# BEYOND THE RESOURCE CURSE

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# Petroleum, Governance, and Fragility: The Micro-Politics of Petroleum in Postconflict States

Naazneen H. Barma

Contemporary political economy research suggests that whether a country falls prey to the resource curse depends on a number of structural and economic factors. The cumulative body of large-*N* analyses of resource-rich developing countries indicates that the quality of existing institutions is perhaps the key factor that mediates a resource-rich country's economic outcomes.[1] Yet there is a gap in the political economy literature in terms of the subsequent causal reasoning about *why* institutions play this crucial intervening role in the resource curse. In this chapter, I examine the micro-politics of petroleum in Cambodia and East Timor through a framework rooted in the natural resource value chain to develop a sense of the mechanisms underpinning the resource curse in fragile nations.[2] Postconflict states offer fertile ground for generating hypotheses about the causal interplay between fragile political institutions, limited state capacity, and resource riches as they impact economic outcomes.

## Political Economy and the Resource Curse

A wide and growing body of scholarship has emerged in the economics and political science disciplines that attempts to understand the mechanisms



underlying the resource curse and illuminate policy fixes to help poor countries avoid it. Broad agreement exists on the appropriate macroeconomic, technical, and institutional mechanisms to put in place to manage the resource curse successfully. Even when the menu of policy options varies, the institutional prescriptions to ensure good governance of the national resource sector all emphasize clear organizational mandates, transparency of processes, and strong built-in accountability measures.

The true puzzle is *why* governments are unable to implement such corrective policy measures to mitigate many of the patterns that cumulate into the resource curse. This, then, is where politics enters the picture, and a complementary political science literature emphasizes how different political economic systems deal with resource rents, focusing on the nature and role of state institutions and how dynamics such as state capture and patronage networks influence the management of natural resource rents.[3] When a state has resources such as petroleum, the main political and economic impacts come via the effect that resource rents have on the state's patterns of revenue collection and expenditure.[4] Natural resource booms turn countries into "rentier states," which live off unearned income; the state is resourced through rents rather than taxes and requires correspondingly little organizational effort from the state apparatus.

Politically, natural resources generate significant windfall resources for the state and therefore a valuable prize for those who control political power.[5] By limiting a government's need for other forms of revenue generation, such as tax collection, natural resources can lead to the attenuation of state-administrative and institutional capacity building. A core logic of the political effects of the resource curse hence derives from what Mick Moore has dubbed the "fiscal sociology" paradigm.[6] This has been crystallized recently by Robert Bates in his examination of state failure in Africa: if political elites calculate that their own best interests are served by collecting tax revenues and protecting producers with the rule of law to maximize the tax base, they will establish bureaucratic infrastructure to enable them to do so; if not, they will be prone to turning the state apparatus into a predatory instrument that extracts rent from society and dispenses that rent through patronage networks.[7] Terry Karl articulates how this dynamic unfolds in her seminal book *The Paradox of Plenty*:

> Dependence on petroleum produces a distinctive type of setting, the petro-state, which encourages the political distribution of rents. Such

> a state is characterized by fiscal reliance on petrodollars, which expands state jurisdiction and weakens authority as other extractive capabilities wither. As a result, when faced with competing pressures, state officials become habituated to relying on the progressive substitution of public spending for statecraft, thereby further weakening state capacity.[8]

Supporting hypotheses advanced in the contemporary political economy literature suggest that a resource curse is made more likely when: (1) natural resources constitute the "only game in town"; (2) the distribution of resource rents aligns with existing political-economic cleavages; (3) political power is concentrated in the executive; and (4) policy commitment is made more difficult by price volatility or political instability.[9]

The resource curse is particularly acute in the case of petroleum (compared to other natural resources such as hard-rock minerals) because of petroleum's "point source" nature with highly concentrated ownership.[10] Such point source resources foster a higher concentration of power and, consequently, weaker accountability of political elites and potentially poorer policy decisions.[11] Point source resource extraction is easier for governments to regulate and tax; in practice, this means that the rents are high and pass through the hands of a relative few. More highly concentrated resource ownership facilitates the collective action of resource developers—meaning they are more likely to have disproportionate access to government agencies and be able to defend their vested interests. Petroleum tends, moreover, to be highly lucrative in relation to production costs so that the magnitude of the rent streams is high and the consequent resource curse is often greater.

The bulk of the political economy literature thus identifies institutions as key intervening variables affecting a country's susceptibility to the resource curse and, most importantly for the purposes of this chapter, attributes a bidirectional causality to them. Resource dependence actually shapes state institutions and decision-making frameworks in predictable patterns; in turn, those political and institutional constellations have predictable effects on economic outcomes. Karl again offers a concise summary of the logic:

> Petro-states suffer from a double perverse effect: their states, so often formed during the period of oil extraction, are skewed by the imperatives of resource extraction, but the intensification of the resource dependence that accompanies state-building subsequently produces even further decay in critical areas such as non-mineral-based revenue raising, expenditure patterns, fiscal accountability, and citizen participation. A vicious cycle between mineral extraction and state making is set in motion.[12]



At the core of this chapter's argument is the explicit recognition that natural resources interact with governance and state institutions in two interrelated ways. First, extraction of natural resources might erode the quality of governance. One line of logic is that dependence on natural resource wealth limits other forms of government revenue generation, such as tax collection. This, in turn, can lead to a decline in administrative and institutional capacity building, particularly as the core tax-accountability linkage between state and society is weakened.[13] Additionally, resource wealth might adversely impact the quality of governance by intensifying battles between political and economic elites for control over natural resource rents and the state institutions responsible for collecting and distributing them.[14]

Second, even if resource abundance does not cause deterioration in governance, the quality of institutions and governance will most likely condition the quality of the economic and natural resource management policies adopted as well as their implementation across the value chain.[15] From this viewpoint, institutional quality and the government's ability to make policy effectively, minimizing discretion and rent seeking, affects outcomes in the natural resource sector much as they do other development outcomes. In addition, because natural resources generate revenue windfalls, governments can be tempted to make policy and public spending decisions with adverse long-term consequences.

Both these interactions are of interest to the study, and I attempt to treat them as distinct through a twofold analytical approach. I use the micro-political lens of the natural resource value chain to focus on the detailed institutional and governance arrangements that frame the process of rent extraction and distribution. At the same time, I build causal narratives rooted in the contemporary political context in an attempt to unravel the endogeneity inherent in the institutional quality puzzle. In order to develop the argument, I examine two oil-rich postconflict countries, Cambodia and East Timor, as their nascent and fragile institutional architecture throws the issues into sharp relief.

## A Micro-Political Economy Framework: Value Chain Analysis

The political economy literature recognizes, as discussed briefly above, that the main factors determining the success of oil-rich countries are inherently related to a country's overall governance framework and political economy of rent extraction and distribution. In other words, managing the resource curse is a governance challenge—the quality, transparency, and accountability of policy-making processes, the legal and regulatory climate, and general public as well as natural resource sector institutions are major determinants of how successfully countries can turn the resource curse into a blessing.[16] Yet the macro viewpoints outlined above fall short of translating broad agreement on the "right" policies into concrete steps to navigate the institutional and political obstacles that are associated with governing the resource curse. In other words, what state-of-the-art scholarship on the resource curse lacks, and what this chapter seeks to elaborate, is a fine-grained micro-political framework that demonstrates how and where rent generation and extraction actually occur in practice.

The World Bank and its development partners have recently elaborated a "value chain" approach to systematically diagnosing the institutional and governance challenges in the natural resource sector.[17] The approach pivots on the Extractive Industries Transparency Initiative (EITI), which seeks to encourage governments to publish their natural resource revenues and resource developers to publish their payments to governments so that the figures can be independently reconciled. EITI has made great steps in improving transparency in natural resource management, yet it does not cover the full value chain spanning from how resources are developed to how the revenue generated is ultimately spent. In the language of political science, EITI alone does not cover the full range of rent generation and distribution in the natural resource sector.

The natural resource management value chain approach is an attempt to develop a comprehensive analytical framework for better understanding the governance of the natural resource sector, which I will now refer to as "sector governance." It encompasses and integrates (as depicted in Figure 13.1) the institutional arrangements across four key steps spanning the full range of an extractive industry's value chain: (1) award of contracts/licenses and organization of the sector; (2) regulation and monitoring of operations; (3) collection of taxes and royalties; and (4) revenue distribution and economic management.[18]



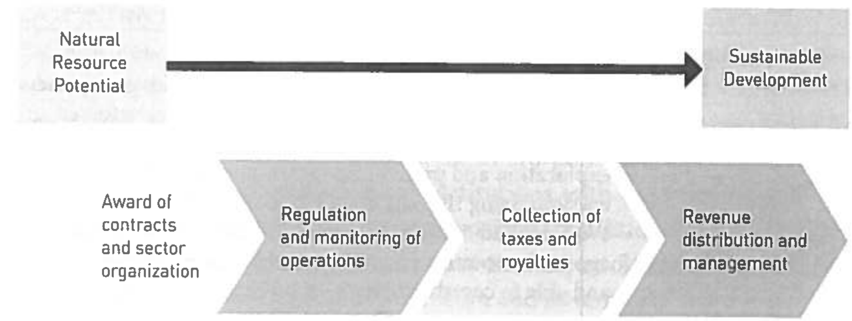


Figure 13.1 Natural resource management value chain.

The World Bank has adopted this approach with the primary objective of prescribing an integrated sequence of feasible policy remedies and reforms to help countries address the resource curse. In this chapter, I propose that this framework, when grounded contextually, offers the potential for a comprehensive micro assessment of the domestic politics of petroleum exporters. It identifies a series of institutional and governance good practices for each pillar of the value chain (see Table 13.1).

This set of criteria forms the backbone for a structured characterization of the micro-politics of how petroleum rents are generated and distributed in a country. A deeper look at the underlying political and institutional context can then be used to generate a causal picture of the fate a petroleum-rich country faces vis-à-vis the potential resource curse. The following empirical sections of this chapter discuss the cases of Cambodia and East Timor, two hydrocarbon-rich states in East Asia and the Pacific, using the organizational logic of the natural resource value chain. In each case, I move from upstream to downstream issues, focusing on key institutional and governance dimensions of the four consolidated pillars of the value chain: (1) the legal, regulatory, and institutional framework surrounding the granting of petroleum concessions and sector organization; (2) oversight and monitoring of resource exploitation; (3) the collection and management of revenues from the petroleum sector; and (4) some aspects of expenditure management.

Cambodia and East Timor have both recently discovered large petroleum reserves and both also have recent postconflict state-building experiences that attempted to strengthen state institutional capacity. They thus provide fertile empirical ground for testing Karl's observation of the vicious

Table 13.1 Natural Resource Management Value Chain Framework

| *Value chain stage* | *Good practice institutional and governance arrangements* |
|---|---|
| *Award of contracts and sector organization* | • Clear legal and regulatory framework that gives private developers consistent expectations and enables government departments to know whether the law is being enforced<br>• Transparent and nondiscretionary framework for awarding exploration and production rights (contracts/licenses), encompassing the national petroleum authority (if it exists)<br>• Well-defined institutional responsibilities so government agencies at central and local levels are aware of their mandates and able to coordinate with each other |
| *Regulation and monitoring of operations* | • Clearly defined monitoring and inspection responsibilities in appropriate government agencies<br>• Commensurate institutional capacity and resourcing<br>• Monitoring of community development and environmental impact, with remediation programs in affected communities |
| *Collection of taxes and royalties* | • Transparent and nondiscretionary fiscal regime for concessions, preventing revenue leakage and empowering government vis-à-vis private sector by encouraging competition on the terms of the deal<br>• Adequate administrative and audit capacity for revenue collection agencies<br>• Adherence to internationally accepted accounting and reporting standards<br>• Channeling of resource revenues into formal budget process such that they are subject to normal scrutiny and accountability mechanisms |
| *Revenue management and distribution* | • Appropriate macroeconomic policy responses to mitigate negative consequences from exchange rate appreciation<br>• Transparent savings decisions to smooth public expenditure in the face of commodity price volatility and to accumulate assets as finite resources are extracted<br>• Strong public financial management and procurement systems<br>• Judicious allocation of public expenditures—e.g., within a medium-term expenditure framework and aligned within a national development strategy<br>• Adequate scrutiny, appraisal, and audit of public investment decisions |

Adapted from Eleodoro Mayorga Alba, "Extractive Industries Value Chain: A Comprehensive Integrated Approach to Developing Extractive Industries," Oil, Gas, and Mining Policy Division Working Paper 3 and Africa Poverty Reduction and Economic Management Department Working Paper 125, World Bank (2009).



cycle between mineral extraction and state making. A brief discussion of the two countries' recent political histories provides the context within which to consider governance and institutional strengths and vulnerabilities in the petroleum sector. Through an application of the value chain framework, then, I attempt to unravel the micro-political economy underlying the bi-directional interaction of institutions with resource wealth. On one hand, the two cases show how preexisting institutional quality affects policy making and governance outcomes in the petroleum sector. On the other hand, I trace the impacts of petroleum and its rents back on the broader institutional context.

## Cambodia: The "Shadow State" and Rent-Seeking Networks

From 1970 onward, Cambodia underwent two decades of political instability, auto genocide, and civil war. Beginning with the Khmer Rouge's brutal regime from 1975 to 1979, which strategically dismantled and destroyed the political and social fabric of the country, and continuing into the Vietnamese-backed regime that took power in 1979, the conflict for political control over the country developed out of the Cambodian state's collapse of legitimacy. The Cambodian peace accords of October 1991 provided a roadmap for building state capacity and a transition to an elected government. Elections were held successfully, but the political and administrative landscape has since been increasingly dominated by the powerful Cambodian People's Party (CPP) led by Hun Sen. The CPP's main source of leverage in achieving this result was its grip on the institutions and human resources of the state apparatus.[19]

The power-sharing coalition that emerged from Cambodia's first post-conflict elections in 1993 created persistent legislative and executive gridlock. Despite having won the elections, the royalist party Funcinpec's governing power was restricted to the cabinet level; administrative power further down the state hierarchy remained in CPP hands. Continuing bureaucratic factionalism has prevented Cambodia's development of national institutional capacity to this day. The power-sharing system failed to foster reconciliation among the factions and build a new political system and effective state apparatus based on compromise and inclusion; worse still, it created dual governments, as Funcinpec brought its supporters into the already bloated state structure. This arrangement deadlocked decision making and governance and perpetuated parallel crony-based political networks that operate both within and outside the state, such that "Hierarchical patron-client networks . . . have expanded and subsumed the formal state structure."[20] In the absence of an institutional power base or the ability to seek legitimacy through the public sector, Funcinpec leaders chose to mimic and partner with the CPP in rent extraction and distribution networks. In turn, these networks continued to undermine state capacity, perpetuating a self-reinforcing vicious cycle of institutional decay.[21]

The consensus principle of Cambodia's coalition government endowed the CPP, with its control of the state, with de facto veto power over any reforms that threatened its political, financial, or institutional interests. State capacity was weak under the CPP's grip, and no structural reform of the state was possible. Both parties were anxious to ensure that their own supporters were not removed as part of a bureaucratic retrenchment process, and attempts to increase state revenues threatened the ability of the two patronage networks to extract rents. The state had no nonpartisan, technocratic constituency to defend itself against the sociopolitical elite and to support institutional reform and the building of state capacity. This lack of a reform coalition has continued to hamper the international community's efforts to build state capacity and improve Cambodian governance to the present day.[22] Time-series data of government effectiveness in Cambodia demonstrate that although state capacity may have improved slightly in the late 1990s, it has since remained consistently quite low (see Figure 13.2).

The consolidation of two parallel state structures in Cambodia also affected internal party dynamics, concentrating power in the hands of leaders. The two sets of elites managed to work together for the first three years of their coalition government, avoiding contentious issues and pursuing enough economic liberalization to blind foreign observers to the political decay taking place. But this greater openness came at the price of dual party-based rent extraction networks—with both networks carrying out land grabs, deforestation, corruption, and violent crime in an environment of weak legal institutions.[23] As we shall see, this mode of affairs has also permeated Cambodia's petroleum sector. Yet the CPP and Funcinpec's mutually beneficial arrangement of dual rent-seeking was not enough to prevent deterioration in the relationship, as Funcinpec began to voice its frustration over the CPP's increasing stranglehold on power. In response, Prime Minister Hun Sen and the CPP staged a coup d'état in 1997, which marked the breakdown of a system of power sharing between distinct elite groups. In subsequent coalitions,




Figure 13.2 Government effectiveness in Cambodia, 1996–2008. Daniel Kaufmann, Aart Kraay, and Massimo Mastruzzi, "Governance Matters VIII: Aggregate and Individual Governance Indicators for 1996–2008," World Bank Policy Research Working Paper 4280 (Washington, D.C.: World Bank, 2009), http://info.worldbank.org/governance/wgi/index.asp. The *government effectiveness score* in the World Governance Indicators dataset measures "the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies." The indicator is aggregated from a series of underlying indices and scored from −2.5 for least effective to 2.5 for most effective states. This indicator should be treated with caution, as its composition varies from one year to the next, but it provides a reasonable sense of evolution in a country's government effectiveness over time.

Funcinpec's ostensible role in power sharing has been little more than window dressing for the emergence of a de facto one-party system led by the hegemonic CPP.

The CPP's grip on Cambodia's political system has subsequently thwarted any meaningful progress in the state's (human or institutional) capacity building or democratic consolidation. What manifests as state hollowness or failure can thus actually be viewed as the result of a deliberate elite strategy to assert its control over key sources of resource wealth (forestry) and other rents, thereby assuring its hold on power. This "shadow state"[24]—a system where ruling elites draw power from their ability to control high-rent economic activity—had firmly established itself in Cambodia by the time oil was discovered there.

Since 2004, when Chevron struck oil 200 kilometers offshore in Cambodia's Khmer Basin in the Gulf of Thailand, the country has been awaiting the promise of billions of dollars of oil wealth. There are six potential offshore fields in Cambodia's territorial waters in the gulf plus a number of potential exploration areas in regions disputed with Thailand. Chevron confirmed its find in one of these fields, Block A, in late 2004, and the World Bank provisionally estimated that the explored portion contains 400–500 million barrels of oil and 2–3 trillion cubic feet of gas.[25] Although the volume in question is low in comparison to other oil-producing developing countries, these anticipated petroleum reserves are substantial given Cambodia's size. The projected revenue flow could easily place Cambodia squarely within the ranks of resource dependence.[26] In 2007, the IMF estimated that Cambodia's government oil revenues could begin flowing in 2011 and reach up to $1.7 billion annually ten years after production commences, almost matching the Cambodian government's 2009 overall budget of $1.9 billion.[27] This revenue would be particularly significant in the current aid context, in which donors provide about half of Cambodia's annual budget.

Yet the initial decisions that Cambodian officials have made regarding the management of their nascent petroleum sector across the value chain do not bode well for a channeling of projected wealth into sustainable development outcomes for the country. A snapshot of key institutional and governance arrangements in the sector is provided in Table 13.2. Upstream in the value chain, the legal and regulatory framework for the oil and gas sector, with no comprehensive petroleum law, is incomplete, and the government lacks a comprehensive sector strategy. Moreover, the management structure of the sector is formally fragmented—with opaque institutional mandates for formulating policy, awarding contracts, and interacting with the private sector. Ambiguities also exist in terms of regulation, fiscal and taxation matters, and the handling of petroleum sector externalities.[28]

In practice, the dominant agency in petroleum sector management is the Cambodian National Petroleum Authority (CNPA), which is directly under the control of Prime Minister Hun Sen and Deputy Prime Minister Sok An, the two leaders at the helm of the most powerful faction within the CPP. In 1998, the CNPA was created by royal decree (instead of an act of parliament) as an independent body and took over petroleum sector governance from the Ministry of Industry, Mines, and Energy. Its operations are not subject to scrutiny from the National Assembly, Senate, or any other government body. The CNPA acts as policy advisor to the government on oil and gas sector development, functions as the regulatory body for the sector, and plays a commercial role as the agency that negotiates exploration and production contracts, including joint-venture agreements, on behalf of the government. Although this multiple and often conflicting functionality is not uncommon practice for petroleum authorities in the developing world, the lack of firewalls between the CNPA's different roles is extremely problematic in terms of transparency and accountability.

The deputy prime minister, as chair of the CNPA, has almost complete control over its operations, and the organization is run with a premium on



Table 13.2 Key Governance Outcomes in Cambodian Petroleum Sector

| *Value chain stage* | *Institutional and governance arrangements* |
|---|---|
| *Award of contracts and sector organization* | • Underdeveloped legal and regulatory framework; lack of clarity about institutional mandates<br>• Cambodian National Petroleum Authority (CNPA) dominant; governed directly by prime minister and deputy prime minister<br>• Multiple roles of CNPA—policymaking, regulatory, commercial—with no firewalls between roles<br>• Nontransparent, discretionary award of contracts; companies report having to pay large bribes for licenses that fail to materialize |
| *Regulation and monitoring of operations* | • CNPA shares little to no information necessary for effective inspection and monitoring, within agency or with other government bodies<br>• Weak administrative capacity across government<br>• CNPA bypasses accountability controls; not subject to parliamentary or other scrutiny |
| *Collection of taxes and royalties* | • Opaque financial flows—fiscal regimes and fees vary considerably in practice; no mechanisms for verifying receipt of revenues<br>• Millions of dollars companies have reported paying to government for oil concessions are missing from official revenue reports |
| *Revenue management and distribution* | • Ministry of Economy and Finance out of loop on revenue management<br>• Procurement problems in public investment program<br>• A significant proportion of revenues retained in CNPA and used for rent distribution networks, rather than channeled into formal budget process |

secrecy rather than transparency. The agency's capacity is weak, as is the case with the bulk of Cambodia's bureaucracy, and decision making is confined to a handful of people. Although offshore oil development concessions are formally awarded through a competitive bidding process, all exploration contracts to date have been allocated at the discretion of the powerful players at the helm of the CNPA. Some companies have reported paying large bribes for permits that failed to materialize.[29] CNPA claims to use a model production-sharing contract, but the final terms of exploration agreements and other documents are not shared within the agency, let alone shared with other government bodies or the public. This means that any genuine form of impartial monitoring and inspection of petroleum contracts is almost impossible to implement.

Governance and institutional outcomes are no better further downstream in the Cambodian petroleum sector's value chain. The fiscal regimes and fees associated with exploration contracts are reported to vary considerably; furthermore, because contractual terms are not made public, it is extremely difficult to verify fiscal receipts from the petroleum sector.[30] Companies report that millions of dollars they have paid to the government for oil concessions are missing from official revenue figures.[31] Because petroleum revenues have yet to come onstream, a sector-specific assessment of the public financial management system would be premature. In general, the public financial management system has long been an area of major donor attention in Cambodia, but serious problems persist with the procurement system, which is a common mechanism for rent distribution to patronage networks. Moreover, there is no way of estimating what volume of rents is being distributed outside the formal budget process, or "off budget," through the CNPA itself or is being siphoned off into the hands of individuals.

Even in the early stages of its petroleum development, Cambodia's management of the natural resource sector demonstrates how broader institutional quality conditions governance outcomes in the sector. In a similar manner to the use of forestry rents in the contemporary political context, it appears that a significant portion of oil revenues are being captured by political elites, with some portion being used to cement loyalties and pay off the opposition.[32] Mirroring the governance dynamics associated with the forestry sector, the petroleum sector has become co-opted in the patronage extraction and distribution that is the hallmark and basis of the CPP's grip on power. Because Cambodia's oil potential was only discovered a few years ago, however, the feedback effects of the petroleum sector on the broader institu-



tional landscape are not yet obvious. Both interactions are evident in East Timor, to which I now turn.

### East Timor: From Best Practice to "Buying the Peace"

Following an almost twenty-five-year guerrilla resistance movement against Indonesian occupation, the East Timorese people voted for their independence in 1999. In the wake of the scorched earth violence that followed that vote in the tiny nation, the United Nations mounted its most ambitious peace-building exercise. East Timor was in numerous ways the poster child for the international community's state-building efforts, and many observers found cause for cheer when the country passed the five-year mark without renewed violence.[33] At that point, it appeared that the Revolutionary Front for an Independent East Timor (Fretilin, by its Portuguese acronym) had successfully seized the mantle of the national resistance front and channeled its organizational strength into a popularly elected administration. Yet during the transitional phase, state capacity building was underemphasized and remained severely attenuated, with elite attention focused on the political rather than the administrative arena.[34]

Even though the United Nations Transitional Authority for East Timor (UNTAET) had established the East Timor Public Administration by 2001 as part of an all-Timorese transitional government, the capacity of this embryonic civil service was woefully weak and failed to incorporate East Timorese participation in planning and administration. The civil administration was highly dependent on international assistance to make up for low professional skills, particularly in the central government functions of public finance and human resource management.[35] This has meant that some core government functions in East Timor are carried out surprisingly well relative to everything else; as we shall see, this seems to be the case in the petroleum sector. Yet overall, Timorese political leaders' emphasis on political incorporation has meant that not enough attention was paid to the state-strengthening dimension of the peace-building program. Time-series data of government effectiveness in East Timor demonstrate that although state capacity spiked in the immediate period after the transition to independence, it has since declined and remains quite low (see Figure 13.3).

Fretilin, the political party led by the returned Timorese diaspora elite, dominated the political process after the transitional period, which proved

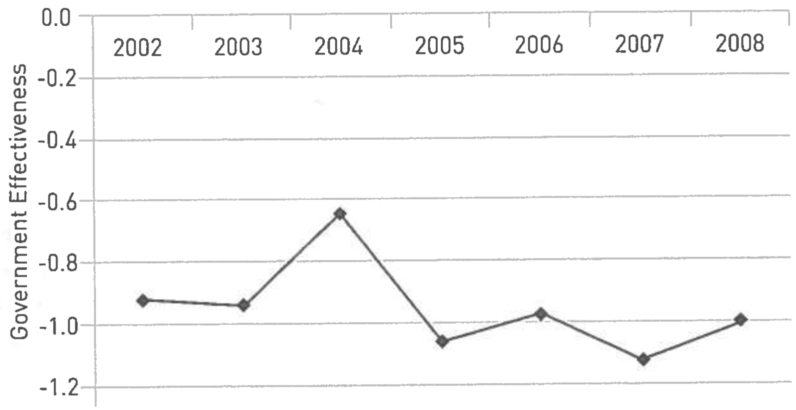


Figure 13.3 Government effectiveness in East Timor, 2002–2008. Kaufmann, Kraay, and Mastruzzi, "Governance Matters VIII." See caption to Figure 13.2 for a description of the indicator.

problematic for state strengthening and the longer-term consolidation of democracy in East Timor. Fretilin, in essence, "placed the new National Parliament in clear subordination to a government intent on using its majority to push through its ambitious legislative program."[36] It also quickly began to consolidate its patronage networks throughout the country by politicizing civil service hiring in district administration throughout the country, which ensured that positions were filled by Fretilin cadres.[37] Although the Fretilin party retained its dominant presence throughout the country, it soon became apparent that the population at large did not necessarily share all of its goals. Timorese civil society representatives have criticized the hierarchical and closed-command culture in Timorese political life, recognizing that it led to the success of a national resistance movement but arguing that it is detrimental to democracy.[38] Moreover, Fretilin's own institutional legacies increasingly compromised its political legitimacy. Politically motivated violence erupted in April 2006; after several months of severe political instability, the Fretilin leadership was forced out of office at the behest of revolutionary leaders. New presidential and parliamentary elections, respectively, were held in May and June 2007, with former President Xanana Gusmão taking the prime minister's seat at the head of a volatile new coalition government.

Decisions around the institutional arrangements in East Timor's petroleum sector have interacted with this fast-evolving political context. East Timor is one of the most petroleum revenue-dependent countries in the world, with oil and natural gas revenues providing more than 98 percent of government revenues and constituting around 480 percent of non-oil GDP (about 80 percent of GDP).[39] Petroleum production began in 2004 at the Bayu-Undan gas field located in the offshore Joint Petroleum Development Area (JPDA) shared with Australia. East Timor's portion of the future revenue stream from Bayu-Undan is estimated at $15.2 billion in present value terms, in comparison with the government's overall budget of about $680 million in 2009.[40] East Timor's sources of petroleum revenue are expected to proliferate in the future—beginning with the Greater Sunrise field, estimated to hold reservoirs as large as Bayu-Undan, and the smaller Kitan field, due to commence production in 2011. Additional exploration in both the JPDA and East Timor's exclusive zone is also expected to result in further commercially viable petroleum discoveries.

Given its extreme petroleum dependence and postconflict institutional fragility, East Timor is very vulnerable to the resource curse. Yet the institutional and governance arrangements the East Timorese government made for the management of the petroleum sector during the country's early stages of independence appear to bode quite well for the country's ability to channel oil and gas revenues into sustainable development (see Table 13.3).[41] More recently, however, some of the institutional safeguards and quality initially designed into the petroleum sector architecture are on the verge of unraveling somewhat, which demonstrates the intense political pressures on the system as well as the impact of the shift in power from the first Fretilin government to the current coalition government. The petroleum sector's evolving institutional architecture has, in turn, begun to have a series of noticeable effects on the macro political and governance landscape as well.

Upstream in the value chain, East Timor has thus far opted for maximum transparency in the petroleum development process—handling all exploration contract bidding rounds with model contracts, publicly advertised terms, and competition based on only one bid variable (reducing the opportunity for discretion in the decision).[42] In addition, the final contracts are public documents. Currently, however, the government is reported to be engaging with regional oil companies and consortia in several strategic investment partnerships—such as the construction of a liquefied natural gas plant and establishment of a supply base as well as storage and port facilities on the south coast of the country.[43] The government has not disclosed what it would offer in return for these proposed investment partnerships, but observers agree that a number of secret memoranda of understanding for exploration

Table 13.3 Key Governance Outcomes in East Timorese Petroleum Sector

| *Value chain stage* | *Institutional and governance arrangements* |
|---|---|
| *Award of contracts and sector organization* | • Best international practice Petroleum Fund Law (2005), widely heralded as robust and transparent<br>• Acreage releases to date with publicly advertised, transparent, open bidding procedures; contracts made public<br>• New, nontransparent deals potentially being negotiated with regional companies<br>• Intention to create National Oil Company (NOC); would change sector organization considerably |
| *Regulation and monitoring of operations* | • To date, strong, using Joint Petroleum Development Area (JPDA) mechanisms; but not set up for future contracts<br>• Weak overall administrative capacity and dominance of particular oligarchic interests constrain regulatory capacity<br>• National Petroleum Authority has best administrative capacity in-country, but still weak; brought closer to government, which seems to be affecting neutrality of regulatory decisions |
| *Collection of taxes and royalties* | • Revenue collection capacity weak; to date heavily reliant on international technical assistance<br>• To date, transparent, through JPDA mechanisms; potential for revenue leakage with other contracts<br>• Petroleum Fund revenue management is state of the art, with robust independent audits; but there is some pressure for potential reforms<br>• NOC creation could potentially take significant revenues out of the formal budget process, diluting transparency and accountability controls |
| *Revenue management and distribution* | • All government expenditure of resource wealth is channeled into the formal budget process, providing full fiscal accountability through budget scrutiny by Parliament<br>• Estimated Sustainable Income can only be exceeded via justification to Parliament<br>• Dysfunctional, centralized public financial management system and constrained budget execution; pressure to spend has opened up possibility of more rent distribution<br>• "Buying the peace" push in 2007 and 2008, using cash transfers, subsidies, and, increasingly, public investment budget<br>• NOC could potentially become an alternate, off-budget source of public investment and rent distribution |



contracts may have already been signed in advance of the next scheduled acreage release. Such exclusive terms on high-value sites would represent an unraveling of the hitherto exemplary bidding process and a cause for concern in terms of transparency and accountability.

In terms of petroleum sector organization, the Secretariat of State for Natural Resources handles policy. The National Petroleum Authority (NPA), created in 2008, is responsible for regulating and monitoring activities in both the JPDA and East Timor's exclusive zone.[44] It is widely agreed that the NPA is currently one of the most highly capacitated Timorese state agencies, which is a sign of the government's recognition of the strategic importance of the petroleum sector as well as the premium placed on the regulatory function. The NPA reports to a board of directors, which is in turn supervised by the Secretariat of State for Natural Resources. There is thus concern that the NPA's independence is somewhat compromised due to its proximity to the executive; observers worry, for example, that the forthcoming decision on the development plan for the Sunrise field will be made through a political lens.[45]

Moving across the value chain to revenue-management arrangements, the Fretilin government in 2005 established a state Petroleum Fund for fiscal receipts from the sector along with a complementary legislative framework that are widely heralded as examples of best international practice and even, to some, the finest legacy of the first East Timorese government. With heavy advisory involvement from the Norwegian government, Fretilin Prime Minister Mari Alkatiri articulated a Petroleum Fund based on the Norwegian model. Norway's State Petroleum Fund was established with the aim of ensuring that some proportion of the finite stream of revenues accruing to the country from its North Sea oil deposits would be saved for future generations. East Timor's Petroleum Fund is similarly an exemplary architecture for intergenerational savings, and its receipts can also be used, if necessary, for expenditure smoothing in the face of petroleum price volatility. According to the Petroleum Fund Law, all petroleum revenues—fees, royalties, and taxes—are directed to the Petroleum Fund without exception.[46] There are none of the off-budget petroleum accounts or special purpose funds that are common in many hydrocarbon-rich developing countries. Parliament unanimously passed the Petroleum Fund Law in 2005, and it is the only legislation ever to have received no opposition in East Timor. In this respect, Alkatiri used his technocratic orientation, the considerable postindependence legitimacy afforded to his government, and advice from the international community to establish best practice institutional arrangements for upstream sector governance. The forward-looking logic of the Petroleum Fund was also likely enabled, in part, by the fact that immediate revenues were relatively low: Bayu-Undan had just started producing, and oil prices had not yet spiked.

Enshrined in the Petroleum Fund Law is the concept of Estimated Sustainable Income (ESI)—defined as the maximum amount that can be appropriated from the fund in any given fiscal year, leaving enough revenue in the fund such that the same value can be appropriated in all subsequent years. In short, this principle ensures intergenerational saving. The law sets ESI at 3 percent on the assumption that the fund will generate an annualized 3 percent return on investment, and each year Petroleum Fund advisors at the Ministry of Finance calculate the dollar amount on the basis of fairly conservative revenue projections based on proven reserves. In 2009, East Timor's ESI was just over $400 million (in comparison to the country's total budget that year of $680 million). All revenue coming out of the fund is appropriated through and integrated fiscally with the formal budget process, which means that the use of all resource revenues is subject to parliamentary scrutiny and regular budget accountability measures.

The Petroleum Fund Law enables the government to request an appropriation to the budget exceeding ESI, as long as it provides justification to Parliament; this has now happened twice, in 2008 and 2009. Yet this flexibility may not make the Petroleum Fund resilient enough. A recent development of concern is that the government is considering tabling amendments to the Petroleum Fund Law that would increase ESI over 3 percent, which (particularly in the current low-return global financial context) would almost certainly deplete the fund over time. The initial design was likely enabled by relatively low petroleum revenues; by contrast, the current government appears to be under pressure to demonstrate to a restless public the dividends from both newly reestablished peace and increasing petroleum wealth. The coalition government is unlikely to be a lasting one, moreover, and there are increasing signs that uncertainty about the next set of electoral results has shortened the time horizon of some in government and put in place a short-term personal enrichment calculus. In this respect, reports of corruption are increasing—particularly through the public procurement process, because lack of recourse to off-budget sources of rent puts enormous pressure on the formal public expenditure system.



The formal public financial management system in East Timor complicates petroleum-sector governance because it has been relatively dysfunctional. A complex, centralized design with ex ante spending controls contributed to extremely poor budget execution during the past several years. In turn, increasingly frustrated by the inability of the public financial management system to demonstrate results and to service important constituencies (especially veterans), the government opened a multitude of other spending channels—including subsidies, cash transfers, pensions, and decentralized and shortcut procurement procedures—so that by mid-2008 it was spending seven to eight times more each month than the year before.[47] More recently, in October 2009, $70 million of an unutilized budget allocation for construction of a heavy oil power plant was channeled by executive decree into what was known as the "Package Referendum." These funds were intended to be used for targeted, small- to medium-size public investment programs, such as irrigation and roads. The allocation of the resources was entirely off budget in the hands of a recently formed business association not subject to any form of transparency or accountability controls—heightening the risks of rent seeking and rent distribution.

A preliminary analysis of the geographic allocation of public spending in East Timor could not falsify the hypothesis that the government was spending more—in terms of both cash transfers and public investment allocation—in the districts most strongly supportive of the coalition partners in the 2007 election. Viewing these various public spending measures in the best possible light, the government is acting to "buy the peace" with the country's best interests in mind; in this telling, distributing rents in the form of public expenditures to key constituencies can pacify dissent, control elite conflict, and maintain stability. Nevertheless, elite capture of major rent streams, along with constituency-targeted public spending patterns, are troubling signs that the petroleum sector is indeed having an impact on the macro political and institutional landscape of East Timor through the simple fact that these rent streams make up such a large proportion of the government's revenues and make the spending increases possible.

A final development in East Timor's petroleum sector governance is the government's plan to establish a National Oil Company (NOC) that could take equity shares in any new petroleum development activities. This impetus is driven in part by frustration with the formal public financial management system and its constraints and possibly also by a desire to increase the country's take from the petroleum sector to continue to service emerging expenditure pressures. NOCs are certainly common in hydrocarbon-rich developing countries; unfortunately, they are also notorious sources of inefficiency and corruption.[48] The Timorese government has yet to decide how it would structure its NOC and has accepted Norwegian assistance in studying various potential models.

The double-edged danger, from a governance point of view, is that the creation of a NOC would enable political elites to: (1) divert potentially major streams of petroleum revenue away from the Petroleum Fund;[49] and (2) bypass the fiscal accountability measures embedded in budget appropriations from the fund by creating multiple other channels of public investment and expenditure through NOC subsidiary operations. In short, the NOC could be set up to receive a significant share of petroleum revenues and spend those funds in whatever manner its management and board were to choose, with no other executive or legislative oversight. In the worst-case scenario, this could—as is the case in other oil-rich developing countries such as Angola—make the NOC a mini-state within the state that operates on its own terms and plays an outsized political role because of the sheer volume of petroleum revenues it controls and its potential to distribute rents to patronage networks. The petroleum sector could thus, in very tangible ways, reshape the political and institutional landscape of East Timor.

## Conclusions

In this chapter, I have introduced the natural resource value chain concept as a micro-political lens through which to unravel the bi-directional causality attributed to institutions in the resource curse. I have examined petroleum governance arrangements in Cambodia and East Timor in light of the fragile postconflict institutional context in both countries. For both, I have attempted to illustrate how the impact of the macro political environment and overall institutional quality can be seen in the choices made for petroleum-sector governance. Moreover, in East Timor, where petroleum production has begun and revenues have already altered the public expenditure equation, the impacts of petroleum feeding back into the broader political and institutional landscape are already becoming evident.

Developing countries are particularly vulnerable to the resource curse because of their low institutional quality at the outset of petroleum production. These concerns apply even more to fragile postconflict states. The experience of poor countries rich in hydrocarbons has shown that adverse political incentives are exacerbated when oil is the "only game in town," and a lack of access to other revenues constrains the accountability of the state to society and concentrates rent seeking and rent distribution in the natural resource sector. The Cambodia and East Timor cases demonstrate that the logic of zero-sum politics and short-time horizons facing political elites are extremely acute in fragile institutional contexts.



In support of the rich theoretical scholarship that articulates the interaction between natural resources and institutions, these two cases and the value chain concept also demonstrate the potential for containing the resource curse through intelligent and resilient institutional design. Resource curse dynamics can be mitigated through, for example, an institutional setup that guards against the concentration of power; a transparent legal and regulatory framework for the petroleum sector that, in particular, sets out clear institutional mandates and lines of accountability; a forward-looking revenue management architecture that saves some portion of resource wealth for future generations and safeguards it, as much as possible, from being distributed as rent; and an attention to administrative capacity building across the natural resource value chain that cumulates to enhanced institutional quality. Once an adverse resource curse pattern has been set in place, however, it can be extremely difficult to break the vicious cycle of its micro-political dynamics, as can be seen in Cambodia. On the other hand, East Timor is poised to demonstrate whether it might be possible to avoid the worst forms of the resource curse through conscious institutional design. Both countries evidence what Karl articulated as one of the hallmarks of the petrostate: the progressive substitution of public spending and rent distribution for statecraft and the consequent weakening of state capacity. For petroleum-rich poor countries, this is a very real sociopolitical peril that can be extremely hard to escape.

whatever the levels of other variables are. In the face of the complexity of many political phenomena, however, "it often makes sense to admit the possibility of nonadditivity of interaction" where "the effect of an independent variable on a dependent variable may vary, depending on the level of some other variable." Robert Friedrich, "In Defense of Multiplicative Terms in Multiple Regression Equations," *American Journal of Political Science* 26:4 (1982): 797–98.

34. Faten Ghosn and Glenn Palmer, *Codebook for the Militarized Interstate Dispute Data, Version 3.0* (State College, Penn.: Correlates of War 2 Project—The Pennsylvania State University, 2003), http://cow2.la.psu.edu (accessed December 20, 2008).

35. Ibid., 171.

36. Kirk Hamilton and Michael Clemens, "Genuine Savings Rates in Developing Countries," *World Bank Economic Review* 13:2 (1999): 333–56.

37. Ross, "A Closer Look at Oil, Diamonds, and Civil War," 273.

38. Monty G. Marshall and Keith Jaggers, *Polity IV Project, Political Regime Characteristics and Transitions, 1800–2003*, 2003, http://www.cidcm.umd.edu/inscr/polity. University of Maryland, College Park, Md.

39. Level of Income is divided by 10,000 to make the interpretation of the coefficients intelligible; i.e., one unit equals 10,000 $US.

40. Arthur S. Banks, *Cross-National Time-Series Data Archive*, CD-ROM, Databanks International, 2004.

41. Reuben M. Baron and David A. Kenny, "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations," *Journal of Personality and Social Psychology* 51:6 (1986): 1173–82, and Duane F. Alwin and Robert M. Hauser, "The Decomposition of Effects in Path Analysis," *American Sociological Review* 40 (February 1975): 37–47.

42. Baron and Kenny, "The Moderator-Mediator Variable Distinction."

43. Ross, "Does Oil Hinder Democracy?" and M. Steven Fish, "Islam and Authoritarianism," *World Politics* 55:1 (2002): 4–37.

44. The time range of the analysis is from 1970 to 2004. There are 144 countries and about 3,500 country-years, the latter being the unit of analysis. Main models involving Force Use Onset as the dependent variable utilize population average logit with robust standard errors. In order to estimate the effect of the temporal dependence I create a dummy variable counting the number of peace years since the previous failure (see Nathaniel Beck, Jonathan N. Katz, and Richard Tucker, "Taking Time Seriously: Time-Series-Cross-Section Analysis with a Binary Dependent Variable," *American Journal of Political Science* 42:4 (1998): 1260–88). To account for the nonlinearity of the logistic regression, this variable is included together with three cubic splines. All independent variables are lagged to mitigate the endogeneity problem. All models are run in Stata 10 statistical software.

45. Westing, *Global Resources and International Conflict*; Klare, ed., *Resource Wars*; and Paul R. Hensel, "Contentious Issues and World Politics: Territorial Claims in the Americas, 1816–1996," *International Studies Quarterly* 45:1 (2001): 81–109.



46. Luciani, "Allocation vs. Production States," 76.

47. Smith, "Oil Wealth and Regime Survival."

48. Ibrahim Elbadawi and Nicholas Sambanis, "How Much War Will We See? Explaining the Prevalence of Civil War in 161 Countries, 1960–1999," *Journal of Conflict Resolution* 46:3 (2002): 307–34, and Patrick M. Reagan and Daniel Norton, "Greed, Grievance, and Mobilization in Civil Wars," *Journal of Conflict Resolution* 49:3 (2005): 319–36.

49. Thomas Brambor, William Roberts Clark, and Matt Golder, "Understanding Interaction Models: Improving Empirical Analyses," *Political Analysis* 14:1 (2006): 63–82.

50. Dashwood, *Zimbabwe, the Political Economy of Transformation*; Andrew Meldrum, "Good-bye," the website of *The New Republic*, April 17, 2000; and Bjørn Willum, "Foreign Aid to Rwanda: Purely Beneficial or Contributing to War?" (doctoral dissertation, University of Copenhagen, 2001).

51. United Nations, *Report of the Panel of Experts on the Illegal Exploitation of Natural Resources and Other Forms of Wealth of the Democratic Republic of Congo*, S/2001/357 (New York: United Nations Security Council, 2001).

52. Collier and Hoeffler, "On Economic Causes of Civil War."

## Chapter 13

1. See, inter alia, Halvor Mehlum, Karl Moene, and Ragnar Torvik, "Institutions and the Resource Curse," *Economic Journal* 116 (2006): 1–20; Xavier Sala-i-Martin and Arvind Subramanian, "Addressing the Natural Resource Curse: An Illustration from Nigeria," NBER Working Paper 9804 (June 2003); and Adnan Vatansever and Alexandra Gillies, "The Political Economy of Natural Resource Management for Development: A Framework for Operational Research," manuscript, World Bank (2009).

2. Following scholarly convention, I refer to East Timor by its anglicized name, rather than its official name (in Portuguese), Timor-Leste.

3. See, inter alia, Richard Auty, *Sustaining Development in Mineral Economies: The Resource Curse Thesis* (London: Routledge, 1993); Thad Dunning, *Crude Democracy: Natural Resource Wealth and Political Regimes* (New York: Cambridge University Press, 2008); Terry L. Karl, *The Paradox of Plenty: Oil Booms and Petro States* (Berkeley: University of California Press, 1997); and Michael L. Ross, "The Political Economy of the Resource Curse," *World Politics* 51:2 (1999): 297–322.

4. Thad Dunning, "The Political Economy of the Resource Paradox: An Overview," Draft, World Bank (2008), 6.

5. Ibid.

6. Moore provides a discussion of rentier states and their conformity to the propositions of fiscal sociology. Mick Moore, "Revenues, State Formation, and the Quality of Governance in Developing Countries," *International Political Science Review* 25 (2004): 297–319.

7. Robert H. Bates, *When Things Fell Apart: State Failure in Late-Century Africa* (New York: Cambridge University Press, 2008).

8. Karl, *The Paradox of Plenty*, 16.

9. Dunning, "The Political Economy of the Resource Paradox," 2.

10. See, for example, Michael Woolcock, Lant Pritchett, and Jonathan Isham, "The Social Foundations of Poor Economic Growth in Resource-Rich Countries," in Richard Auty, ed., *Resource Abundance and Economic Development* (New York: Oxford University Press, 2001), 76–92; Pauline Jones Luong and Erika Weinthal, "Rethinking the Resource Curse: Ownership Structure, Institutional Capacity, and Domestic Constraints," *Annual Review of Political Science* 9 (2006): 241–63; and Vatansever and Gillies, "The Political Economy of Natural Resource Management." McPherson and MacSerraigh also enumerate the special features of the petroleum industry that render it particularly susceptible to corruption. Charles McPherson and Stephen MacSearraigh, "Corruption in the Petroleum Sector," in J. Edgardo Campos and Sanjay Pradhan, eds., *The Many Faces of Corruption: Tracking Vulnerabilities at the Sector Level* (Washington, D.C.: World Bank, 2007), 191–220.

11. Vatansever and Gillies, "The Political Economy of Natural Resource Management," 22–23.

12. Terry L. Karl, "Ensuring Fairness: The Case for a Transparent Fiscal Social Contract," in Macartan Humphreys, Jeffrey D. Sachs, and Joseph E. Stiglitz, eds., *Escaping the Resource Curse* (New York: Columbia University Press, 2007), 259.

13. Karl, *Paradox of Plenty*, articulates this as the core logic of the "petro-state," and Moore, "Revenues, State Formation, and the Quality of Governance," further explains the link between fiscal sources and accountability.

14. Known as the "voracity effect," this has been modeled in Aaron Tornell and Philip R. Lane, "The Voracity Effect," *American Economic Review* 89:1 (1999): 22–46.

15. Robinson et al. have modeled a country with weak institutional controls where a resource boom creates incentives for politicians who want to stay in power to spend resource windfalls on public programs and employment. James A. Robinson, Ragnar Torvik, and Thierry Verdier, "Political Foundations of the Resource Curse," *Journal of Development Economics* 79:2 (2006): 447–68.

16. See, for example, Naazneen Barma, "Strengthening Political Economy Analysis on the Resource Paradox: Terms of Reference for Country *X* Case Study," manuscript, World Bank (October 2008) and Naazneen Barma, Kai Kaiser, Tuan Le, and Lorena Viñuela, *Rents to Riches? The Political Economy of Natural Resource-led Development* (Washington, D.C.: World Bank, forthcoming 2011).

17. For a thorough description of the approach and its components, see Eleodoro Mayorga Alba, "Extractive Industries Value Chain: A Comprehensive Integrated Approach to Developing Extractive Industries," Oil, Gas, and Mining Policy Division Working Paper 3 and Africa Poverty Reduction and Economic Management Department Working Paper 125, World Bank (2009). For a related discussion of the sector



value chain approach in diagnosing corruption in the petroleum sector, see McPherson and MacSearraigh, "Corruption in the Petroleum Sector."

18. Often a fifth link in the value chain is included, which addresses implementation of sustainable development projects and policy. In this chapter, I fold this concern into the four links mentioned where possible but focus on the four prior links to retain the emphasis on the interaction of natural resource revenues with governance and institutional quality.

19. The brief description of Cambodia's contemporary political and institutional context is adapted from Naazneen Barma, "Crafting the State: Transitional Governance and the International Role in Post-Conflict Peacebuilding," Ph.D. dissertation (University of California, Berkeley, 2007).

20. David W. Ashley, "The Failure of Conflict Resolution in Cambodia," in Frederick Z. Brown and David G. Timberman, eds., *Cambodia and the International Community: The Quest for Peace, Development, and Democracy* (New York: Asia Society, 1998).

21. Philippe Le Billon describes how this took place in Cambodia's forestry sector in a commodity chain analysis similar to that pursued here. Philippe Le Billon, "The Political Ecology of Transition in Cambodia 1989–1999: War, Peace, and Forest Exploitation," *Development and Change* 31 (2000): 785–805.

22. Author's interviews with donor officials, Phnom Penh, Cambodia, May and October 2005.

23. Ashley, "The Failure of Conflict Resolution in Cambodia."

24. Le Billon develops this concept of the "shadow state," arguing that the Cambodian political elite used the forestry sector for these purposes. "The Political Ecology of Transition in Cambodia," 798–99.

25. Graham Lees, "Cambodia Set for Oil and Gas Development Bonanza," *World Politics Review*, December 4, 2006.

26. The IMF defines a country as "resource-dependent" if an average of 25 percent or more of its government revenues over the past three years derived from oil, gas, or mining.

27. Geoffrey Cain, "The Curse of Oil Looms for Cambodia," *Far Eastern Economic Review*, June 5, 2009.

28. World Bank, *Cambodia: Energy Sector Strategy Review*, Issues Paper (2006).

29. Global Witness, "Country for Sale: How Cambodia's Elite Has Captured the Country's Extractive Industries," *Global Witness*, 2009, http://www.globalwitness.org/media_library_detail.php/713/en/country_for_sale.

30. The Cambodian government has elected not to join the Extractive Industries Transparency Initiative (EITI), which would have required full disclosure of petroleum revenues.

31. Global Witness, "Country for Sale."

32. Department for International Development, *Cambodia Country Governance Analysis* (London: Department for International Development, 2007).

33. The rule-of-thumb estimate that has emerged from Collier et al.'s research on the causes of renewed conflict is that approximately half of countries that emerge from civil war return to violent conflict within five years. See, in particular, Paul Collier, Lani Elliot, Håvard Hegre, Anke Hoeffler, Marta Reynal-Querol, and Nicholas Sambanis, *Breaking the Conflict Trap: Civil War and Development Policy* (Washington, D.C. and New York: World Bank and Oxford University Press, 2003).

34. The brief description of East Timor's contemporary political and institutional context is adapted from Barma, "Crafting the State."

35. Author's interviews with East Timorese government officials in civil service human resource management and public financial management, Dili, East Timor, April 2005.

36. Anthony Goldstone, "UNTAET with Hindsight: The Peculiarities of Politics in an Incomplete State," *Global Governance* 10 (2004): 84.

37. Author's interviews with academics, East Timorese provincial officials, and World Bank and other donor officials, Dili, East Timor, 2005. One Timorese official reported that Fretilin was the only party that had a presence in his (relatively large) province.

38. Author's interviews with East Timorese NGO representatives and journalists, Dili, East Timor, April 2005.

39. IMF, "Democratic Republic of Timor-Leste: 2009 Article IV Consultation—Staff Report," IMF Country Report 09/219 (2009). Only two other countries have hydrocarbon revenues exceeding non-oil GDP—Equatorial Guinea (around 120 percent) and Congo (around 103 percent). On average, other petroleum-producing countries have hydrocarbon revenues at around 50 percent of fiscal revenues and 20 percent of GDP. See also McPherson and MacSearraigh, "Corruption in the Petroleum Sector."

40. Production and revenue figures taken from IMF, "Democratic Republic of Timor-Leste."

41. The discussion on institutional and governance arrangements in East Timor's petroleum sector draws from a research trip to East Timor in November 2009 sponsored by the World Bank as well as Catherine Anderson, Naazneen Barma, and Douglas Porter, "The Political Economy of Natural Resource Management in Timor-Leste: A Value Chain Perspective," World Bank, draft (2009).

42. McPherson and MacSearraigh, "Corruption in the Petroleum Sector."

43. These plans are referred to as the "Petroleum Industry Corridor" concept in the 2010 budget submission of the Secretariat of State for Natural Resources.

44. The NPA was created as the successor to the Timor Sea Designated Authority, which was responsible for all petroleum activities occurring in the JPDA.

45. Author's interviews with petroleum sector experts, Dili, East Timor, November 2009. At issue is where the gas pipeline will be landed, with the Timorese government having expressed a clear preference for it to come to East Timor; on the other hand, Woodside, the international petroleum company that currently holds the production rights to the field, has only prepared detailed feasibility studies for a floating LNG plant or for the pipeline to be landed in Darwin, Australia.



46. Democratic Republic of Timor-Leste Petroleum Fund Law, Law 9/2005. Accessed at: http://timor-leste.gov.tl/wp-content/uploads/2010/03/Law_2005_9_petroleum_fund_law_.pdf on May 6, 2011.

47. Anderson, Barma, and Porter, "The Political Economy of Natural Resource Management."

48. See McPherson and MacSearraigh, "Corruption in the Petroleum Sector," and Silvana Tordo with David Johnston and Daniel Johnston, "Petroleum Exploration and Production Rights: Allocation Strategies and Design Issues," Working Paper No. 179, World Bank (2009).

49. This would not be permissible under the current Petroleum Fund Law, which explicitly states that all petroleum revenue, including revenue from equity participation in petroleum production, must be channeled into the fund; but this could be amended in the current revision cycle.

## Conclusion

1. This classification is from Andrew Rosser, "The Political Economy of the Resource Curse: A Literature," IDS Working Paper 268 (2006), 8.

2. Ragnar Nurkse, *Equilibrium and Growth in the World Economy* (Cambridge, Mass.: Harvard University Press, 1961), 242–43, 305; also see Irving B. Kravis, "Trade as a Handmaiden of Growth: Similarities Between the Nineteenth and Twentieth Centuries," *Economic Journal* 80:320 (1970): 850–72.

3. Nurkse, *Equilibrium and Growth in the World Economy*, 299. Nurkse thought the demand for goods and services originated from these countries in relative terms was not as high as it was a century ago. But Kravis notes, "Nurkse did not oppose trade in principle as an engine of growth for today's developing countries, but he was pessimistic about its availability to the developing countries. The world's industrial centres were no longer 'exporting' their own growth rates to primary producing countries, owing to such factors as low income elasticities of demand, the rise of synthetics, and the importance of home primary product output in the advanced countries (especially in the United States). Prospects for exports of manufactures from the developing countries to the industrial centres were also poor, both because of the 'formidable' obstacles to the attainment of a minimum level of efficiency in the former countries and because of unfavourable commercial policies in the latter" ("Trade as a Handmaiden of Growth," 851–52).

4. Nurkse, *Equilibrium and Growth in the World Economy*, 301.

5. See Sweder van Wijnbergen, "Inflation, Employment, and the Dutch Disease in Oil-Exporting Countries: A Short-Run Disequilibrium Analysis," *Quarterly Journal of Economics* 99:2 (1984): 233–50; Sweder van Wijnbergen, "The 'Dutch Disease': A Disease After All?" *Economic Journal* 94:373 (1984): 42–55; Alan Gelb and associates,