US\$111 million signatory bonus that they paid to the government of Angola to operate an offshore well, the Angolan government threatened BP with contract termination and expulsion (McMillan, 2005). Resistance can also have a commercial logic. Private oil companies often resist contract transparency because of proprietary information that may be contained within contracts, such as seismic

⁴ See Stiglitz (2007) for a discussion of agency problems in resource governance.

data on field geology. Proponents of contract transparency argue that concerns about proprietary information can be addressed while still achieving transparency over the contractual clauses relevant to the public by redacting sensitive information (Rosenblum and Maples, 2009). Whether or not contract transparency policies can simultaneously release sufficient information to the public to promote accountability and protect commercial interests remains to be tested empirically. Even if all parties theoretically agree to transparency, there can be legal and technical hurdles to overcome before information can actually be made public (see Chapter 8 of this publication).

Some oil-producing countries have already pioneered contract transparency policies. At least five countries in Latin America (Bolivia, Colombia, Ecuador, Mexico, and Peru) already disclose oil contracts. However, contracts are not equally accessible across cases. Table 7.1 outlines key differences among Latin American countries in contract accessibility. In Mexico, for example, citizens file freedom of information claims to request the disclosure of specific contracts (Andrade et al., 2010–11). In Peru, by contrast, the state-owned oil company, Petroperu, operates an online database of oil contracts searchable by block. The fact that these countries are still releasing contracts and securing private investments in the oil sector suggests that it is possible to pursue the goals of transparency and protection of commercial interests simultaneously.

For Latin America then, arguments about how transparency policies can be most effective are as important as arguments about why contracts should be made transparent. This chapter focuses on the accountability mechanism, asking how contract transparency could improve resource governance.

WHAT INFORMATION CAN BE FOUND WITHIN OIL CONTRACTS?

Data

In order to illustrate how information can be extracted from contracts, this chapter relies on a dataset of historical oil contracts and legislation (Kyle, 2014). These contracts were obtained from the Barrows Company, an international reference library for oil, gas, and mineral laws and contracts. Specifically, the chapter uses information from 103 oil contracts signed between 1955 and 2002 by eight Latin American countries: Argentina, Bolivia, Chile, Colombia, Ecuador, Paraguay, Peru, and Venezuela. These countries were selected to represent a broad range of geological and market conditions, including major global producers (Venezuela), net exporters of oil (Argentina, Colombia, and Ecuador), net importers of oil (Bolivia,⁵ Chile, Peru), and countries that initiated exploration efforts that never yielded major discoveries (Paraguay).⁶

⁵ Bolivia is a net exporter of natural gas but not of oil.

⁶ Detailed information on contracts and sources can be found in Table A7.1 on page 247.

Table 7.1

Contract Transparency Policies in Latin America

Country	Method of contract disclosure	Ease of access	Notes
Bolivia	Contracts must be individually authorized and approved by the legislature.	Low	Operation contracts were reviewed and approved by the Chamber of Deputies and the Senate and subsequently posted on Yacimientos Petrolíferos Fiscales Bolivianos (YPFB) and Ministry of Hydrocarbons websites. However, these contracts are difficult to find now.
Colombia	Contracts are published on the Ministry of Hydrocarbons (ANH) website. ^a	Medium	Contracts are easy to locate, but disclosures are incomplete. Full contracts are available for 2012 bidding round but only model contracts are available for earlier rounds.
Ecuador	Contracts are published on Petroecuador's website. ^b	Medium	Contracts are easy to locate, but disclosures do not give full information about fiscal terms.
Mexico	Some Pemex contracts have been released through freedom of information claims.	Low	Contracts have ultimately been disclosed through freedom of information claims, but the process is lengthy.
Peru	Contracts are published on Petroperu's website. ^c	High	Contracts are easy to locate and disclosure is comprehensive. Contracts are searchable by block.

Source: Author's elaboration based on Andrade et al. (2010); RWI (2013a and 2013b).

^a Available at <http://www.anh.gov.co/es/index.php?id=185>

^b Available at http://www4.eppetroecuador.ec/lotaip/lotaip_contratospec.cfm

^c Available at <http://www.perupetro.com.pe/relaciondecontratos/>

While the data are useful in illustrating how to extract and interpret information from oil contracts, they are limited in several ways. First, all contracts used in this chapter are historical and do not represent current conditions in the oil sector for these countries. Second, the contracts presented here may not fully depict the conditions

in the oil sector for the country during the time period in question. In some countries, each contract signed during an exploration effort or bidding round contains similar fiscal terms; in other countries, terms vary within the same round. The author gathered as many contracts as could be located for each bidding round for each country;

however, not all contracts signed during the time period were available. Therefore, the information depicted here cannot be interpreted either as a representation of current fiscal conditions within the resource sector nor can they be interpreted as a full representation of historical fiscal conditions. Third, in order to extract information from oil contracts—such as the expected “government take” from the project, discussed further below—the author had to make assumptions about project economics. Actual government take for the contracts modeled in this chapter depended on real project economics and enforcement of contractual terms. Despite these limitations, the data are useful in illustrating how to extract and interpret information from oil contracts that were negotiated across a wide range of geological and market conditions.

Resource exploration and production is supported by tens (if not hundreds) of contracts between contractors and subcontractors, between contractors and financing institutions, and between contractors and governments and/or state-owned oil companies. When transparency advocates call for contract transparency, however, they are typically referring to a primary contract that governs the exploration and exploitation of the resource which defines the main obligations of the state and the companies involved in extraction (Rosenblum and Maples, 2009). Primary contracts can vary from a 10-page agreement that defines obligations by referencing existing laws to a 150-page agreement in which every term

is specified within the contract. These contracts can comprehensively cover most of the issues that may arise with oil exploration and production, or can remain silent on key issues such as whether governments are committing to tax stabilization over the life of the contract, how the oil price will be calculated to determine a company’s taxable income, and who is liable for environmental cleanups.

Contracts define the rights and obligations of governments and/or state-owned oil companies and private oil companies.

Contracts define the rights and obligations of governments and/or state-owned oil companies and private oil companies. These rights and obligations span several major areas, such as licensing, contract duration, fiscal obligations, environmental liabilities, and local employment and service requirements. Contracts vary widely as to whether they cover each of these issues and as to how these issues are addressed (see Table 7.2 on page 238). The chapter proceeds by evaluating the two major groups of clauses—fiscal terms and social/environmental terms—and how contract transparency can and cannot enhance accountability.

ACCOUNTABILITY OVER FISCAL TERMS

When discussing accountability over fiscal terms in oil contracts, two primary issues are of concern. First, and most prominently, contracts define the overall share of profits that governments can expect to receive over the life of a field. Second, different methods of securing that share—such as royalties, income taxes, and production-sharing—respond differently to changing market conditions. This section addresses the difficulties of calculating and interpreting governments' expected share of profits, which requires detailed information on project economics. By contrast, it is simpler to assess how the share of profits will respond to changes in international prices. However, different forms of tax collection have different advantages and disadvantages and optimal design can vary across contexts.

Government Take

A primary motivation for disclosing oil contracts is assessing the division of profits from oil field development between the government and private oil companies (e.g., EITI International Board, 2012; Gary and Karl, 2003; Rosenblum and Maples, 2009; RWI, 2012). However, there is no single clause within a contract that tells the public whether governments or private companies were more successful in securing their interests. Most commonly, analysts use the government take statistic to

evaluate oil contracts. Government take is “the government’s share of economic profits from almost all income sources, including bonuses, royalties, profit oil, taxes, and government working interest” (Johnston, 2007: 36).⁷ It represents the division of undiscounted profits over the full life of an oil field.

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There are three main problems with evaluating government take and asking whether the government has secured competitive terms. First, government take varies with project economics, and this information is needed to assess whether government take is competitive. Second, fiscal

⁷ When national oil companies (NOCs) have an equity stake in projects, this calculation of government take includes the NOCs' share of profits as a part of government take. Thus, it does not make a distinction between revenues accruing to the central government versus to the NOCs. Whether or not national governments have access to profits collected by NOCs varies across countries (Victor, Hults, and Thurber, 2012). For countries where national governments have little access to NOC revenues, this calculation may overestimate the take of the national government; in that scenario, take would be more appropriately divided between governments, NOCs, and private companies.

terms on paper may diverge from fiscal terms in practice (i.e., contracts may not be enforced). Third, nonfiscal terms also contribute value to a contract but are not incorporated into the government take statistic.⁸

Using contractual terms to calculate government take is a complicated exercise and is both “art” and “science” (Johnston, 2003). The “art” of contractual analysis involves selecting appropriate input parameters, while the “science” involves selecting appropriate modeling methods. Government take calculations presented here utilize cash flow analysis for a base-case scenario that makes assumptions about field reserve size, decline rate, oil prices, project costs, and field life.⁹ Government take calculations are sensitive to modeling assumptions. Figure 7.1 shows how government take varies with project economics. For example, in the contract shown for Ecuador in 1995, government take is secured through income

tax and production-sharing arrangements, which do not vary based on field profitability; thus, government take is independent of field profitability.¹⁰ In each of the other three contracts shown, however, government take is additionally secured through a royalty. Because royalties are collected based on production and not on profits, royalties are regressive with respect to field profitability. Thus, the value calculated for government take will increase as costs as a share of gross revenues increase.

This chapter plots government take across countries, so it is useful to hold project economics constant and vary only the fiscal terms within contracts. When the objective is to analyze a single contract, it would be more appropriate to subject the contractual terms to a wide range of potential scenarios and calculate a range of potential government take statistics. For the base-case assumptions used here, see Table A7.1 on page 247.

Figure 7.2 shows government take calculations for 103 contracts from Argentina, Bolivia, Chile, Colombia, Ecuador, Paraguay, Peru, and Venezuela signed between 1955 and 2002 for the base-case scenario.¹¹ Each government take statistic is calculated using the same price, production, and cost

⁸ There are other potential weaknesses of the government take statistic not addressed here. One major issue is that the statistic is undiscounted and does not incorporate information about the timing of expected payments (Johnston, 2007).

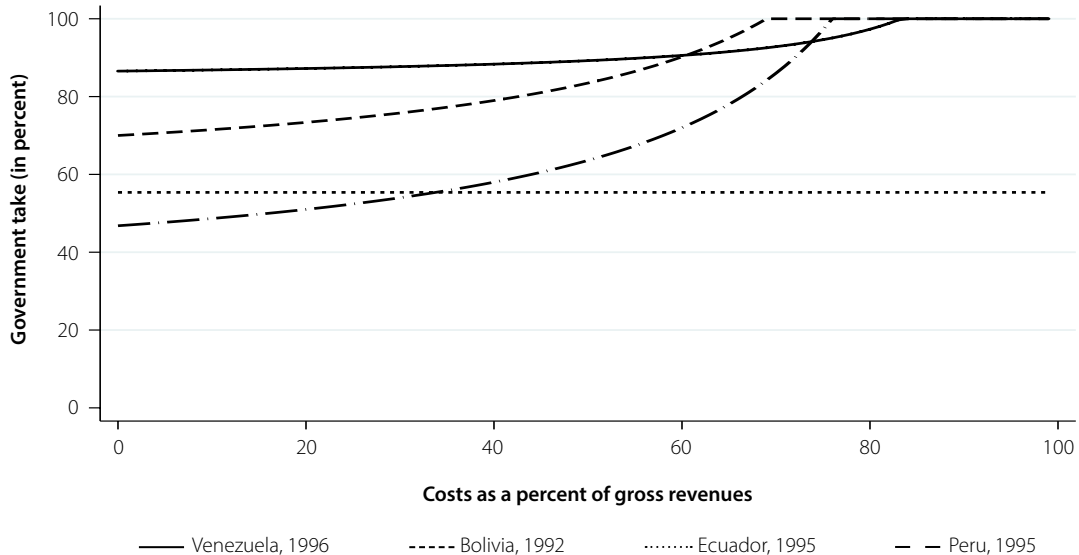
⁹ Other types of analysis can be performed. Companies often use decision analysis to evaluate projects, which focuses on the impact of managerial decisions (e.g., whether to drill additional wells). They incorporate uncertainty but typically by specifying probabilities attached to different prespecified scenarios (e.g., the probability that the discovered field size will be large, small, or zero). Decision trees are designed to guide companies through project decision making (see Galli et al., 1999 for a discussion of different methods of oil field evaluation).

¹⁰ The profit oil split does vary based on field size, which can be an imperfect proxy for field profitability.

¹¹ See Table A7.2 on page 248 for contract availability by country and year. Note that not all countries are covered for the entire time period. Data for Argentina, for example, end in 1989.

Figure 7.1

Variation in Government Take Based on Field Profitability



Source: Author's elaboration (see Table A7.1 on page 247 for source information on contracts).

Notes: Each line plots government take calculated from the fiscal terms within a single oil contract using different assumptions about field profitability.

scenario using (undiscounted) cash flow analysis.¹² In other words, the analysis is performed as if the same oil field—with the same size and extraction costs—were discovered as a result of each contract.

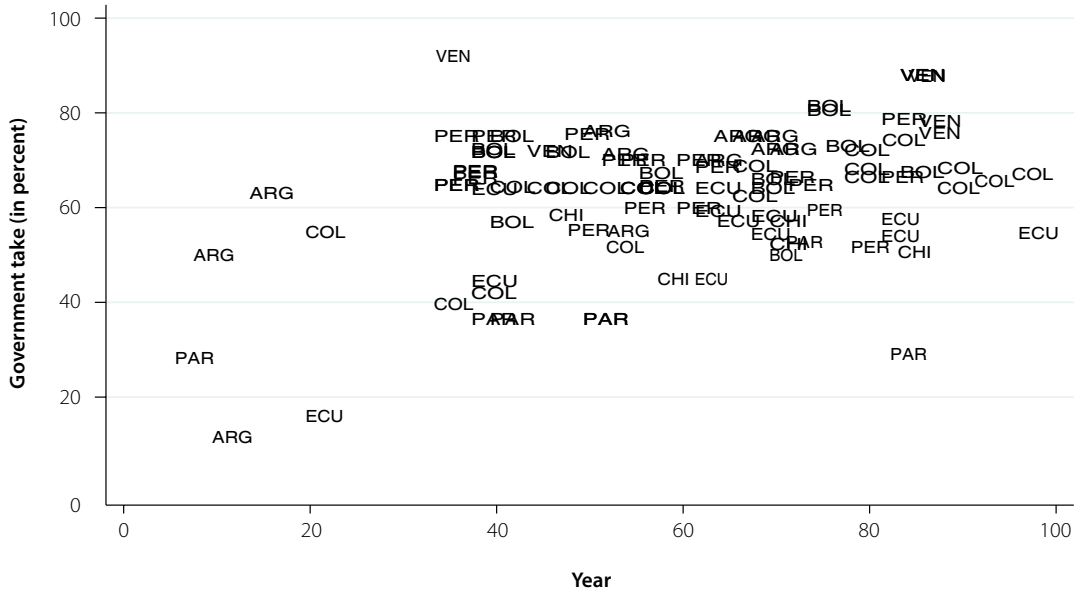
Differences in take statistics in Figure 7.2, therefore, are attributable *only* to differences in fiscal terms. Government take varies widely across countries and over time within the same countries.

¹² One could discount the cash flow to calculate government take, but this is typically not done (Johnston, 2003). Discounting the cash flow would increase calculated government take if the contract secures early revenues for the government (in the form of bonuses or royalties). It is more complicated to compare discounted statistics across countries however because countries may not use the same discount rate.

The logical question from an accountability perspective is the following: do these data points represent the most competitive deal that the government could have secured at the time?

Figure 7.2

Government Take



Source: Author's elaboration. Data on contracts comes from PL (1967).

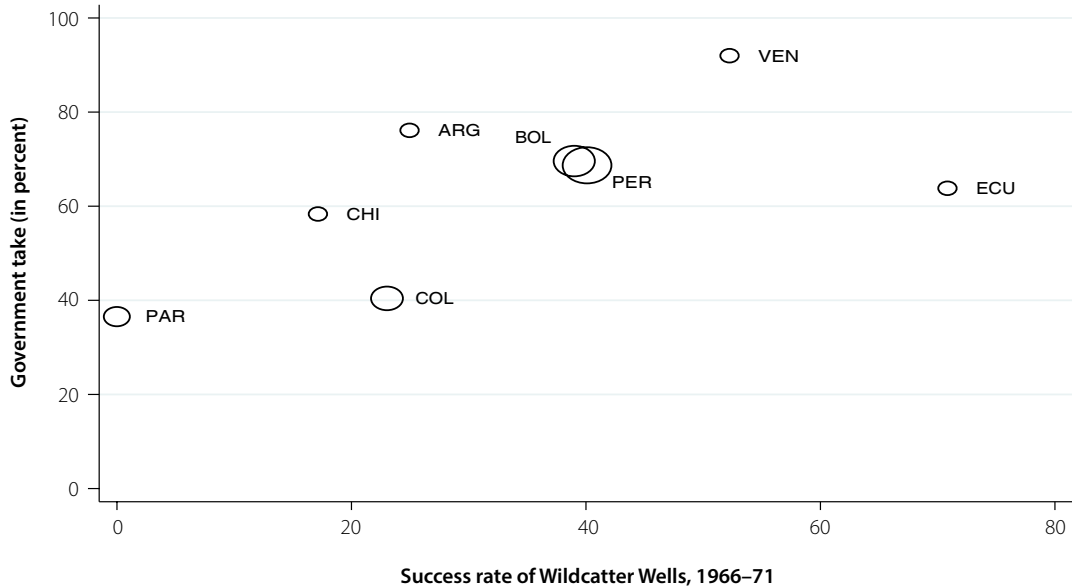
Notes: Each point represents a contract signed during a given year between a government or state-owned oil company and private resource developer. Government take is calculated using cash flow analysis based on the assumptions in Table A7.1 on page 247. See Table A7.2 on page 248 for information on data availability by country.

The logical question from an accountability perspective is the following: do these data points represent the most competitive deal that the government could have secured at the time? For example, why did Bolivia and Peru secure government take near 80 percent in the late 1970s while Colombia's take (for this hypothetical scenario) was closer to 40 percent? However, this question is flawed for at least three

reasons. First, government take varies based on geological risk, which varies across countries and over time. Figure 7.3 illustrates the relationship among prospectivity, the likelihood that a given field contains oil, and government take during the 1970s. This analysis plots values for only eight countries during a single time period, so it should be seen as an anecdotal example of fiscal clauses varying with geological conditions

Figure 7.3

Government Take by Prospectivity



Source: Data on contracts comes from PL (1967). Data on wildcatter drilling comes from AAPG Bulletins (1967, 1968, 1969, 1970, 1971, and 1972).

Notes: The y-axis represents government take calculated for the base scenario summarized in Table A7.2 on page 248. The x-axis represents the percentage of wildcatter wells that hit oil between 1966 and 1971. The size of the circle indicates the level of confidence over fiscal terms in the country at the time; larger circles indicate that more contracts are available for the time period. See Table A7.2 on page 248 for information on data availability by country.

and not a formal test of the relationship. The y-axis represents government take calculated for the first exploration effort conducted by each of the eight countries since 1971. Along the x-axis is the success rate for wildcatter wells drilled between 1966 and 1971. Wildcatter wells are those drilled outside of known oil fields—and not those drilled on existing, known oilfields—and therefore face uncertainty of finding oil. The

size of the circle is weighted by the number of contracts used to create the government take estimates, so larger points should indicate more precision.¹³

¹³ Larger circles do not necessarily indicate more precision over the economic modeling of the contracts but rather more precision over the fiscal terms at the time (larger circles indicate more contracts are available for the bidding round).

Examining Figure 7.3, the difference between Bolivia and Colombia in fiscal terms no longer presents a puzzle: between 1966 and 1971, Bolivia had a wildcatter success rate of 39 percent while Colombia faced a 23 percent success rate (with 100 and 126 total wildcatter wells drilled respectively). Indeed, looking at the data this way, Ecuador now looks like the outlier, with a wildcatter success rate of 71 percent but a government take of only 62 percent.¹⁴ However, this point is estimated with less precision than others since fewer contracts were available for Ecuador for the period.

These differences in prospectivity make it complicated to benchmark deals across countries. Imagine two fields with the same costs of extraction, field size, and technical probability of drilling success. The fiscal terms, among other factors, will determine whether or not the field can be commercially developed. In other words, a field under a fiscal system with harsher terms may not be considered a commercial discovery, while the same field under easier terms could be commercially developed. To put this another way, if the field size and costs of extraction were the same but the probability of drilling success varied, then government take would have to vary in order for the field to remain valuable enough to justify commercial development. Thus, information on project

¹⁴ All drilling information comes from the American Association of Petroleum Geologists.

economics and prospectivity is crucial to contextualize cross-country comparisons on government take.¹⁵

Even with full information on prospectivity, comparing government take across countries and time periods is a complicated exercise. Expectations about the future price of oil at the time of contract negotiation shape investors' attitudes toward risk (Tordo, 2010). Thus, two fields with similar levels of geological risk and costs of extraction may vary in their attractiveness to investors based on *when* they are put up for auction (and differences across time periods in expectations about future oil prices). Fields also vary by the level of technical expertise and up-front capital required for development. In practice, there may only be a small handful of companies globally that have the particular type of expertise required or that can raise a sufficient level of investment capital to develop the field. In these cases, governments may need to allow investors to write down investment costs before collecting tax revenues, effectively limiting government take in early years of the contract. Without these provisions, investors may not be willing to risk the level of capital required to develop

¹⁵ There still may be room for governments to capture more take even in low prospectivity environments. In other words, just because it is important to take geological risk into account when benchmarking government take across countries does not mean that differences in geological risk fully explain differences in government take.

the field. Many more complications with benchmarking exercises could be imagined. This chapter cautions against drawing conclusions about the “fairness” of particular deals without a deep understanding of geological risk, project economics, and market conditions.

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Further, focusing only on government take calculations in transparency policies without also examining accompanying contextual information could have deleterious effects on the government’s ability to implement natural resource policy. Because of differences in project economics and prospectivity within the same country, governments often assign different fiscal terms to different field areas. For example, governments often have different fiscal regimes for onshore versus offshore investments or for areas with proven reserves versus exploration areas. The ability to vary terms can be beneficial for countries because it enables them to encourage investments in high risk areas by assigning lower take while still securing high take on low-risk areas. Without technical knowledge of field differences, it could be difficult for the public to

understand differences in terms. Thus, information on government take could generate focal points that limit the government’s options to release future fields under different terms, even if prospectivity would call for it.

The importance of contextual information for citizens to assess resource governance is highlighted in the new 2013 EITI Standard. Going forward, EITI-compliant countries need to disclose information on production; ownership of licenses; descriptions of how revenues are allocated between national, state, and local governments; and descriptions of fiscal regimes (EITI, 2013). While transparency along these dimensions is crucial to understanding overall resource governance, this information is not sufficient to fully contextualize and benchmark government take.

Second, it is difficult to compare governments’ rate of return across countries because enforcement of contractual terms varies. A country that negotiates lower government take on paper, and successfully enforces contractual terms, may get a higher take in practice than one that negotiates higher terms on paper but struggles to enforce them. Nonenforcement could be caused by several factors. Companies could over-report costs in order to reduce their tax burden, which happens even in the United States. In Alaska in the 1980s, several prominent global oil companies settled with the state on charges that they over-reported production costs and under-reported price by selling oil below market prices to

their own subsidiaries (Stiglitz, 2007). More recently, the Office of Natural Resource Revenue in the United States charged a company operating in the Gulf of Mexico with improperly deducting transportation costs from royalty payments (ONRR, 2014). If these types of violations can happen in the United States, they undoubtedly occur in countries with weaker tax administrations.¹⁶

A country that negotiates lower government take on paper, and successfully enforces contractual terms, may get a higher take in practice than one that negotiates higher terms on paper but struggles to enforce them.

Countries and companies could also mutually agree not to enforce fiscal terms laid out in contracts or to amend them. When there are conflicts between national law and contractual terms, there can be legitimate confusion over tax burdens. For

¹⁶ The point made here refers to incentives to over-report true project costs and not to concerns about “gold-plating,” or, incentives for oil companies to spend more than they otherwise would in order to reduce their tax burden. As long as companies collect some share of the profits, there should always be an incentive for companies to keep true costs down, especially when the time value of money is taken into consideration (Mian, 2010; Johnston, Johnston, and Rogers, 2008).

example, in the 1990s, Argentina signed some contracts with a royalty rate of 8 percent rather than the 12 percent set in national law. Oil-producing provinces brought claims against the companies to demand that companies pay the legally higher royalty rather than the contractually agreed upon lower royalty. The Argentine Supreme Court eventually ruled in the provinces’ favor, but until then the real obligation was not clear (Attwood, 2000). For a variety of reasons, government take on paper and in practice can diverge.

Third, it is also difficult to compare government take across countries because contracts contain nonfiscal clauses that affect the overall value of the contract. How do you value a contract that may rank lower than a neighbor on government take but contains stricter measures for environmental protection, a concept that is more difficult to quantify? What about contracts that place more emphasis on local content provisions and training of local technical professionals? Technological and skill transfers are not captured within government take statistics. Table 7.2 outlines a range of clauses that may be contained within a primary contract. As seen here, contracts vary in whether or not they address environmental and social issues. Eighty percent of contracts reviewed for this chapter fail to assign liability for environmental damages. This is perhaps not surprising given the historical time period examined here; environmental clauses become more prevalent and more stringent

over time. Nevertheless, it is difficult to compare contracts that vary so dramatically in how they secure a country's interests beyond division of profits.

This is not to say that oil contracts should not be disclosed or that fiscal terms within them should be ignored. Instead, this chapter argues that the interpretation of this information can be misleading when taken out of context of other information on project economics and nonfiscal clauses. In order for the accountability mechanism to work, many oil-producing countries need to release contracts into the public domain along with other contextual information. The new 2013 EITI Standards represent an important step forward on these issues. As more and more countries do this, international benchmarks can be created that allow countries to assess whether, given their geological conditions, they can secure higher take. This is not likely to occur over the short term, however, and does not offer much to citizens who wish to immediately use their own country's contracts for accountability.

It is difficult to compare government take across countries because contracts contain nonfiscal clauses that affect the overall value of the contract.

Flexibility of Fiscal Regime to Changing Market Conditions

A second dimension of accountability that could be enabled through oil contract transparency is to assess whether governments have anticipated and planned for changes in the international oil market. Although this information is comparatively simple to obtain and interpret from contracts, optimal fiscal design depends on the political economy context (Barma et al., 2012). In taxing resource extraction, countries balance competing objectives of simplicity, neutrality, and flexibility. In order for citizens to hold governments accountable, they need to develop preferences over these trade-offs, and governments need to develop mechanisms for incorporating these preferences into contract design.

Oil price volatility makes designing fiscal systems challenging. If fiscal systems are regressive, then higher oil prices are associated with greater profit shares for companies but not for governments, who may see their share of profits *fall* as prices rise.¹⁷ On the other hand, countries also have incentives to smooth revenues across market conditions. By claiming larger shares of revenues in low price environments and allowing companies to claim larger shares in high price environments, governments can reduce their exposure to price volatility. This

¹⁷ Even if government take is regressive, level of revenues to the government still increase as prices increase.

structure would theoretically be valuable to countries with low administrative capacity and low ability to credibly commit to revenue-smoothing through other mechanisms (for example, by making contributions to natural resource funds).¹⁸ However, governments are also more likely to expropriate resources and renege on existing contracts during oil price booms (Guriev et al., 2010; Manzano and Monaldi, 2008 and 2010). Based on this logic, in their study of oil contract design, Stroebe and van Benthem (forthcoming) argue that, when countries cannot credibly commit to uphold contracts, oil contracts should secure greater shares of revenues when oil prices are high and lower shares when prices are low; in other words, fiscal systems should be progressive.

Different fiscal systems respond differently to changes in oil price. Royalties, for example, are simple to administer (requiring the government to collect a flat or variable percentage of production without regard to project economics), and they also guarantee income to the government over the short term. Royalties are collected as soon as field production begins, so governments do not have to wait until capital costs have been recovered to collect revenues, as they do with a profit-based tax. However, royalties distort investment. Because they are collected even when exploration projects are operating at a loss, they incentivize

¹⁸ On the political economy of natural resource funds, see Humphreys and Sandbu (2007).

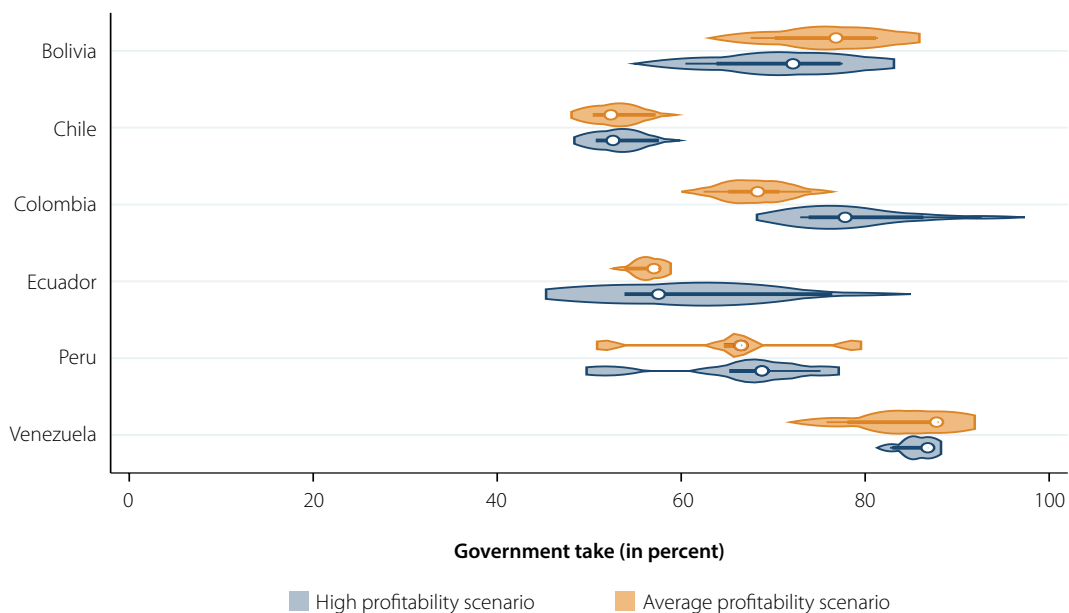
delays in capital investments and reduce total investments in the field compared to a nontax or neutral tax scenario (Smith, 2012). They are also regressive.¹⁹

Income taxes, on the other hand, are virtually neutral to investment (Smith, 2012), yet are more difficult to administer. They are also neutral (neither progressive nor regressive) with respect to rising prices. To collect income taxes, it is necessary to calculate revenues and costs. Whereas assessing production levels to calculate royalties is relatively simple, governments need resources and technical capacity to audit costs, making calculation of taxable income comparatively complex. Taxes based on rates of return—such as sliding scale royalties, income taxes, or profit oil splits based on rates of return—offer countries the ability to design progressive fiscal systems, yet are similarly difficult to administer. Governments may also have to wait years before collecting taxes under more progressive systems, since it can take years for companies to fully recover costs.

¹⁹ Recent work questions the notion that royalties are always regressive with respect to price. The intuition is that at higher prices, the oil company produces more barrels from more expensive-to-produce fields, and the fixed-rate royalty represents a higher share of profits from these high cost barrels. In other words, if costs are rising along with prices, then a fixed royalty does not necessarily drive down government take as oil prices go up (Smith, 2012). However, royalties are always regressive with respect to rising profits.

Figure 7.4

Assessing How Fiscal Systems Respond to Differences in Profitability, 1990s



Source: Data on contracts comes from PL (1967).

Note: See Table A7.2 on page 248 for information on data availability by country.

Figure 7.4 illustrates this point. The figure shows government take for contracts signed in the 1990s. For each country, the red-shaded region indicates government take when costs represent 30 percent of gross revenue (an average profitability scenario). Wider regions indicate more variation in contractual terms within the country, while narrower bars indicate more standardization in terms over the time period. The white circle in the middle of the shaded region represents the median take across all contracts in the dataset for the period, and

the lines represent the interquartile range. Meanwhile, the blue-shaded regions reflect government take for the same set of contracts and the same production scenario if costs represent only 15 percent of gross revenue (a high profitability scenario). For some countries, the blue-shaded regions are to the right of the red regions, indicating fiscal systems that are, on average, progressive.²⁰

²⁰ Individual contracts could behave differently than the country median for the time period if there is large variance in fiscal terms.

For other countries, blue regions are to the left of red regions, indicating fiscal systems that are, on average, regressive.

Although it is illustrative to model differences in take across scenarios, information about how (if not by how much) fiscal systems will respond to changes in price is relatively simple to assess. One need only consider the tax mix employed by the country to get a basic intuition for how it will respond to changes in prices (see Figure 7.4). For example, Bolivia during the 1990s implemented a royalty-tax system, collecting revenues primarily through royalties and income taxes. Because royalties are based on field production and not profitability, the share collected by the government does not change as profits rise, making royalty-based systems regressive. During the same period, Colombia, on the other hand, collected revenues through royalties, income taxes, and equity participation through its state-owned oil company Ecopetrol. In Colombia, Ecopetrol's share of production through its equity stake was linked directly to field profitability, causing the fiscal system to be progressive overall. In Chile, however, government take is virtually neutral with respect to changes in prices. During the period, resource revenues were collected through income taxes and production sharing; although the production-sharing arrangements contained production contingencies (with government take rising as production increases), they did not contain contingencies based on field profitability.

Increasing transparency about the fiscal instruments utilized for tax collections—and making transparent the advantages and disadvantages of each—can be the starting point of a national dialogue on what types of tax instruments are ideal given the country's policy goals.

Through contract transparency, citizens can assess whether fiscal systems are flexible to changes in oil prices. Some fiscal systems are better at securing income during low price environments, while others are better at securing income in high price environments. However, optimal mixes depend on political economy conditions within countries, including the administrative capacity required to administer and enforce more complex progressive tax structures. Increasing transparency about the fiscal instruments utilized for tax collections—and making transparent the advantages and disadvantages of each—can be the starting point of a national dialogue on what types of tax instruments are ideal given the country's policy goals. This type of accountability can develop over the long term, but only if policies are in place to facilitate national dialogue on ways to balance the goals of neutrality, simplicity, and flexibility.

ACCOUNTABILITY OVER SOCIAL AND ENVIRONMENTAL TERMS

Disclosing oil contracts' social and environmental clauses—or lack thereof—is the component of contract transparency most immediately valuable to citizens in resource-producing regions. Social and environmental clauses in oil contracts define companies' obligations with regard to local employment and training, utilization of local materials and services, contributions to infrastructure development and social projects, responsibility for environmental impact studies, and liabilities in the event of environmental damages. However, these clauses are often omitted or are so vague that citizens could not effectively use them to monitor companies' compliance. Instead, disclosing social and environmental clauses is more useful as a means of holding governments accountable for negotiating adequate protections. In addition to social and environmental clauses, contracts define how the government is prioritizing environmental conservation by defining the amount of land devoted to resource extraction and any land use restrictions. Governments need to develop means of effectively sharing this vital information with citizens, especially those in resource-producing areas.

Social and Environmental Clauses

In theory, citizens in resource-producing regions are in the best position to monitor compliance with social and environmental obligations. In practice, however, these clauses are often vague or omitted altogether from contracts (see Table 7.2). In some cases, this is because obligations are defined within national law rather than within contracts. For example, Colombia and Ecuador have passed extensive national legislation on environmental obligations; companies are required to conduct environmental impact studies prior to exploration and justify drilling programs with respect to projected environmental effects. In these cases, contracts merely point to the national laws that must be obeyed and do not specify obligations in detail. In the 1980s, Argentina often attached international treaties on environmental protection to contracts as a reference to environmental obligations in the absence of national legislation.²¹

²¹ Defining social and environmental obligations within national laws rather than contracts may be preferable. When social and environmental obligations are set within contracts, this could encourage horse-trading during contractual negotiations (e.g., offsetting higher environmental obligations with lower government take) (Radon, 2007). Discussing the best method of governing these sectors is beyond the scope of this chapter.

Table 7.2
Contract Clauses (continued on next page)

	Description	Clause prevalence	Mean (SD)	Minimum	Maximum
General terms					
Area	Size of the area in hectares during the exploration period of the license boundaries. Area may diminish over the duration of the contract if there are relinquishment clauses.		785,694 (996,994)	50	6,000,000
Contract duration	Length of the contract in years.		31 (7.4)	15	58
Fiscal terms					
Bonuses	Paid at the time of signing a contract (signatory bonuses), during a prespecified contract-year (annual bonuses), or based on hitting particular production targets (production bonuses).	12%	--	--	--
Land rental tax	Flat or variable fees paid based on a per-hectare basis of the total contract area.	18%	US\$169 (US\$558)	\$0.008	\$3,409
Royalties	Taxes paid based on a set percentage of gross revenues, irrespective of profits. Royalty rates can be flat or variable. Variable rates may depend, for example, on production levels, contract-year, distance from field to port, oil quality, etc.	62%	20% (7.5%)	1%	48%

Table 7.2

Contract Clauses (continued on next page)

	Description	Clause prevalence	Mean (SD)	Minimum	Maximum
Income taxes	Function the same as corporate income taxes (typically, they are the same rate as normal corporate income taxes) and can be a flat or variable share of profits.	89%	43% (13%)	22%	84%
Profit oil split	The government's share of profit oil (after paying royalties and deducting costs and depreciation). (Subtracting this value from 100 would yield the share of profit oil to the contractor.)	59%	52% (15%)	18%	87%
Service payment	A flat or variable fee paid for services rendered by the contractor for exploration and development of the license area.	33%	--	--	--
Environmental clauses					
Environmental clause	Indicates whether protection of the environment is mentioned at all within contracts (at a minimum, whether contractors are asked to prevent pollution).	80%	--	--	--
Liability for damages	Indicates whether the contract has any clauses about liabilities for environmental damages. For example, are contractors required to take out insurance against environmental damage or to deposit an amount that could be drawn from in the event of damages?	20%	--	--	--

Table 7.2

Contract Clauses (continued)

	Description	Clause prevalence	Mean (SD)	Minimum	Maximum
Training provisions	Indicates whether the contract specifies that contractors must conduct training of local employees.	72%	--	--	--
Local employment	Indicates whether the contract specifies that the contractor must hire locals to fill at least part of its employment needs.	82%	--	--	--
Local content	Indicates whether the contract specifies that local content and services should be used when possible, through either setting minimum percentages of materials that must be purchased locally or setting preferential tax rates on goods purchased domestically.	48%	--	--	--

Source: Author's elaboration. Data on contracts comes from PL (1967).

Note: See Table A7.2 on page 248 for information on data availability by country.

Environmental obligations beyond a reference that companies should “prevent pollution” or “protect flora and fauna” are frequently omitted from contracts, leaving it unclear which party will bear liability for damages. Of the contracts examined here, only 80 percent even reference the environment and only 20 percent specify that companies can be held liable for environmental damages. Although social and environmental clauses are becoming more prevalent in contemporary contracts compared to

historical ones, the reality is that many oil contracts will not give citizens useful information on companies’ real obligations. These obligations may not even become clear to the contracting parties until environmental damage is incurred and contractual obligations are disputed in courts.

Social obligations can also be vague. Seventy-two percent of reviewed contracts require companies to run training programs for citizens of host countries, yet only 27 percent of these contracts give any details

beyond “training of local employees is required.” By contrast, contracts with more detail may specify how much money should be invested annually in training programs, how many employees should be trained, the types of training required (e.g., geology, engineering), and collaborations with local universities. As noted above, more contemporary contracts may contain more stringent social and environmental clauses. However, the main point is that citizens may not be able to monitor compliance with existing social and environmental obligations, even the citizens most proximate to resource production.

It is precisely for this reason that these clauses should be released to the public. Citizens in resource-producing areas can monitor compliance with easily observable obligations, but, more importantly, they can hold their governments accountable for negotiating social and environmental clauses and enacting legislation that meets public demand.²² Contract transparency could prevent “government officials from agreeing to terms that the citizenry cannot politically accept and will be wont to criticize, if not attack” (Radon 2007: 97). In order for an accountability mechanism to develop over companies’ social and environmental obligations, it is crucial to release contracts to the public and to develop mechanisms for incorporating citizens’ input into contractual negotiations.

²² Radon (2007) argues that social projects should not be negotiated within contracts since these can become distractions from securing adequate shares of economic profits for the government.

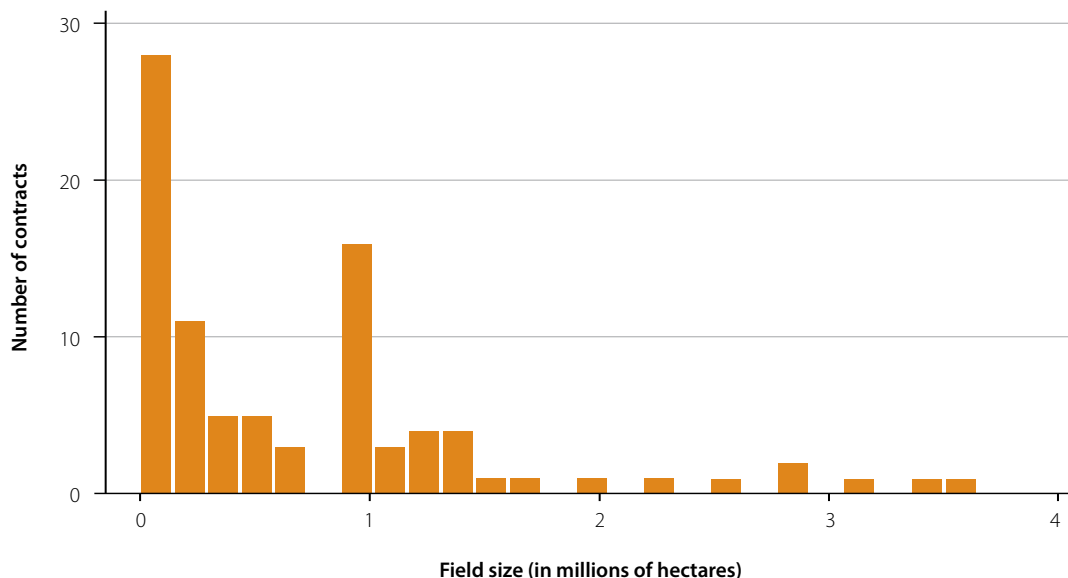
Citizens in resource-producing areas can monitor compliance with easily observable obligations, but, more importantly, they can hold their governments accountable for negotiating social and environmental clauses and enacting legislation that meets public demand.

Trade-offs between Conservation and Revenue Maximization

Beyond the exact contractual terms for environmental protection, contracts can inform citizens about the overall balance that the government is striking between conservation and revenue maximization. Every time a government decides whether to launch an oil exploration effort, politicians are making a trade-off between conservation and revenue maximization. Land used for resource extraction could have been used for other economic purposes. Resource extraction also carries environmental risks. Oil spills are the most obvious risk, but resource extraction can also mean building roads in the Amazon, diversion of water from farmers, and infringement of the lands of indigenous populations. Oil contracts contain information on land use restrictions (if there are any) and on the size and location of the field under development. On the other hand, deciding not to develop resource endowments means foregoing revenues in the present.

Figure 7.5

Field Size



Source: Data on contracts comes from PL (1967).

Note: See Table A7.2 on page 248 for information on data availability by country.

Figure 7.5 shows the distribution of field sizes across the contracts examined here. Field size varies dramatically: from fields of 50 hectares (roughly the size of Vatican City) to vast expanses of over 3 million hectares (roughly the size of Belgium).²³ It is worth noting that these are field sizes at

the beginning of a contract. Many contracts set relinquishment terms, forcing licensors to release unused land as fields move into the production stages. Typically, countries delineate larger initial contract areas under conditions of greater geological uncertainty because more area is needed to explore for oil when parties do not know where oil is located. Longer exploration periods are also set for areas with greater geological uncertainty, allowing licensors to hold land for longer periods. While these policies have commercial logic, countries are often

²³ For at least one of the field sizes above 3 million hectares, the contract covered several different blocks across a single basin. It is unclear whether these areas bordered each other or were merely in the same vicinity.

surrendering the most land precisely when they are least likely to receive high levels of compensation. Indeed, the largest contract areas in Figure 7.5 are all for unexplored areas.

When governments are collecting oil income, they are making trade-offs between savings in the ground, revenues in the present, and environmental conservation for future generations of local and global citizens.

The extent of the trade-off between environmental conservation and oil revenues depends on the value of the land if it were used for alternate purposes. The tradeoff, for example, is steeper in Ecuador, where oil stocks lie in some of the richest biodiversity areas in the world, compared to countries where deposits lie in comparatively unpopulated and less biodiverse regions. Acutely aware of the challenge in balancing environmental conservation with the need for government revenues, President Correa of Ecuador innovated an interesting way to bypass this trade-off through the Yasuní project. Through this initiative, the government of Ecuador promised to refrain from drilling for oil in the Ishpingo, Tambococho, and Tiputini (ITT) oil fields, located in the Yasuní National Park in the Ecuadorean Amazon, if international donors agreed to give the

Ecuadorian government half the foregone income of oil exploitation (Escribano, 2013). Notably, the ITT fields represent around 20 percent of Ecuador's remaining reserves—846 million barrels of oil—and the government was asking for US\$3.6 billion over the course of 13 years from the international community to forego drilling (“Ecuador approves Yasuní,” 2013).

President Correa argues that environmental conservation of this park—one of the most biodiverse areas in the world—constitutes a global public good. While Ecuador may not be able to afford to forego income, wealthy donor countries should be willing to contribute to the protection of the global public good. However, by August 2013, three years after the initiative was launched, the ITT fund had attracted only US\$13 million in donations (“Ecuador approves Yasuní,” 2013), roughly 1.5 percent of the requested amount through 2013. Therefore, President Correa called off the initiative, announcing that he would begin exploration efforts in the Yasuní Park. Although this particular initiative did not succeed, it is a promising idea as a means to enable countries that need oil income to fund government expenditures to simultaneously pursue environmental conservation.

Notwithstanding the Yasuní initiative example, when governments are collecting oil income, they are making tradeoffs between savings in the ground, revenues in the present, and environmental conservation for future generations of local and

global citizens. Making contracts transparent would enable citizens to assess *when* and *where* governments are initiating exploration efforts and how much of their country's land is devoted to resource production.

ENABLING ENVIRONMENTS FOR CONTRACT TRANSPARENCY

Several Latin American countries now routinely disclose oil contracts. This is a significant achievement for transparency. For these countries, the relevant question is not *whether* contracts should be disclosed, but *how* contract disclosure can facilitate better governance. As noted in this chapter, the link between contract transparency and accountability will not develop automatically. Strengthening this link requires disclosing contextual information to support the interpretation of oil contracts and creating mechanisms for citizens to incorporate feedback into contractual negotiations.

As the global transparency movement reaches beyond revenue transparency into contract transparency, many argue that contract transparency can give context to revenue transparency (e.g., PWYP, 2013; RWI, 2012). Citizens may require information from contracts so that they can interpret whether reported revenues represent a fair deal. However, as this chapter argues, interpreting the information disclosed through contract transparency also necessitates contextual information. For citizens to evaluate whether the fiscal terms within

contracts represent a fair deal, they need to be able to benchmark deals across countries. This means that many oil-producing countries need to disclose contracts, and that these contracts need to be considered in light of differing project economics across countries. This type of accountability is only likely to develop over a long-term horizon, as contract transparency increasingly becomes a global norm.

Further, for some contractual terms, it is not obvious even with full information what constitutes a fair deal. Different countries may want to strike different balances among investment neutrality, administrative simplicity, and progressivity in tax collection and also between environmental conservation and revenue maximization. For countries to optimally manage these trade-offs, they need to develop the capacity of civil society groups to engage in dialogue over these trade-offs and to develop mechanisms for incorporating citizens' preferences into contractual negotiations. Along both of these dimensions, Latin American countries are experimenting with innovative policies.

Andean oil producers, including Bolivia, Colombia, Ecuador, and Peru have all initiated consultations with citizens over resource extraction to varying extents. The focus of these policies so far has been on consultations with indigenous communities over the use of land, and implementation has been spotty. Ecuador's 1998 and 2008 constitutions guarantee indigenous peoples the right to prior consultation on

any planned development projects for nonrenewable resources on their lands. Controversy has arisen as activists within Ecuador point to the distinction between prior consultation and prior consent: they claimed that prior consultations often constituted informing a few key representatives of the community about the government's plans for natural resource development in the area rather than involving the entire community in a dialogue and requiring their support to move forward with development projects (Saavedra, 2011). Failure to fully implement prior consultation has resulted in many latent and active social conflicts surrounding resource extraction in Ecuador (DPLF and Oxfam, 2011).

Peru's Law on Prior Consultation, passed in 2011, guarantees similar rights. The first round of prior consultations in Peru (over Lot 1-AB in the northeastern province of Loreto) was scheduled to begin in April 2013, but has been delayed due to disputes between indigenous communities and the national government over cleanup from past oil production. Indeed, Lot 1-AB was ultimately declared a "Zone of Environmental Emergency" ("Peru Pushes for Amazon Cleanup at Pluspetrol Oil Block," 2013). The Due Process of Law Foundation (DPLF) and Oxfam (2011: 13) claim that 44 percent of social conflicts in Peru "stem from the lack of a prior consultation process."

Fully implementing existing consultation policies in conjunction with contract transparency could as easily increase as decrease social conflicts in the short run.

Citizens may disagree over acceptable contractual terms and protest existing terms. These disagreements may stymie resource development in the near term (with citizens blocking resource extraction until agreeable terms have been reached). However, these conflicts could also strengthen governments' negotiating power over the long term. Governments could no longer accept terms that would be unacceptable to their citizens without facing punishment (Radon, 2007). Gaining up-front buy-in from the population could also mitigate political risks faced by companies; contracts with public buy-in may be less likely to be renegotiated (Rosenblum and Maples, 2009). These claims merit empirical testing as countries experiment with national dialogue on resource extraction.

Prior consultations with indigenous communities over specific resource development projects are only one component of incorporating citizen preferences into contract design. Inclusive, national dialogue on overall policy objectives regarding resource production is also important. As citizens become more involved in decisions about resource extraction, the capacity of civil society groups to interpret and disseminate complex information about resource governance becomes increasingly important. Fundación Jubileo in Bolivia and Grupo Propuesta Ciudadana in Peru, for example, publish high-quality reports on resource governance, often utilizing information obtained from oil contracts to inform analysis. Training civil society organizations

in implementing transparency policies is now a key pillar of EITI. Going forward, industry organizations and private companies could also play a role in building technical capacity. In the long run, they may face less political risk over investments if public support can be gained ex ante.

Implementing meaningful national dialogue over resource governance will be no simple feat. Yet, this is an essential step in developing the transparency-accountability mechanism. Contract transparency can support better resource governance when accompanied by other contextual information on project economics and by robust national dialogues on resource governance supported by capable civil society organizations.

Contract transparency can support better resource governance when accompanied by other contextual information on project economics and by robust national dialogues on resource governance supported by capable civil society organizations.

CONCLUSIONS

Releasing historically confidential oil contracts into the public sphere is becoming a key part of the global transparency movement, but there has been little explanation of *how* contract transparency can improve resource governance. This chapter argues that contract transparency is unlikely to yield greater accountability over certain fiscal terms, such as the government's rate of return and the tax system's progressivity in the short run, because they are difficult to measure and interpret. Accountability over fiscal terms is more likely to develop only over the long run when many oil-producing countries have released contracts and when countries have developed mechanisms for incorporating citizens' feedback into contract design. By contrast, disclosing social and environmental clauses in contracts—or the lack thereof—can more immediately enhance accountability. However, contrary to arguments among advocates for contract transparency, social and environmental terms are unlikely to help citizens hold companies accountable for compliance with contracts, since these terms are often vague and poorly defined. Instead, citizens can use social and environmental clauses to hold governments accountable for negotiating adequate protections.

Several Latin American countries, to varying extents, have already enacted many of the policies discussed herein, but implementation has been spotty. At least five countries have made contracts transparent,

and Andean countries have promulgated laws promoting prior consultations on resource extraction projects. These countries can continue to lead the way in transparency of natural resource governance by improving the implementation of existing policies. It is also possible to make progress by detailing how more transparency can yield more accountability. Specifying what information from contracts can be used to promote different types of accountability, how

that information can be interpreted, and the types of policies required to support and enable accountability to develop along with transparency is an important exercise in moving forward with the global contract transparency agenda. Ultimately, in order for citizens to hold governments accountable, they need to develop preferences over these trade-offs, and governments need to develop mechanisms for incorporating these preferences into contract design.

APPENDIX

Table A7.1

Assumptions for Calculation of Government Take Statistics

	Model assumptions
Field and production assumptions	
Field discovery size	100MMBBL
Peak production rate	12% of field size, in year 6
Decline rate	12.5%
Field life	20 years
Price and cost assumptions—base scenario	
Capital costs as a percent of gross revenue	18%
Operating costs as a percent of gross revenue	12%
Total costs as a percent of gross revenue	30%
Price and cost assumptions—high profitability scenario	
Capital costs as a percent of gross revenue	9%
Operating costs as a percent of gross revenue	6%
Total costs as a percent of gross revenue	15%

Source: These assumptions are drawn from Johnston (2003) on contract cash flow analysis.

Table A7.2

Information on Contract Availability by Country

Argentina
1958 , 1959, 1961 , 1967, 1968, 1979, 1980 , 1985, 1986, 1987, 1988 , 1989
Bolivia
1973 , 1974 , 1977, 1982, 1985, 1988 , 1989, 1991 , 1992, 1996
Chile
1977, 1989 , 1996
Colombia
1955, 1964, 1971 , 1973, 1974, 1976, 1977, 1979, 1980, 1981 , 1982, 1987, 1995, 1998, 2000, 2002
Ecuador
1964, 1973 , 1985 , 1986, 1988 , 1995 , 2002
Paraguay
1957, 1973, 1974, 1979 , 1990, 1995
Peru
1957, 1971 , 1972 , 1973, 1978 , 1980 , 1981 , 1982, 1984 , 1989, 1990, 1991, 1992, 1993, 1995 , 1996
Venezuela
1971 , 1996 , 1997

Source: PL (1967).

Note: Bolded years contain more than one contract.

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