INDEX

Abacha, Sani, 11
Abrahamovich, Roman, 38
absorptive capacity, 186
Abuja Joint Declaration, 305, 310
Access to Gross Revenue (AGR), 75
accounting, 107; asset disposal in conventional, 170. See also booking barrels
acreage, 83–84
activity rule: alternate, proposed, 138; license-by-license, 148; Milgrom-Wilson, 138; relaxed revealed preference, 141, 142; revealed preference, 139, 146
additive pricing, 137
additive values, 115, 121, 122
adjustable peg, 187
Africa, 58, 72f, 84, 199. See also Sub-Saharan Africa; West Africa
agency problems: privatization and, 26–45; solutions to, 39–45
AGR. See Access to Gross Revenue
agricultural sector, 241
Alaska, 25, 189; NRF inflows/outflows in, 216r, 215–18
Alaska Permanent Fund, 198, 243, 312
Algeria, 267
Amerada Hess Case, BP and, 46
Angola, 1, 13, 268
area (block size), 70r, 81–82
Argentina, 74f
ascending proxy auction, 136
asset depreciation, 39
asset disposal, 170
assets: booking barrels as, 55, 68, 79, 83; disposal of, 170; income v., 4; management of, 295–98; ownership of, 89, 97; preservation of, 104; protection of, 42–43; real reserves as protecting, 42–43
auction(s): additive values and, 115; basic issues for, 122–27; bidder preferences in, 115; block definition in, 118; clock/clock-proxy, 116, 133, 134–35, 136–37, 141–42, 143, 145, 145r; context-specific, 324; corrupt privatization and, 32–33; design of, 31, 33, 114–49, 324; developing countries and, 117, 128–29; discrete rounds in, 139; efficient outcomes of, 140; first-price sealed-bid, 116; format variations for, 144–46, 147r; gas, 134; implementation of, 143; key factors in, 114; Libya case study of, 131–32; non-oil industry, 133–35; outside U.S., 131–32; package/individual blocks in, 124–26; proxy phase of, 137, 140, 142–143; rigged, 37; setting-specific, 146; simultaneous ascending auctions, 116, 129, 133, 134; transparency, 114, 117; U.S., 126, 129–31; Venezuela’s approach to, 84–85, 127, 132, 146, 148
auction software, 143
auction theory, 117–19
audits/reporting, oil fund account, 303–4
Azerbaijan, 3, 45, 73, 74f, 89, 198, 221, 228, 275, 303, 303f, 309
Bangladesh, genuine investment/GDP in, 166, 167r, 168r
bank, custodial, 288
barrels of oil per day (BOPD), 54. See also booking barrels
bidder(s): aggregate quantities of, 138; business plans of, 144; collusion of, 122, 123, 124, 137, 145; foreign, 32, 33; valuation interdependence across, 119–20
bidder participation, 135
bidder preferences, 32, 115, 119–22
bidding: bonus, 31–32, 87, 104, 126, 127, 293; collusion in, 122, 123, 124; competitive, 85, 86, 86t, 328, 329; corruption/collusion in, 31–32, 122, 123, 124; least desirable form of, 87; open/sealed, 122–23; package/individual block, 124–26; royalty, 32, 33; sealed bid round, 87; speculative, 134
Blair, Tony, 97
block(s): area/size of, 70t, 82; definition of, 118; leasing, 31, 129, 130; pricing of, 7f, 36, 126, 129, 137, 138–39, 140, 141–42, 143; shared/single ownership of, 121; suitability of, 117; U.S. term for, 129; valuation interdependence across, 121–22. See also tracts
block offerings, 84; multiple, 123–24; package/individual, 124–26
block size, 70t, 81–82. See also acreage
Bolivia, 38, 71
bonding, 324
bonus bidding, 31–32, 87, 126; signature bonuses and, 32, 71, 104, 126, 127, 293
booking barrels, 55, 68, 79, 83
boom-bust cycles, 8, 197, 267, 268, 271, 325
BOPD. See barrels of oil per day
borrowing: aggressive, 190; avoiding taxation through, 262; expected oil revenue-based, 181; prohibiting, 299–300
Botswana, 2
BP, 46, 247–48, 275; Amerada Hess Case and, 46; transparency campaign and, 275
Brazil, 189
bribery, 47, 304, 309
Brosio, G., 249
Brunei, 2
budget, unified, 194, 224–25
business plans, bidders’, 144
Canada, 68, 94, 96, 304; checkerboard leasing of, 31
capital, extraction, 163–65
capital market access, 157–61, 170, 329
capital stock, social welfare measured by, 158–60
carbon dioxide (CO2) emissions, 166, 167t
cash transfers. See direct distribution
Chad, 2–3, 179, 224, 329, 333–34; corruption/NRF in, 195; Government Take in, 72–73, 72f; oil revenue management in, 301, 302, 303, 303f, 304, 308, 311, 312; revenue of, 6, 7f; taxation benefiting, 6
Chad-Cameroon Petroleum Pipeline Project, 301, 333
Chavez, Hugo, 38
checkerboard leasing, 31
checks and balances, 211–13; consumption/GDP and, 211t; spending and, 212f
Chevron, 25, 268, 319
Chevron-Texaco, 25, 275
childhood mortality, 237–39, 238f, 239f
Chile, 39, 199, 218
China, 3, 54, 78–79, 97; genuine investment/GDP in, 166, 167t, 168t
citizen shares, 177–78
citizens: participation deficit and, 265; state government and, 13, 265, 326, 330
civil war, 1, 10, 13, 145, 168, 169, 245–46, 246t, 322
Clinton, Bill, 49
clock phase, 137, 141–42, 143
collusion: bidders’, 122, 123, 124; clock auctions avoiding, 137, 145
Colombia, 5, 13, 68, 74f, 78, 86, 248, 257–58
Columbia University, 2, 286; Earth Institute oil team of, 307
common values, 119
compensation, 266; negotiation of, 106–7, 323; profit oil, 70t, 132. See also rate of return
competition: auctions and, 135; bidding, 85, 86, 86t, 328, 329; increasing, 31; reduced, 31–32, 37
competitive bidding, 85, 86, 86t, 328, 329
complementary licenses, 137
compliance: NRF rules, 218–19; oil company, 110; oil contract termination and, 111; state government, 218–19, 265
confidentiality clause, 306
conflict of interest: oil contract, 94; public-private, 94–97; revenue management law, 308–9; state government self-negotiation, 101
Conoco, 85
consumption: checks and balances and, 211; growth of, 54; investment v., 173, 185, 325; private, public investment v., 176–77; smoothing, 189, 195, 197, 204, 205

contract. See oil contracts

contractual-based fiscal systems, 56–57, 57f

corruption, 10–11, 24–26, 98, 191; agency problems and, 26–45; auctions and, 31–32, 37, 117, 129; bidding collusion, 122, 123, 124; bribery and, 47, 304, 309; kleptocracy, 260; market economy rewarding, 29; NRF and, 195; privatization, 26–39; public procurement and, 309–10; revenue management law addressing, 309; solutions to, 39–45; state government, 26–45, 266; Transparency International, scale, 268. See also privacy; rent-seeking behavior; secrecy
cost recovery, 75, 77, 77t, 82, 127
costs: cleanup, 324; consumer, 258; exporters’, 257–58; negotiating, 108; opacity/secrecy, 267; overestimation of, 25; past, 79; project, 66
countries. See developing countries; oil-producing countries
crypto taxes, 69, 70t
custodial bank, oil fund account, 288, 291
decentralization, revenue, 248–51
democracy, 35, 208, 273; threats to, 12–13
depreciation: asset, 39; exchange rate, 173, 182, 185, 191–92; PSA and, 100; world average, 70t
developing countries: auction problems specific to, 117, 128–29; direct distribution in, 243–44, 252; new discoveries in, 333–34; payments problem of, 45
development: joint, 310–11; negotiating resource, 109; principles for, 44–45; strategies for national, 174–92
development tracts, 130
direct distribution, 188–89, 241–44, 252, 295; advantages of, 243; gas revenue, 189
disclosure, 308; complete, 98; geological information, 31; mandatory/voluntary, 275–76; pressure against, 332; rate of return, 105. See also transparency
discovery, 54, 104; natural resource, new finds in, 333–34
diversification: economic, 271; through privatization, 181
domestic sectors, extraction creating two major, 5
dos Santos, José Eduardo, 268
drainage tracts, 130
duration, 70t

Dutch Disease, 5–6, 240, 325; IMF on minimizing, 191; non-oil export and, 184; oil booms and, 181–86, 182f; PPF pattern of, 182–83, 182f
earnings. See compensation; income
Earth Institute oil team, 307
East Timor. See Timor-Leste
economic growth, 1–2
economy: closed, extraction capital and, 164; hydrocarbon, 58–59, 180–81; income-based strategies for, 178–79; mixed, 175; open, 161–65; political, 14, 26–45, 194–227. See also macro-economy; market economy
Ecuador, 3, 74f, 75, 90, 148, 217–18, 231, 267
education, investment in, 10, 166, 167t
Effective Royalty Rate (ERR), 53, 56, 73–78, 76f; calculating, 77, 77t; weakness of, 75
efficiency, 30; auction outcome, 140; economic policy, 209–14; spending tied to, 209–10
Egypt, PSA of, 57f
EITI. See Extractive Industry Transparency Initiative
electricity, 134
Elf Aquitaine, 268
employment, selected countries’, 239–40, 240t
energy, alternative, 257
enforcement, asymmetric, 34
English auction, 131
enhanced oil recovery, 311
entitlement, 65, 83
environment, 109–10, 166, 167t; bonding for protection of, 324; information, 97–99; multinationals liable for, 327; negotiation of, 109–10
Equatorial Guinea, 2, 72f, 89, 268, 272
ERR. See Effective Royalty Rate
Europe, state-building in, 260
exchange rate: appreciation, 5, 8, 140, 181, 182, 183, 184, 185–87, 240; depreciation, 173, 182, 185, 191–92; policy, 142, 186–88, 191
exit strategy, 191
expenditure smoothing. See consumption smoothing
expertise, 4–5, 90; negotiation, 90, 92–94, 109, 327
exploration, 54, 70; Venezuela’s approach to licensing, 84–85
exploration risk, 57–58; factors for exposure to, 81–83; hedging and, 180; license agreement, 99–100; PSA terms for, 61; risk management for, 180–81
exporters, costs/negative results to, 257–58
expropriation, 128
extraction: domestic sectors created by, 5; front-loading rates of, production v., 6; grievances caused by, 13; loans for, 35–36; migration caused by, 13, 246; rapid, 35; rate of, 6; state government control ling, 39; timing of, 9, 15, 35, 40
extraction capital, 163–65
Extractive Industry Transparency Initiative (EITI), 85, 97, 274
Exxon Mobil, 25, 90, 268

INDEX

foreign aid, 191–92
foreign bidders, FSU not allowing, 32, 33
Former Soviet Union (FSU), privatization in, 32–33, 36, 58t, 84
Freeland, Crystal, 37
front-loading, 71–72; production/extraction, 6
FSU. See Former Soviet Union
Future Generations Fund, 296. See also natural resource fund
Gabon, 2, 72f, 74f, 267
gas auctions, 134
Gas war, Bolivian, 71
GDP. See gross domestic product
General Resource Fund (Kuwait), 198
genuine investment, GDP and, by country samples, 166–68, 167t, 168t
Gini coefficient, income distribution, 238–39, 238f, 239f
global clearinghouse, 222, 225
Global Witness, 268, 274
GNI. See gross national income
governance, 270; exploration risk and, 81–83; national development and, 190–92; PSA self-negotiating conflict of interest, 101; public, 308–10; secrecy in, 331; spending and, 201–8; stability of, spending impacted by, 201–8, 209; takeovers and, 222; transparency measures for, 208, 276–77. See also political economy; state authority; state government
government participation: participation deficit and, 265; statistic, 70t, 77–80
Government Pension Fund, 178
Government Take, 56, 103; calculating, 69–70; fixed fee system of, 62–64, 63t; government participation and, 70t, 77–80; Kazakhstan, 77; minimum, 75; payment timing failure of, 71; profit oil split, 70t, 132; royalty tax system, 60; statistic, 69–75; U.S., 130; variable fee system, 62–64, 64t; Venezuela example of, 132; West African oil-producing countries’, 72–73, 72f; world statistics for, 73–75, 74f
government takeover, NRF prevention for, 222
grievance, extraction and populations, 13
gross domestic product (GDP), 325; assessing social welfare using, 43; genuine investment and, by country samples,
166–68, 167t, 168t, 169; national income overstatement of, 157–58; Sierra Leone, 6; social welfare assessment by, 43, 165–68, 167t, 168t, 169

gross national income (GNI), 157–58. See also national income

Gulf of Mexico, 85

Hartwick’s Rule, 170

HDI. See Human Development Index

Heal, G., 158, 159

health, 109–10

hedging, risk and, 180

HIV/AIDS, investment data and, 167

Hong Kong, 1

horizontal inequality: civil war and, 245–46, 246r; problem of, 244–46, 246r; solutions to, 246–48

Hotelling’s analysis, 40, 160, 164–65

human capital investment, 10

Human Development Index (HDI), 2

Hussein, Saddam, 260

hydrocarbon economy: development strategies for, 180–81; production, 58–59

IIAPCO. See Indonesia American Petroleum Company

IMF. See International Monetary Fund

incentives: contract generated, 42; against NRF, 199–209, 213

income: asset v., 4; expected/actual, 181, 196, 245; Exxon Mobil, 90; national, 155–71, 167t, 168r, 180, 325; oil v. other sources of, 180, 261; resource-rich countries’, 1–2; strategies for low/middle high, 178–79. See also compensation; Government Take; oil revenue

income distribution: child mortality as measure of, 237–39, 238f, 239f; national development and, 237–39

income volatility, 6–8

India, genuine investment/GDP in, 166, 167t, 168r

individual block bidding, 124–26

Indonesia, 1–2, 47, 57f, 60, 74f, 77, 82, 241, 242, 242f, 247–48, 250, 257, 260; exchange rate policy in, 142; PSAs of, 57f; public goods projects in, 241–42; relinquishment provisions in, 82

Indonesia American Petroleum Company (IIAPCO), Permina contract with, 60

inequality, 2, 6, 139; avoiding, 326; horizontal, 17, 210, 244–48; reducing, 232–57; research priorities on, 251–52; vertical, 17, 210, 239–44

information: bidders’ private, 120; geological, disclosure of, 31; negotiation of, 97–99; oil company/aggregate, 305; proprietary, 306–7; public office of, 307; transparency of, 97–99

information asymmetry, 31, 33–34

information deficit, 264–65, 266, 269

infrastructure: privatization and, 23, 36–37, 39, 188; rural, 188; Sao Tome and Principe, 179

Initiative for Policy Dialogue (IPD), 2

interdependence of valuations: across bidders, 119–20; across blocks, 121–22

interest-group politics, 200–201

intergenerational sharing, 178

international financial institutions. See also International Monetary Fund; World Bank

international financial institutions, transparency measures for, 277

international lending, 8, 181

International Monetary Fund (IMF), 9, 36, 305; foreign aid/oil flow recommendations of, 191–92; privatization advice of, 38

international oil companies (IOC), 54, 87, 327

internet, transparency and, 307–8

investment: consumption v., 173, 185, 325; education, 10, 166, 167t; extraction, loans for, 35–36; genuine/GDP, country sample of, 166–68, 167t, 168t, 169; human capital, 10; limits on, 298–98; negotiation as, 92, 93; oil boom impact on, 184–85, 185f; oil price and, 267; policymaking committee for, 295–96; public, 175–79, 181–86, 182f; shadow price, 166–67, 167t; social welfare and, 159–60; wealth and, 10

investment committee, oil fund account, 295–96

IOC. See international oil companies

IPD. See Initiative for Policy Dialogue

Iran, 14, 63, 74f, 258, 267, 271

Iraq, 63, 243, 257, 258, 260, 267, 273; war in, 258
JDA. See Joint Development Authority
Johnston, Daniel, 75
Joint Development Authority (JDA), 333
joint ventures, 62, 99, 101, 127
Kazakhstan, 45, 76, 85, 89, 198, 221, 268, 272, 273
Keynes-Ramsey rule, 164–65
KIA. See Kuwait Investment Authority
kleptocracy, 260
Korea, 1
Kriström, B., 158, 159
Kuwait, 198; oil fund account of, 296; oil revenue management in, 303
Kuwait Investment Authority (KIA), 296
labor force, 91–92, 239–41, 240t; political economy and, 207. See also domestic sectors
Latin America, 174t
leasing, tract, 31, 129, 130
legal system: PSA and, 100; rule of law practices, 94; transparency and, 98. See also enforcement
Leitzinger, Jeff, 31
lending: extraction investment, 35–36; international, 8, 181. See also borrowing
Libya, 73, 84, 127; auction case study for, 131–32; reconsidering auction formats of, 146, 148
license agreement (concessionary system), 56, 99–100
license rounds, 84
licenses: activity rule, 148; auction design and, 122; complementary, 137; examples of, 84–85; U. S., 148
Malaysia, 30, 39, 43, 44, 46, 73, 74f
manufacturing sector, 6, 241
market economy, 29, 35
maximum efficient production rate (MEPR), 68
Mayanmar, 246t
MDGs. See Millennium Development Goals
de Menezes, Fradique Bandeira Melo, 305
MEPR. See maximum efficient production rate
Mexico, 2–3, 8, 89, 189, 248; direct distribution and, 188
Middle East: employment in, 240t; genuine investment/GDP in, 166, 167t, 168t; social welfare/oil production in, 174t
migration, extraction causing in/out, 13, 246
Milgrom-Wilson activity rule, 138
military: presence, 247, 269; spending, 13
Millennium Development Goals (MDGs), 176, 179
Minimum Government Take, 75
minimum price. See reservation price
minimum share, 75
mixed economy, 175
Mongolia, 104
monitoring deficit, 265
Morocco, 246t
multinationals. See international oil companies
national income: calculating accurate, 325; GDP/GNP overstating, 157–58; measuring methodology for, 169; NNIP and, 157–65; oil v. other sources of, 180; oil-producing countries’, 155–71, 167t, 168t; per capita, 1–2; resource depletion subtraction from, 165; social welfare and, 158–60; theoretical summary for, 165–66
national oil companies (NOCs), oil fund accounts in, 23, 53, 54, 263, 290
natural resource fund (NRF), 194–99, 205–6, 213–27; Alaska’s, 198, 242–43, 312; contracting out, 221–22; country-specific design of, 213–14; independent, 220–22, 224; inflows/outflows, 216t, 217–18; macroeconomy, 194–99, 205–6, 213–18, 219–27; policy making and,
213–22; political incentives against, 199–209, 213; politics and, 271–72; rules, 218–27; rules for, 214–27; third-party management of, 327; transaction publication of, 223–24. See also political economy

natural resources, depletion of, 164–65

Nazabayev, Nursultan, 268

negotiation: compensation, 106–7, 323; costs/expense, 108; development plans, 109; expense, 108; expertise in, 90, 92–94, 109, 327; form selection for, 99–102; health/environment, 109–10; information environment in, 97–99; investment in, 92, 93; issues covered by, 102–3; key issues during, 91–93, 91; license agreement form of, 56, 99–100; oil contract, 40–41, 89–112; oil price, 107; payment structure, 103–5; social projects and, 110; systems of, 55; taxation, 107, 108; team selection for, 93–94; transparency of, 97–99, 324

Nepal, genuine investment/GDP in, 166, 167, 168

net national product (NNP), 157–65, 325; capital market access and, 157–61; resource depletion and, 160

Netherlands, 5

NGOs. See nongovernmental organizations

Nigeria, 1–2, 3, 6, 8, 11, 45–46, 62, 65, 72f, 74f, 85, 86, 94, 179, 186, 240t, 241, 242, 242f, 264t, 248, 263, 267–68, 269, 275, 305, 310, 333; employment in, 240, 240t

Nigerian National Oil Corporation (NNPC), 65

NNP. See net national product

NNPC. See Nigerian National Oil Corporation

NOCs. See national oil companies

nongovernmental organizations (NGOs): mediation by, 247–48; transparency measures for, 277

nontradables sector, 5–6

North Africa, genuine investment/GDP in, 166, 167t, 168t

North Sea, 5

Norway, 2, 39, 43, 74f, 86, 95, 96, 109, 155, 178–79, 189–90, 191, 196, 199, 219, 272, 288, 292, 296, 304; best practices example of, 273; gas revenue direct distribution in, 189; maximum return example of, 106; NRF inflows/outflows in, 216r, 217–18; NRF of, 195; rule of law practices and, 94; state-run oil company of, 30

Norwegian State Petroleum Fund, 198, 297

NRF. See natural resource fund

Obasanjo, Olusegun, 305

Obiang, Teodoro, 268

offshore program, U.S. auction, 130, 145

O’Neill, Donal, 90–91

oil companies, 23–149; cheating of, 24–26; compliance of, 110; expertise of, oil-producing countries and, 4–5, 90; information published by, 305; negotiating oil contracts with, 40–41, 89–112; oil contract objectives for, 68–69; state-owned, 106; transparency and, 27, 277

oil contracts, 70t; auction design for, 31, 33, 114–49, 324; complex, 41–42, 108; confidentiality clauses in, 306; conflict of interest in, 94; enforcement of, 34; factors common to all, 57; fair outcomes of, 105–6; fiscal terms of, 53–87; forms of, 99–102; incentives generated by, 42; key elements of, 68–87; Libya case study of, 131–32; negotiating, 89–112; oil company objectives for, 68–69; parties in, 111; privacy/ nontransparency of, 105–6; progressiveness of, 81, 81t, 323–24; PSA, 56, 57–58, 57t; 60–62, 61f, 65–66, 66f, 67t, 75, 76, 77t, 83, 127; R Factor in, 70t, 73, 74f, 81t; rate of return and, 67t, 70t, 73, 74f, 81t; recommendation overview for, 323–24; renegotiation of, 40–41; risk and type of, 57–58; SA, 56, 62–64, 62t, 63t, 64t, 65–66, 67t, 102; stability of, 110; state government objectives in, 66; termination of, 111; time factor in/time-sensitive, 95–96; transparency of, 97–99, 105–6, 306–7; types of, by region, 58t. See also auction(s)

oil fund account, 288–312; audits/reporting in, 303–4; custodial bank for, 288; deposits to, 290; establishment of, 288–90; internet access to information on, 307–8; investment policymaking for, 295–96; management of, 295–300; NOCs with, 23, 53, 54, 263, 290; oversight of, 288–95, 296–98, 300–303,
oil fund account (continued)
303f; public governance of, 308–10; revenue use in, 294–95, 294f; spending limits for, 291–94; trusts and, 312; withdrawals from, 290–91
oil industry: dynamics in today’s, 54; secrecy in, 265–69
oil prices: determining, 107; oil fund account and, 292; projections of, 293; volatility of, 267
oil production. See production
oil revenue: annual changes, spending and, 212; bonuses and, 104; calculating, 325; Chad’s, 6, 7f; channeling, 32–33; direct distribution of, 180; expected, 181, 196; governance and, 104, 190–92; income distribution of, 180; NNP and, 157–65, 325; public information of, 190; risk management approaches for, 180–81; savings and, 189–90; tax, 12; timing of, 6. See also compensation; Government Take; income; income distribution; natural resource fund; oil revenue management; revenue; revenue management law
oil revenue management: NRF rules for managing, 217–27; selected countries’, 303f
oil rights: assigning, 114; licensing, 56, 84–85, 99–100, 122, 137, 148; state government objectives in, 68; tract leasing and, 31, 129, 130. See also auction(s) oil trap, 273–74
oil wealth, 155–71; benefits of, 174–75; calculating national, 325; income uniqueness of, 180, 261; macroeconomics of, 173–93; paradox of, 156
oil/mineral booms, 8; boom-bust cycle of, 8, 197, 267, 268, 271, 325; Dutch Disease and, 181–86, 182f; horizontal inequality and, 244–48; investment impacted by, 184–85, 185f; labor force impacted by, 239–41
oil-producing countries, 1–2; expertise of oil companies v., 4–5, 90; HDI ranking of, 2; income-specific strategies for, 178–79; international actions aiding, 326–28; national income of, 155–71, 167f, 168f, 180, 325; oil contract negotiation of, 40–41, 89–112; rulers of, 270; Transparency International corruption scale and, 268. See also exporters
OPEC. See Organization of Petroleum Exporting Countries
open economy, 161–65; extraction capital in, 163–64
Open Society Institute, 274
Organization of Petroleum Exporting Countries (OPEC), 263, 267
Oversight Management Plan, 275
overspending, political incentives for, 199–210, 213
ownership, 44, 65; asset, 89, 97; block, 121; IOC, 59; PSA system, 60; R/T system, 59
package values, 121, 137
Pakistan, genuine investment/GDP in, 166, 167f, 168f
Papua, 246t
past costs clause, 79
payments: cash/direct distribution, 188–89, 241–44; as central problem, 45; front-loading of, 71–72; structuring, 103–5; timing of, 42, 71
pension benefits, 189
Permina, IIAPCO contract with, 60
Peru, PSA contract type of, 57f, 64
Peruvian model, 57f, 64
Philippines, 246–47
policy: economic, 209–14; exchange rate, 186–88, 191; fiscal, 201–8, 256–79; spending, 39–40, 210
policymaking: investment, 295–96; NRF and, 213–22; sharing, 219–20
political economy, 14, 194–227; agency problems in, 26–45; checks and balances and, 211–13, 211f; labor force and, 207; NRF and, 194–99, 205–6, 213–27; overspending in, 199–210; power rivalry model and, 200–205; savings incentive lack in, 199–209, 213; separation of powers and, 219–22; transparency improving, 222–25; unified budgets and, 194, 224–25
political reform, 270–71
politics: diversification and, 271; economist solutions and, 269–74; infrastructure and, 36–37, 39, 179, 188; interest-group, 200–201; managing, 237–312; NRF and, 271–72; privatization and, 26–38, 272; resource curse as issue of, 256
pollution allowance auctions, 134
population: grievances of, extraction and, 13; growth of, NNP and, 168
portfolio composition, 40
poverty trap, 177
power rivalry model, 200–205. See also separation of powers
PPF. See production possibility frontier
prededicated expenditure, 217
price(s): block, 7f, 36, 126, 129, 137, 138–39, 140, 141–42, 143; oil, 107, 267, 292, 293; shadow, 158, 166–67, 167t
price discovery, 133, 140; clock phase providing, 141–42; improving, 138–39
price increments, clock phase, 143–44
privacy, oil contract, 105–6
private values, 119
privatization, 188; agency problems and, 26–45; corruption and, 26–39; diversification through, 181; failure/limit of, 35–36, 272; infrastructure and, 23, 36–37, 39, 188; oil revenue diversion in, 27–30, 39; rapid, 36; Russia’s, 32–33, 36, 37–38
production: civil war and, 245; exploration and, 54; extraction capital use by, 164–65; extraction rate front-loading v., 6; sliding scales for increased, 80–81. See also hydrocarbon economy;
production sharing agreement (PSA)
production possibility frontier (PPF), 182–83, 182t
production sharing agreement (PSA), 56, 57–58, 57f, 60–62, 61f, 65–66, 66f, 67t, 83, 84, 100–101; cost recovery limits in, 75, 77, 77t, 127
production sharing contract. See production sharing agreement
profit oil, 70r, 132
profit sharing, 105
profits tax system, 103–4
progressiveness, oil contract, 81, 81t, 323–24
project costs, PSA/R/T system, 65
property rights, 35–36, 272
proxy phase, in auctions, 137, 140;
advantages of, 142–143; concern with, 143
Prudhoe Bay, 25
PSA. See production sharing agreement
PSC. See production sharing agreement
public: direct distribution to, 188–89, 243–44, 252; oil revenue information as, 190
public goods, 175; Indonesia’s strategies for, 241–42; underprovision of, 176–77
public governance, oil fund account, 308–10
public information. See transparency
public information office, 307, 328
public investment, 175–79; Dutch Disease and, 181–86, 182t; oil boom impacting, 184–85, 185f; private consumption v., 176–77
public procurement, corruption and, 309–10
Publish What You Pay (PWYP), 98, 274–75, 276
Qatar, 2, 74f, 267
R Factor, 70r, 73, 74f, 81t
radio spectrum, 134
Radon, 16
rate of return, 67t, 70r, 73, 74f, 81t
Reagan, Ronald, 31
real reserves, 42–43
regressiveness, fiscal system, 80–81, 81t, 323–24
relaxed revealed preference activity rule, 141, 143
relinquishment provisions, 70t, 82
renegotiation, oil contract, 40–41
rents, 4–5, 44; allocation of, 262; direct distribution and, 243; NRF addressing, 271–72; solving problem of, 271
rent-seeking behavior, 4, 244, 258
The Republic of Congo, 246t, 268
research, inequality, 251–52
reservation price, 36, 126, 129
reserve-replacement ratio, 68
resource dependence, 11, 37; democracy and, 12–13, 208; state authority and, 259–60
resource depletion, 165; Hotelling model of, 164–65; national income and, 160
revealed preference activity rule, 139, 146; relaxed, 141, 143
revenue: centralization of, 249–50; decentralizing, 248–51; gas, direct distribution of, 189; subnational governments and, 249–51; transparency of, 247
revenue equivalence theorem, 117–18
revenue law management, enforcement, 287, 297, 304
revenue management law, 287, 297, 304; borrowing prohibited by, 299–300; conflict of interest, 308–9; critical issues for,
revenue management law (continued) 286–312; investment policymaking for, 295–96; joint development and, 310–11; natural resource sharing and, 310–11; oil fund account and, 288–304; portfolio managers of, 296–98; Sao Tome and Principe’s, 286–87, 290, 291; stability issues for, 311–12; state constitutions and, 311–12; transparency and, 247, 296, 305–10. See also natural resource fund ringfencing, 70t, 72, 82 risk: expropriation, 128; minimizing Dutch Disease, 191; oil contract types and, 57–58; revenue, addressing, 180–81. See also exploration risk royalty, 70t, 126–27 royalty bidding, 32, 33, 127 royalty rates, 127 royalty tax system (R/T system), 56, 58–60, 59t, 65–66, 66f, 67t; ERR and, 75 R/T system. See royalty tax system rule of law, 110, 260–61; practices, 94 rulers, oil-producing countries’, 270 Russia, 37–38; privatization in, 32–33, 36, 37–38 SA. See service agreement Sao Tome and Principe: economy/infrastructure of, 179; NRF inflows/outflows in, 216t, 217–18; oil price projections of, 293; oil revenue management in, 303f; revenue management law of, 286–87, 290, 291f, 294f, 300, 305 Saudi Arabia, 90; oil wealth of, 156–57 savings: incentives against, 199–209, 213; NRF and, 194–99, 205–6, 213–18, 219–27; oil revenue, 189–90 savings index, 56, 80 sealed round bidding, 87 secession, 245–46, 246t, 250 secrecy: governance, 331; oil industry, 265–69. See also privacy separation of powers, 219–22; forms of, 220 sequential auctions: collusion in, 124; simultaneous v., 123–24 service agreement (SA), 56, 62–64, 62t, 63t, 102; fixed fee system of, 62–64, 63t; R/T systems and, 65–66, 67t; variable fee in, 64, 64t settings, auction formats for specific, 146 settlements, 25 shadow prices, 158; investment at current, country sample for, 166–67, 167t shareholders, 28–29 Sierra Leone, GDP of, 2 signature bonuses, 32, 71, 104, 126, 127, 293 simultaneous ascending auctions, 116, 133, 134 simultaneous first-price sealed-bid auction, 129 Singapore, 1 SLD. See straight line decline sliding scales, production increase, 80–81 Smith, Adam, 28 social projects, 110 social welfare, 2, 110; capital stock measuring, 158–60; GDP assessment of, 43, 165–68, 167t, 168t; indicators of, by region, 173, 174t; NNP and, 157–65; technology and, 168; theoretical summary for, 165–66; World Bank data on, 166, 170. See also fiscal social contract; public goods spectrum industry, auctions in, 133, 134 speculative bidding, 134 spending: checks and balances tied to, 212f; governance/stability impacting, 201–8; limiting oil, 183–84; military, 13; oil fund account, 291–94; over-, 199–209; political support tied to, 206–8; public, political advantages of, 209; sustainable levels of, 160; taxation and, 263; timing/amount of, 201; unified budgets for, 194, 224–25. See also consumption; consumption smoothing; public investment spending effect, 5 spot price FOB, all countries, 7f stability: governance, 201–8, 209; oil contract terms, 110; revenue management law, 311–12; rule of law, 110 stability clauses, 96 stabilization fund. See natural resource fund state authority, 260, 261; deficits in, types of, 264–65; disempowered, 11–12, 96, 259, 264–65; fiscal social contract and, 256–79; honey pot phenomenon and, 259–65; resource dependence and, 259–60; taxation and, 11–12, 261
state constitutions, revenue management law and, 311–12
state government: checks and balances in, 211; citizens and, 13, 265, 326, 330; compliance of, 218–19, 265; conflict of interest in, 101; corruption in, 26–45, 266; diversion and, 27–34; extraction control by, 39; government participation statistic and, 70t, 77–80; oil rights objectives of, 68; political economy in, 14, 194–227; renegotiation and, 40–41; role of, 23–45; taxation and, 278. See also Government Take; infrastructure; subnational governments
State of Alabama v. Exxon Mobil Corp., 25
state-building, 260, 261
straight line decline (SLD), 70t
subadditive values, 121
Sub-Saharan Africa: genuine investment/GDP in, 166, 167, 167t, 168t, 169; social welfare/oil production in, 174t
Sudan, 246t
superadditive values, 121
sustainability, 168; spending, 160
Taiwan, 1
takeover, government, 222
tax rate, 110
taxation, 69, 70t, 263, 265; back-in/government participation as, 79–80; borrowing to avoid, 262; Chad’s, 6; decentralization and, 249, 250; direct, 278; government and, 278; negotiating, 107, 108; profits tax system, 103–4; PSA, 61; royalty tax system, 56, 58–60, 59t, 65–66, 66f, 67t; R/T system, 59, 59t; state authority and, 11–12, 261
technology, social welfare and, 168
termination, oil contract, 111
threshold problem, 125, 143
timing: extraction, 9, 15, 35, 40; negotiation, 95–96; oil revenue, 6; payment, 42, 71; spending, oil revenues and, 201
Timor-Leste, 216t, 217–18
Timor-Leste Petroleum Fund Law, 292, 296, 300, 303f/
title, facilities, 65
tracts: leasing, 31, 129, 130; types of, 130. See also block offerings; block size
transparency: agency problems and, 26, 27, 44; auction, 114, 117; BP, 275; campaign for, 274–75; fiscal social contract, 256–79; governance, measures for, 208, 276–77; internet access for, 307–8; negotiation, 97–99, 324; NGO measures for, 277; oil companies v. state government, 27; oil contract, 97–99, 105–6, 306–7; political economy improved by, 222–25; public information scope of, 305–7; revenue management and, 247, 296, 305–10; spending, 208; theory v. empirics for, 331; violation prevention for, 333. See also information deficit
Transparency International, 268
Trinidad and Tobago, 74f, 86, 140–41, 267–68, 275
trusts, oil fund account, 312
Uganda, 331
UK. See United Kingdom
UN Millennium Project, 179
uncertainty, 92, 180, 181, 267
unified budget, political economy and, 194, 224–25
United Arab Emirates, 2, 89
United Kingdom (UK), genuine investment/GDP in, 166, 167t, 168t
United Nations Human Development Index, 2, 273
United States of America, 12, 14, 25, 28, 30–31, 32, 34, 42, 60, 68, 85, 86, 97, 108, 112, 118, 128, 168t, 189; auctions in, 116, 126, 129–31, 145; auctions outside, 131–32; genuine investment/GDP in, 166, 167t, 168r; Government Take in, 130; licenses of, 85; oil rights and, 129
U.S. See United States of America
U.S. Enrichment Corporation (USEC), 34
USEC. See U.S. Enrichment Corporation
valuations, 133; interdependence of, 119–20, 121–22; state, 158–59
values: additive, 115, 121, 122; bidding and, 115; common, 119; package, 121, 137; private, 119; proxy, expression of, 144; subadditive, 121; superadditive, 121
variable fee, 62–64, 64t
Venezuela, 2, 8, 36, 38, 46, 60, 62, 84, 86, 90, 129, 199, 246, 248, 258, 263, 267–68, 269; auction formats of, 84–85, 127, 132, 146, 148; Government Take of, 74f
vertical inequality: problem of, 239–41; solutions for, 241–44
violence, 260
volatility, 6–8

war, 262; Iraq, 258

wealth: investment creating, 10; oil, 156–271; resource v. other types of, 3–4
welfare. See social welfare

West Africa, Government Take in, 72–73, 72f
wildcat tracts, 130
winner’s curse, 120, 122
World Bank, 85, 169; social welfare data of, 166, 170

Yeltsin, Boris, 37
Yemen, 246t