Index

Adelman, Morris A., 18, 429, 461n28
Adler, Michael, 97
Agency issues
  contract theory, 63–65
  GRAB function and, 199, 220
  oil production contracts and, 229–231,
    235, 237–238, 247, 249–252, 256–261
Aghion, Philippe, xii, 20, 47–67
Aguiar, Mark, 77
Ahmed, Faisal, 73
Ahmed, Rafiq, 23, 27
Albuquerque, Rui, 72, 107n1
Alchian, Armen, 414
Alesina, Alberto, 121–123, 156
Alesina-Angeletos model
  ability shock and, 130–132
  Condorcet winner and, 133, 136
  fairness and, 130–137
  income distribution and, 130–137
  luck shock and, 130–132
Alfaro, Laura, 73
Algeria, 454
Allende, Salvador, 161
Al Quarashi, Zayed A., 27
Amador, Manuel, 24, 72
Ameriven, 439, 443
Angeletos, George-Marios, 121–123, 155–159
Angevine, Gerry, 451, 463n40
Anglo-Iranian Oil Company, 487
Angola, 490
Arab-Israeli War, 435, 473
Arbitration, 55
  host country (HC)/multinational corpo-
    rations (MNCs) relationship and, 4, 10,
    19, 23, 27–29, 35, 38nn9,10
  oil production contracts and, 262
Venezuela and, 415, 437–438, 442–444,
  448–452, 455–458, 463n45
Arellano, Cristina, 77
Argentina, xii, 7, 34, 36, 338, 368, 416
  Administrative Emergency Law and, 387
  Alsogaray, Alvaro and, 389–390
  betrayal and, 383–394, 407
  California Argentina and, 374–375, 380,
  383
  Comodoro Rivadavia oil field and, 376
  corruption in, 387–389
  credibility and, 385
  delegative democracy and, 385–386
  ENARSA and, 340
  expropriation and, 373, 379
  Frondizi, Arturo and, 370, 375–377, 380–386, 390
  gas-bubble effect and, 335
  Gas del Estado and, 378
  Huergo letter and, 390–391
  Hydrocarbons Law and, 377–378
  hyperinflation of, 34, 377–378, 381, 383
  Illia, Arturo and, 376–377
  industrial development in, 372–375
  institutional fragility and, 387–389
  international influences and, 370–371,
  La Plata refinery and, 372
  Menem, Carlos and, 377–388, 392
  Mining Code and, 369
  National Constitution and, 373–374
  nationalization and, 369–370, 373, 375,
    379, 389–392, 399n75, 406–407
  oil tax increase and, 4
  Palacios, Alfredo and, 392
  Patagonia and, 335, 369
  Peronism and, 370–375, 380–384, 388, 392
Argentina (cont.)
  pipeline investment and, 379
  production-sharing agreements (PSAs) and, 374–375
  profit issues and, 375, 407
  radicalism and, 375, 391–392
  reform crisis and, 380–383
  right-wing and, 120
  royalties and, 372, 378, 391
  sovereign theft and, 375–377
  Standard Oil and, 372–375, 388, 390
  Wells’ commentary and, 405–407
  Yacimientos Petrolíferos Fiscales (YPF)
  Yrigoyen, Hipólito and, 391

Bell, Simon, 18
  Bellman equation, 236
  Bénabou, Roland, 121
  Benjamin, David, 77
  Berger, Klaus Peter, 27–28
  Betancourt, Romulo, 429, 431
  Bindemann, Kirsten, 10–11, 17
  Bin Laden, Osama, 492
  Blake, Andon J., 14–15
  Blitzer, Charles R., 16–17
  Boadway, Robin, 166–167
  Bohn, Henning, 166, 198

Bolivia
  xi–xii, 7, 34–36, 450
  E&P investment and, 337
  ENARSA agreement and, 340, 355nn30,32
  expropriation and, 332
  Gas Sales Agreement and, 337–338
  gas-war strategies and, 339–340
  holdup and, 52
  Law 1194 and, 331, 334, 341–342, 360
  Law 1689 and, 331, 335–336, 339, 341–342
  Law 3058 and, 332, 340
  MMBTU changes and, 342, 348
  nationalization and, 4, 146, 340, 352n2
  354n24, 359, 366–368
  Natural Gas Purchase Agreement and, 334
  oil production contracts and, 230
  optimal resource extraction contracts and, 163–167, 175–180, 184–185, 190–191
  price renegotiation and, 32
  profit caps and, 224n1
  pure, 14
  regulatory asset base and, 313
  royalty/tax (R/T) systems and, 11
  tax revenues and, 16, 18, 262n7
  Venezuela and, 428, 438–440, 446, 454–456, 459

Atsegbua, Lawrence, 28

Auctions
  Bolivia and, 337
  cost-plus regulation and, 260
  deadweight loss and, 280–281
  expropriations and, 36, 229, 265
  operational service agreements and, 454–456
  optimal resource extraction contracts and, 163–167, 175–180, 184–185, 190–191
  price renegotiation and, 32
  profit caps and, 224n1
  pure, 14
  regulatory asset base and, 313
  royalty/tax (R/T) systems and, 11
  tax revenues and, 16, 18, 262n7
  Venezuela and, 428, 438–440, 446, 454–456, 459

Australia, 162
  Austria, 296–297
  Averch, Harvey, 301–302
  Averch-Johnson effect, 301
  Axis of Weasel, 490
  Azerbaijan, 4

Bank of England, 310
  Baunsgaard, Thomas, 2, 11, 14, 16–17
  Beers, David T., 97

Benjamin, David, 77
  Bank of England, 310
  Baunsgaard, Thomas, 2, 11, 14, 16–17
  Beers, David T., 97

Beers, David T., 97
  Bank of England, 310
  Baunsgaard, Thomas, 2, 11, 14, 16–17

Bellman equation, 236
Contracts (cont.)
ex ante price caps and, 293–304, 307–308, 325–329, 336
ex post interventions and, 294–295, 298–308, 311–317, 326, 329
ex post uncertainty and, 56–59
first-best, 75–76
fiscal stability and, 414
governance models and, 26–29
grievance and, 56–59
heterogeneous agents and, 414
historical similarity in, 10–11
holdup problem and, 9, 18–20, 222, 340, 347, 352n2
moral hazard and, 14, 20, 31 (see also Moral hazard)
nonstrategic options and, 29–33
oil production, 227–253
operational service agreements (OSAs) and, 437–448, 454–458, 482–483
optimal resource extraction, 161–194
potential inefficiency sources and, 50–59
principal-agent issues and, 414
privatization trap and, 61–63
production-sharing agreements (PSAs) and, 11–18, 47–52, 58, 59n1, 60n7, 455
profit-sharing, 455 (see also Profits)
pure service, 11, 13–16, 49
real options approach and, 263–286
renegotiations and, 22–23, 26–29 (see also Renegotiations)
reopening, 454–459
risk exploration (RE) agreements and, 440, 443–448, 459
risk service, 13, 47, 49, 438, 455
royalty/tax (R/T) systems and, 11–13, 17
self-enforcing, 18, 26, 34–35, 91–96, 115, 117
sovereign theft and, 69–107 (see also Sovereign theft)
spirit of, 56
stabilization clauses and, 27
structure of timing of, 414
sunk costs and, 2, 19–22, 38n8, 49, 52–53 (see also Sunk costs)
third-party influences and, 65–67
time inconsistency and, 325–328
unenforceable, 18–26

Contract theory, xii
allocation of costs and benefits, 10–18
changing allotment methods and, 9
credibility and, xiii–xiv (see also Credibility)
governance models and, 10
inflexibility and, 9–10
lack of single model for, xii
obsolescng bargains and, 9
populist pressures and, 2–3 (see also Populism)
risk allocation and, 3, 10–18, 20, 30, 47, 301 (see also Risk)
COPEL, 433
Corneo, Giacomo, 123
Corporación Venezolana de Petróleo (CVP), 472
Crawford, Robert, 414
Credibility, xiii–xiv
Argentina and, 385
commitment and, 293, 309, 313
ex post interventions and, 294–295, 298–308, 311–317, 326, 329
GRAB function and, 219
host country (HC)/multinational corporations (MNCs) relationship and, 1, 3, 9, 23, 31, 37
optimal resource extraction contracts and, 162, 167
production contract guidelines and, 229, 252, 261–265
privatization trap and, 61–63
real options approach and, 281
reputation and, 24–26 (see also Reputation)
resource belief curse and, 121
setting up investment regimes and, 1
sovereign theft and, 72
United Kingdom and, 293–295, 304–310, 318, 326, 329
various petroleum contracts and, 55, 59, 61–63
Venezuela and, 415, 423, 425, 434, 441, 454
Credit default swaps (CDSs), 31–32
Creole, 425, 469
Cuddington, John, 431
Cukierman, Alex, 385
CVP, 433–434
Dal Bo, Pedro, 388
Daniel, Philip, 33
Index

Davis, Graham A., 30
Deacon, Robert T., 166, 198
Deadweight loss, 270, 280–281, 289
“Declaration of Petroleum Policy in Member Countries” (OPEC), 472
Decret Sanabria, 431–432, 436
Default. See also Expropriation
credit default swaps (CDSs) and, 31–32
defaulterable debt and, 76–91
enforceability issues and, 18–26
expropriable direct investment and, 78–91
Great Depression and, 98, 111–112
maximization problem and, 236
rate of, 88
probability of, 229, 238, 247–249
reputation losses and, 24–25 (see also
Reputation)
sovereign theft and, 69–107 (see also
Sovereign theft)
Venezuela and, 423
Denzau, Arthur T., 121
De Tocqueville, Alexis, 123
Devlin, Julia, 33
Dewatripont, Mathias, 19, 26, 54
Díaz, Porfirio, 11
Discounted cash flows (DCFs), 30
Distribution distortion, 205–207, 218–219
Di Tella, Rafael, xii, 29, 36, 119–153, 388
Domínguez, Jorge I., 74
Donna, Javier, 123–124, 141
Dow, James, 73
Dubra, Juan, xii, 29, 36, 119–153
Duncan, Roderick, 26, 37n2
Duval-Hernandez, Robert, 32–33
Eaton, Jonathan, 21–25, 72, 77, 107n1
Economic issues
Great Depression and, 98, 111–112, 417–418
income distribution and, 122, 124, 130–137, 139, 146
subsidies and, 164–165, 181–185, 190–191, 193n10, 228, 231, 235, 252
Ecuador, 33, 162, 290
Efficiency, 31, 491
Argentina and, 382, 386
bidding and, 32
Bolivia and, 334
domestic law issues and, 27
GRAB function and, 197–204, 207, 211, 217–221
optimal resource extraction contracts and, 166–167, 192
petroleum contract issues and, 49–59, 66
production-sharing agreements (PSAs), 17–18
real options approach and, 263, 266, 276, 281, 284, 289
resource belief curse and, 123, 126–130, 156, 162
sources of inefficiency and, 50–59
sovereign theft and, 84
taxes and, 126–131
United Kingdom and, 293–297, 300–307, 310–318
Venezuela and, 413–414, 460n11
worker’s utility and, 127
EFV surtax, 477
Electricity sector, 34
ENARSA, 340, 355n30,32
ENERGAS, 379
Enforceability
arbitration and, 19
concessions and, 23
credit market repercussions and, 23–24
denial of trade credit and, 22
direct punishment and, 21–24
external mechanisms for, 417–426
holdup problem and, 18–20
lack of legal system and, 19–20
opportunism and, 19
petroleum contracts and, 54–56
poor enforcement and, 54–56
recourse and, 21–22
renegotiations and, 22–23
reputation losses and, 24–25
sovereign debt literature and, 20–26
sovereign/private relationship and, 18–19
sunk costs and, 19
two-sided commitment problem and, 23–24
Engel, Eduardo, xii, 161–195, 198–199, 236, 290
English, William B., 70, 72–73, 83
ENI, 443
Enterprise Oil, 316
Environmental issues, 7
GRAB function and, 214–217
optimal resource extraction contracts and, 164–165, 180–181
populism and, 491
real options approach and, 263
research spending and, 491–492

Equations
Alesina-Angeletos model, 131–136
Bellman, 236
charity model, 125–126
Cobb-Douglas production function, 84
constant relative risk aversion (CRRA), 83
cost function, 233
defaultable debt, 76–77, 80–83
efficiency, 127–129
expropriable direct investment, 78, 80–83
expropriation probability, 191–192
first-best contracts, 76
GRAB function, 204, 210, 215, 217–218, 221
MMBTU deviation, 350
oil production contracts, 232–233, 236, 238, 247–248, 253n7
optimal self-enforcing contract, 91–94
profit maximization, 51–53, 55
real options approach, 266–268, 282–285
Trolle-Schwartz model, 282–283
worker’s utility, 127
Equity contracts, 70, 78, 84, 86, 96, 102, 115, 117
Espinasa, Ramón, 419, 427, 436, 453, 467–483, 490
Everhart, Stephen, 32–33
Expropriation, xii
Argentina and, 373, 379
Bolivia and, 332
comeback of, 7
creeping, 7
direct, 7
enforceability and, 18–26
as function of state variables, 270–275
as function of tax rate, 276
GRAB function and, 179, 194n22, 197–225 (see also GRAB function)
holdup and, 9, 18–20, 52–61, 222, 340, 347, 352n2
host country (HC)/multinational corporations (MNCs) relationship and, 1–4
indirect, 7
Least Squares Monte Carlo (LSM) approach and, 264, 267, 282–285
mining and, 4, 162
nonstrategic options and, 29–33
oil production contracts and, 227–262
optimal resource extraction contracts and, 161–194
as option problem, 223n9
patterns of, 98
political-risk insurance and, 31–32
populist pressure and, 17 (see also Populism)
pricing of, 266–268
rate of, 88
real options approach and, 263–286
reputation and, 415–416 (see also Reputation)
resource belief curse and, 119–150
sovereign theft and, 69–107 (see also Sovereign theft)
total, 7
unenforceable contracts and, 18–26
United Kingdom and, 293–294, 309, 317
U.S. military and, 492
Exxon, 65–66, 374, 425
ExxonMobil, 439, 443–444, 449–451, 491–492
Fairness, 130–137, 146, 157
Fernandez, Raquel, 22
Fernández-Arias, Eduardo, 74
Fiscal reference prices (FRPs), 432–433, 436
Fiscal Terms Index, 451
Fischer, Ronald, xii, 10, 161–195, 198–199, 236, 290
Flatters, Frank, 166–167
Fong, Christina, 123
Foreign direct investment (FDI), 34
concession contracts and, 50 (see also Concession contracts)
credibility and, 1–2 (see also Credibility; Reputation)
enforceability issues and, 18–26, 417–426
GRAB function and, 207–213
host country (HC)/multinational corporation (MNC) relationship and, 1–3
International Center for Settlement of Investment Disputes and, 458
lack of legal system and, 19
optimal resource extraction contracts and, 161–164
patterns of, 102–105
populist pressures and, 2–3 (see also Populism)
sovereign theft and, 70, 86, 88–89, 94, 96–107, 115
sunk costs and, 2, 19–22 (see also Sunk costs)
third-party influences and, 65–67
Foster, Andrew, 388
France, 124, 423, 439, 443
Frankel, Jeffrey, 325–329
Fraser, Rob, 166
Futures curve, 263–264, 270–274, 281–282, 289
Gadano, Nicolás, 7, 34, 369–403
Galetovic, Alexander, 167, 181–182, 184, 193nn8,10, 194nn17,19,23
Galiani, Sebastian, 123
Gas, 487, 490
Argentina and, 373–375, 378–379, 388
Bolivia and, 331–348, 359–368
contract theory and, 47
guidelines for contracts and, 230, 233–235, 250–251
host country (HC)/multinational corporations (MNCs) relationship and, 1–4, 16, 26, 30
United Kingdom and, 294–298, 308–309, 316
Venezuela and, 416
Gas del Estado, 378
Gas Sales Agreement, 337–338
Gazprom, 316
Geiger, Linwood T., 7
General Motors, 491
Gerchunoff, Pablo, 382
Germany, 423
Gersovitz, Mark, 21–22, 77, 107n1
Gillis, Malcolm, 166
Giuliano, Paola, 123
Giusti, Luis, 437
Glaeser, Edward L., 123
Gleason, Eric S., 29, 31–32
Gómez, Juan Vicente, 418, 423, 426, 468
Gopinath, Gita, 77
Gotanda, John Y., 28
Governance models, 26–29
Governments. See also specific country
dergency problems and, 63–65
betrayals and, 383–387, 407
budget dependency and, 9
charity model and, 124–126
coruced sale and, 98
concession selling and, 207
constant relative risk aversion (CRRA) and, 83
credibility and, xiii–xiv, 1–2 (see also Credibility)
deleagative democracy and, 385–386
firm equity and, 167
GRAB function and, 179, 194n22, 197–225
hidden information and, 214–219
host country (HC)/multinational corporations (MNCs) relationship and, 1–4
individualism and, 119–151
moral hazard and, 164 (see also Moral hazard)
nationalization and, 4–5 (see also Nationalization)
oil production contracts and, 227–253
optimal resource extraction contracts and, 161–194
political economy and, 412–417
population and, 201, 229, 398n67, 487–493 (see also Populism)
privatization trap and, 61–63
production-sharing agreements (PSAs) and, 11–18, 47–52, 58, 59n1, 60n7
pure service contracts and, 11, 13–16, 49
real options approach and, 263–286
renegotiations and, 227–228 (see also Renegotiations)
reputation and, 24–26, 35, 56 (see also Reputation)
resource development and, 1–2
right-wing reformists and, 120–121
risk service contracts and, 13, 47, 49, 438, 455
royalties and, 10–11 (see also Royalties)
self-interest and, 208
Governments (cont.)
sovereign theft and, 69–107 (see also
Sovereign theft)
statements of independence and, 9
subsidies and, 164–165, 181–185, 190–
191, 193n10, 228, 231, 235, 252
taxes and, 197–199 (see also Taxes)
GRAB function, 179, 194n22
agency issues and, 199, 220
certain profits and, 203–205
concession selling and, 207
cost-benefit analysis of, 200–201
delayed development and, 207
discouraged development and, 203–205
distribution distortion and, 205–207,
218–219
expected externality payment and, 216–
218
extralegal solutions and, 222
extra payments and, 221–222
factors influencing, 200–203
firm size and, 198–199
government measures to promote invest-
ment and, 207–213
hidden information and, 214–219
lotteries and, 199–200
meanings of, 199
moral hazard and, 203–207, 214, 218, 220
no externality payment and, 215
optimal constrained payment schedule
and, 208–211
populism and, 201
probability of, 200–201, 205–206, 211–218
profit and, 199–223, 224nn11,15
property rights and, 198
reputation and, 197–202, 219–220
self-interest and, 208
taxes and, 197–199, 205, 208, 220
technologies example and, 211–213
temptation-reducing mechanisms and,
219–222
uncertain profits and, 205–207
Great Depression, 98, 111–112, 417–418
Greif, Avner, 121
Grievances, 56–59
Grossman, Herschel I., 113
Grossman, Sanford J., 53
Gruner, Hans, 123
Guasch, J. Luis, 32, 37n2, 38n8
Gulf of Mexico, xi, 4, 489
Gulf War, 272
Guriev, Sergei, 20
Haber, Stephen, 11
Hajzler, Chris, 98
Hall, Peter, 123
Hamaca (Ameriven) Project, 439, 443
Harrison, J. Michael, 266
Hart, Oliver, 47, 53, 56–59
Hausmann, Ricardo, 74
Heaps, Terry, 166
Heath, David, 282
Hedging, 32–33, 64
Heliwell, John F., 166
Helm, Dieter, 4, 7, 34, 293–323, 325–326
Hidden information
distribution distortion and, 218–219
GRAB function and, 214–219
moral hazard and, 218–219
no externality payment and, 215
two-sided asymmetric, 214–218
Hochschild, Jennifer, 123
Hogan, William, 1–43, 487
Holdup
asset specificity and, 52–54
GRAB function and, 222
host country (HC)/multinational corpo-
rations (MNCs) relationship and, 9, 18–
20
petroleum contracts and, 52–61
policy reversal and, 347, 352n2
theory of the firm and, 340
time inconsistency and, 325–328
Holmstrom, Bengt, 340
Honduras, 66
Host country (HC), 2, 35. See also specific
country
agency issues and, 63–65
allocation of costs and benefits, 10–18
bidding and, 32
choice of, 32
constant relative risk aversion (CRRA)
and, 83
contract crafting by, 3–4 (see also
Contracts)
credit market repercussions and, 23–24
governance models and, 10
GRAB function and, 179, 194n22, 197–
225
hidden information and, 214–219
multinational corporations (MNCs) rela-
tionships and, 1–14
nonstrategic options for, 29–33
oil production contracts and, 227–253
opportunism and, 19
<table>
<thead>
<tr>
<th>Term</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>optimal resource extraction contracts</td>
<td>161–194</td>
</tr>
<tr>
<td>petroleum contracts and</td>
<td>47–60</td>
</tr>
<tr>
<td>populist pressures and</td>
<td>2, 9 (see also</td>
</tr>
<tr>
<td>privatization trap and</td>
<td>61–63</td>
</tr>
<tr>
<td>reputation and</td>
<td>24–26 (see also</td>
</tr>
<tr>
<td>sovereign theft and</td>
<td>69–107 (see also</td>
</tr>
<tr>
<td>stabilization funds and</td>
<td>32–33</td>
</tr>
<tr>
<td>third-party influences and</td>
<td>65–67</td>
</tr>
<tr>
<td>voluntary contributions to</td>
<td>162</td>
</tr>
<tr>
<td>Hotelling framework</td>
<td>14</td>
</tr>
<tr>
<td>Huergo, Luis</td>
<td>390–391</td>
</tr>
<tr>
<td>Hydro Electric</td>
<td>307</td>
</tr>
<tr>
<td>ICSID</td>
<td>448</td>
</tr>
<tr>
<td>Illia, Arturo</td>
<td>376–377</td>
</tr>
<tr>
<td>Incomplete contracts</td>
<td>4</td>
</tr>
<tr>
<td>Bolivia and</td>
<td>347–348</td>
</tr>
<tr>
<td>courts and</td>
<td>26</td>
</tr>
<tr>
<td>debt crises and</td>
<td>113</td>
</tr>
<tr>
<td>equity and</td>
<td>114</td>
</tr>
<tr>
<td>holdup problem and</td>
<td>19–20</td>
</tr>
<tr>
<td>renegotiation and</td>
<td>227</td>
</tr>
<tr>
<td>United Kingdom and</td>
<td>295–296, 301, 303, 311–312</td>
</tr>
<tr>
<td>India</td>
<td>489</td>
</tr>
<tr>
<td>Individualism</td>
<td></td>
</tr>
<tr>
<td>Alesina-Angeletos model and</td>
<td>130–136, 156</td>
</tr>
<tr>
<td>charity model and</td>
<td>124–126</td>
</tr>
<tr>
<td>Condorcet winner and</td>
<td>133, 136</td>
</tr>
<tr>
<td>fairness and</td>
<td>130–137, 146, 151n9, 157</td>
</tr>
<tr>
<td>income distribution and</td>
<td>122, 124, 130–137, 139, 146</td>
</tr>
<tr>
<td>luck shocks and</td>
<td>130, 132, 138–149</td>
</tr>
<tr>
<td>Meltzer-Richard model and</td>
<td>156</td>
</tr>
<tr>
<td>nationalization and</td>
<td>146</td>
</tr>
<tr>
<td>resource belief curse and</td>
<td>119–150</td>
</tr>
<tr>
<td>U.S. General Social Survey and</td>
<td>121, 137–150</td>
</tr>
<tr>
<td>World Values Survey and</td>
<td>123</td>
</tr>
<tr>
<td>Indonesia</td>
<td>11, 13</td>
</tr>
<tr>
<td>Inglehart, Ronald</td>
<td>123</td>
</tr>
<tr>
<td>Insley, Margaret C.</td>
<td>30</td>
</tr>
<tr>
<td>Internal rate of return (IRR)</td>
<td>440, 456–457</td>
</tr>
<tr>
<td>International Center for Settlement of Investment Disputes</td>
<td>458</td>
</tr>
<tr>
<td>International Chamber of Commerce (IOC)</td>
<td>456</td>
</tr>
<tr>
<td>International Energy Agency</td>
<td>488–489</td>
</tr>
<tr>
<td>International Monetary Fund (IMF)</td>
<td>66, 341, 346, 366</td>
</tr>
<tr>
<td>International oil companies (IOCs). See also specific company</td>
<td></td>
</tr>
<tr>
<td>asset specificity and</td>
<td>52–54</td>
</tr>
<tr>
<td>concession contracts and</td>
<td>48–49</td>
</tr>
<tr>
<td>enforceability and</td>
<td>54–56</td>
</tr>
<tr>
<td>ex post uncertainty and</td>
<td>56–59</td>
</tr>
<tr>
<td>grievance and</td>
<td>56–59</td>
</tr>
<tr>
<td>joint ventures and</td>
<td>49</td>
</tr>
<tr>
<td>moral hazard and</td>
<td>51–52</td>
</tr>
<tr>
<td>national oil companies (NOCs) and</td>
<td>48</td>
</tr>
<tr>
<td>production-sharing agreements (PSAs) and</td>
<td>48</td>
</tr>
<tr>
<td>risk sharing and</td>
<td>49–52</td>
</tr>
<tr>
<td>Venezuela and</td>
<td>409–410, 416, 429, 435–439, 450, 460n14, 467–469, 480</td>
</tr>
<tr>
<td>Iran</td>
<td>487, 490</td>
</tr>
<tr>
<td>Iraq</td>
<td>492</td>
</tr>
<tr>
<td>Italy</td>
<td>443</td>
</tr>
<tr>
<td>Jarrow, Robert</td>
<td>282</td>
</tr>
<tr>
<td>Johnson, Leland L.</td>
<td>301–302</td>
</tr>
<tr>
<td>Johnston, Daniel</td>
<td>11, 13</td>
</tr>
<tr>
<td>Joint ventures</td>
<td></td>
</tr>
<tr>
<td>Bolivia and</td>
<td>339–340</td>
</tr>
<tr>
<td>contract theory and</td>
<td>47, 49</td>
</tr>
<tr>
<td>host country (HC)/multinational corporations (MNCs) and</td>
<td>11, 14</td>
</tr>
<tr>
<td>oil production contracts and</td>
<td>231, 235, 251</td>
</tr>
<tr>
<td>production contract guidelines and</td>
<td>231, 235, 251</td>
</tr>
<tr>
<td>risk service contracts and</td>
<td>49</td>
</tr>
<tr>
<td>Venezuela and</td>
<td>410, 434, 437–443, 458–459, 462nn31,37</td>
</tr>
<tr>
<td>Kaletsky, Anatole</td>
<td>73</td>
</tr>
<tr>
<td>Kaplan, Marcos</td>
<td>388, 398n65, 399n72, 400n81</td>
</tr>
<tr>
<td>Karl, Terry</td>
<td>431</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>490</td>
</tr>
<tr>
<td>Kehoe, Patrick J.</td>
<td>23, 25, 73</td>
</tr>
<tr>
<td>Kingwell, Ross</td>
<td>166</td>
</tr>
<tr>
<td>Klein, Benjamin</td>
<td>414</td>
</tr>
<tr>
<td>Kletzer, Kenneth M.</td>
<td>22–23, 72</td>
</tr>
<tr>
<td>Kobrin, Stephen J.</td>
<td>97–98</td>
</tr>
<tr>
<td>Kreps, David M.</td>
<td>266</td>
</tr>
<tr>
<td>Kuwait</td>
<td>492</td>
</tr>
<tr>
<td>Kvasov, Dmitry</td>
<td>20</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>4, 18</td>
</tr>
</tbody>
</table>
Ladd, Everett Carll, 123
Laffer curve, 17, 243
Laffont, Jean-Jacques, 38n8, 187, 194n26
Lagrangians, 92, 173
Lajous, Adrian, 491
Least Squares Monte Carlo (LSM) approach, 264, 267, 281–285
Leland, Hayne E., 14, 17
Leoni, Raúl, 436
Lessard, Donald R., 16–17
Levy, Brian, 415
Libya, 473, 490
Lipset, Seymour Martin, 123
Lipson, Charles, 425
Listhaug, Ola, 33
Littlechild, Stephen, 296, 304, 306, 310
London Underground, 318
Longstaff, Francis, 264, 267
Longstaff-Schwartz procedure, 267, 283–285, 289
López Contreras, Eleazar, 426
Lora, Eduardo, 389, 397n44, 398n68
“Lottery in Babylon, The” (Borges), 119
Luck shocks, 130, 132, 137–149
Lund, Morton W., 30
McBeth, Brian, 418–419, 422, 461n18
McCardle, Kevin F., 30
McClure's Magazine, 390
MacCulloch, Robert, xii, 29, 36, 119–153, 388
Machado de Acendo, Clemy, 426
Mahajan, Arvind, 30, 198, 265
Manzano, Osmel, 7, 11, 14, 34–35, 409–466, 490
Nöldeke, Georg, 20
North, Douglass C., 121
Northern Electric, 306–307, 311
North Sea, 294, 308, 316–317
Norway, 15, 33, 415, 439
Norweb, 303

Occidental, 473
O’Donnell, Guillermo, 385–386, 394

Oil, xi
Alesina-Angeletos model and, 130–136
Arab-Israeli War and, 435, 473
Argentina and, 369–400
Bolivia and, 331–368
charity model and, 124–126
Condorcet winner and, 133, 136
efficiency and, 126–130
effort elasticity of income and, 122
expropriation of, 4
fairness and, 130–137, 146, 151n9, 157
Fiscal Terms Index and, 451
Golden Age of, 370
Gulf of Mexico and, 4
income distribution and, 122, 124, 130–137, 139, 146, 155–156
increased royalties and, 4, 7 (see also Royalties)
individualism and, 119–151
luck shocks and, 138–149
nationalization of, 4 (see also Nationalization)
OPEC and, 467, 470–473, 490–491
operational fee per barrel and, 455
petroleum contracts and, 47–60
petroleum revenue tax (PRT) and, 317 (see also Taxes)
political economy and, 412–417
Petroleum Fiscal Regimes types and, 12
Prudhoe Bay and, 4
real options approach and, 263–290
Regulatory Climate Index and, 451
resource beliefs and, 124–137, 142, 147
Suez crisis and, 469
United Kingdom and, 293–329
U.S. General Social Survey and, 121
Venezuela and, 409–483
Oil production contracts
agency costs and, 229–231, 235–252, 256–261
cost structure and, 233
design elements for, 228–229
government’s problem and, 237–238
joint ventures and, 231, 235, 251
Laffer curve and, 243
lessons for resource extraction and, 261–262
maximization problem and, 236–238, 247–249
Muehlegger commentary and, 255–262
organizing framework for, 232–238
overtax and, 228–229
policy lessons and, 250–251
prices and, 227–249, 255–261, 262nn5,7
recovery operations and, 228–229
rents and, 229
revenue stability and, 229, 231, 252
simulations of, 238–250
taxes and, 233, 235–236, 239–247, 251–252
volatility and, 243–249
wasted expenditures and, 232
Oil Taxation Act, 316–317
Operating expenditure (OPEX), 296, 298, 303–306, 312–314, 318
Operational service agreements (OSAs)
maximum total fee and, 455
operational fee per barrel and, 455
PDVSA and, 482–483
reopening contracts and, 454–458
risk exploration (RE) agreements and, 459
Venezuela and, 437–448, 454–458, 482–483
Operation Desert Storm, 274
Opportunism, 70–71
Optimal resource extraction contracts
bidding and, 167
concave utility function and, 181–182
effective profit functions and, 169
efficiency and, 166–167
environmental regulations and, 164–165
ex post political pressures and, 163
full-fledged cash flow tax and, 167
government equity in firm and, 167
high-demand scenario and, 164
increased profits and, 163
intermediate-demand scenario and, 164
investment cycles and, 162
labor regulations and, 164–165
monotone likelihood ratio property (MLRP) and, 186–187
Nash equilibrium and, 176, 185
operational profits and, 168, 173
planner’s problem and, 169–171, 186–190
political investment and, 188–190
profit and, 161–191
property rights and, 163, 171
rents and, 162
sunk costs and, 161–164
taxes and, 164–168, 177–178, 182, 186–190, 193n1
voluntary contributions and, 162
welfare gain and, 178–180
Options valuation, 30
Organization for Economic Cooperation and Development (OECD), 102
Organization of Petroleum Exporting Countries (OPEC), 467, 470–473, 490–491
Orinoco Belt, 437, 442, 444–447, 475
Orr, Ryan J., 28–29
Osmundsen, Petter, 16–17
Overseas Private Investment Corporation, 31
Paddock, James L., 16–17, 30
Palacios, Alfredo, 392
Panizza, Ugo, 116, 389, 392–393, 397n44, 398n68, 399n69
Paris Club, 97
Percentage of profits (PEG), 440
Pérez Alfonso, Juan Pablo, 436, 470–471
Pernice, Sergio, 383, 390, 393, 399n68
Perón, Juan Domingo, 370–375
Peronism, 376, 380–384, 388, 392
Peru, 13, 162, 338
Petrobras, 490
PetroCanada, 444, 449
Petróleos de Venezuela (PDVSA), 435, 462n36, 37, 38, 468
Code of Commerce and, 474
consolidation and, 475–476
EFV surtax and, 477
expansion and, 476–477
industry demise and, 480–483
internationalization strategy and, 476
labor strike and, 481–482
Minister of Energy and Petroleum and, 482
Ministry of Energy and Mines and, 474
nationalization and, 477–480
opening strategy and, 477
Orinoco Belt and, 475
renegotiations and, 441–452
reopening contracts and, 437–441, 454–459
rise and fall of, 474–483
United States and, 476
Petróleo y Política (Oil and Politics) (Frondizi), 383–384
Petroleum contracts
asset specificity and, 52–54
basic model for, 49–50
concession contracts and, 48–49
corporate and, 54–56
duty and, 56–59
distributional benefits and, 58–59
enforcement and, 54–56
Hart-Moore model and, 47, 56–59
holdup and, 52–61
joint ventures and, 49
moral hazard and, 51–52
ownership allocation and, 47–48
potential inefficiency sources and, 50–59
prevailing, 47–49
production-sharing agreements and, 47–52, 57–58
profit and, 48–59, 62–63
risk sharing and, 49–52
Standard Oil and, 372–375
Summers commentary and, 61–67
Oil and Politics (Oil and Politics)
(Palacios), 383–384
Petroleum Taxation Law, 15
Petrozuata, 443
Philip, George, 418, 425, 461n18
Piketty, Thomas, 120–122, 126–127, 142, 151n7
Pindyck, Robert, 289–290
Pitchford, Rohan, 20, 77
Platt, Desmond Christopher Martin, 74
Pliska, Stanley R., 266
Policy
Argentina and, 369–400
betrayals and, 383–387, 407
Bolivia and, 331–368
colonialism and, 1
government expropriation and, xi (see also Expropriation)
medium-term financial strategy (MTFS) and, 297
nationalization and, 477–480 (see also Nationalization)
OPEC and, 467, 470–473, 490–491
renegotiation and, 22–23, 26–28 (see also Renegotiations)
right-wing reformists and, 120–121
third-party influences and, 65–67
time inconsistency and, 325–328
United Kingdom and, 293–329
Venezuela and, 409–483
Political-risk insurance, 31–32
Politics. See Governments
Poppo, Laura, 28
Populism
Argentina and, 381, 384, 398n67
CIA coups and, 487
environmental issues and, 491
GRAB function and, 201–202, 212, 220
host country (HC)/multinational corporation (MNC) relationship and, 1–4, 9, 15–18, 29–30, 32–33
optimal resource extraction contracts and, 161
prices and, 2–3, 487–493
production contract guidelines and, 227–229
resource belief curse and, 147
United Kingdom and, 294–295, 308, 331
Populism and Natural Resources Workshop, 107, 193n9, 194n27, 252, 285, 459, 487–492, 495, 497
Prescott, John, 309
Present-value-of-revenue (PVR), 190
Prices, xii
Arab-Israeli War and, 435, 473
Bolivian policy and, 331–368
charity model and, 124–126
deadweight loss and, 270, 280–281, 289
ex ante price caps and, 293–304, 307–308, 325–329, 336
fiscal reference (FRPs) and, 432–433, 436
futures curve and, 263–264, 270–274, 281–282, 289
host country (HC)/multinational corporations (MNC) relationship and, 1–3, 7–19, 24, 27–30, 37
oil production contracts and, 227–249, 255–261, 262nn5,7
perceived exploitation and, 161–162
profit and, 3, 7–19, 24, 27–30, 37 (see also Profit)
public opinion and, 161–162
real options approach and, 263–286
regulation analogy for, 259–260
royalties and, 409 (see also Royalties)
RPI-X approach and, 294–300, 304, 311–315, 318, 327–328
stabilization funds and, 32–33
Suez crisis and, 469
vagaries of international, 1
volatility and, xi, 416 (see also Volatility)
Private finance initiative (PFI) schemes, 294
Privatization, 3, 293
Bolivia and, 335
contract theory and, 61–63
credibility and, 304
ex ante price caps and, 302
resource belief curse and, 119
RPI-X and, 295–299
trap of, 61–63
United Kingdom and, 293, 304–312, 316
Production-sharing agreements (PSAs), 59n1, 60n7
Argentina and, 374–375
inefficiency of, 17
international oil company (IOC) and, 48
national oil company (NOC) and, 48
petroleum contracts and, 47–52, 57–58
sliding scale of, 13
Profit
Argentina and, 375, 407
Bolivia and, 334, 340–345, 349, 353n12, 355nn27,28
GRAB function and, 199–223, 224nn11,15
maximization of, 30, 51–56
MNC-HC contracts and, 3, 7–19, 24, 27–30, 37
optimal resource extraction contracts and, 161–191
percentage of profits (PEG), 440
petroleum contracts and, 48–59, 62–63
political limits to, 315–316
real options approach and, 263, 267, 270, 276, 279, 282, 285n5
resource belief curse and, 125, 151n3, 159
sovereign theft and, 70, 72, 79, 91–94
United Kingdom and, 294–298, 305, 311, 315–318, 327–328
Property rights
Bolivia and, 339–340
GRAB function and, 198
MNC-HC contracts and, 20
optimal resource extraction contracts and, 163, 171
United Kingdom and, 309, 329
Venezuela and, 410, 413–415, 418, 426, 434, 453, 462n31, 467, 472
Prudhoe Bay, 4
Public-private partnership (PPP), 294
Pure service contracts, 11, 13–16, 49
Puttermann, Louis, 388
Qian, Yingyi, 198
Quesada, Lucía, xii, 20, 47–60
Railtrack, 312
Ramsey, Frank P., 127
Razo, Armando, 11
Real options approach
baseline parameters and, 268–269
deadweight loss and, 270, 280–281, 289
efficiency and, 263, 266, 276, 281, 284, 289
factors influencing, 263–265
futures curve and, 263–265, 267, 270–274, 281–282, 289
Least Squares Monte Carlo (LSM) approach and, 264, 267, 281–285
linear regression and, 264
Longstaff-Schwartz procedure and, 267, 283–285, 289
Markov process and, 270
profit and, 263, 267, 270, 276, 279, 282, 285n5
reputation and, 263–269, 275, 281
royalties and, 265–266, 269, 276, 279
state variables and, 270–275, 284
taxes and, 263–266, 269, 276, 279–282, 285n2, 2, 286n10
Trolle-Schwartz model and, 282–283, 289–290
Regulation, 7, 331
discretion in, 299–301
ex ante price caps and, 293–304, 307–308, 325–329, 336
ex post interventions and, 294–295, 298–308, 311–317, 326, 329
financial dimensions to, 301–303
good chaps, 299
institutions for, 299–301
nationalization and, 293
official’s preferences and, 300
privatization and, 293
time inconsistency and, 325–328
Regulatory asset base (RAB), 298, 301–303, 311–313, 318
Regulatory Climate Index, 451
Reinisch, August, 7
Renegotiations, 285n2, 489–490
Argentina and, 370, 377, 388, 392, 396n24
Bolivia and, 332, 339–340, 352n2, 353n14, 361, 366
Canada and, 409–410
contract clauses for, 26–29
detailed contract analysis and, 227–228
host country (HC)/multinational corporations (MNC) relationship and, 2–4, 7, 9, 18–23, 26–36, 37nn1, 3, 38n8
individualism and, 120, 146
oil production contracts and, 227–229, 237, 250, 255–256, 259–261
optimal resource extraction contracts and, 146, 163, 193n3
political economy and, 412–417
politicized environments and, 227
sovereign theft and, 98, 114
unequal judicial treatment and, 227
United Kingdom and, 327, 410
Repsol, 443
Reputation, 261–262
Argentina and, 381, 383, 388–390
contract theory and, 56, 62
GRAB function and, 197–202, 219–220
host country (HC)/multinational corporations (MNC) relationship and, 24–26, 35
real options approach and, 263–269, 275–276, 281
sovereign theft and, 72–73, 89, 100, 112–116
United Kingdom and, 304, 329
Resource belief curse
Alesina-Angeletos model and, 130–136
fairness and, 130–137, 146, 151n9
individualism and, 119–150
luck shocks and, 130–132, 137–149
nationalization and, 122, 127–130, 146
privatization and, 119
profit and, 125, 151n3, 159
U.S. General Social Survey and, 137–150
Resource rent taxes (RTTs), 14–15
Revenue-sharing risk exploration (RE) agreements, 440, 443–448, 459
Rey, Patrick, 54
R-factor tax, 15
Richard, Scott F., 121, 156
Rigobon, Roberto, 334
host country (HC)/multinational corporations (MNC) relationship and, xii, 17–18, 36, 37n1
Muehllegger commentary and, 255–262
oil production contracts and, 227–254
Risk
better valuation and, 30–31
bonus bidding and, 16–17
Cobb-Douglas production function and, 83–84
concession contracts and, 48–49 (see also Concession contracts)
constant relative risk aversion (CRRA) and, 83
contractual allocation of, 10–18, 20, 30, 47, 301
defaultable debt and, 75–91
enforceability and, 54–56 (see also Enforceability)
expropriable direct investment and, 78–91 (see also Expropriation)
geological, 415, 423
governance model and, 28–29
host country (HC)/multinational corporations (MNCs) relationship and, 1–4
moral hazard and, 14, 20 (see also Moral hazard)
oil production contracts and, 51–52, 227–262
political-risk insurance and, 31–32
pricing of, 266–268
production-sharing agreements (PSAs) and, 11–18, 47–52, 58, 59n1, 60n7
pure service contracts and, 11, 13–16, 49
real options approach and, 263–286
renegotiation clauses and, 26–28 (see also Renegotiations)
royalty/tax (R/T) systems and, 11–13, 17
sovereign theft and, 69–107 (see also Sovereign theft)
stabilization funds and, 32–33
sunk costs and, 2, 19–22 (see also Sunk costs)
Risk exploration (RE) agreements, 440, 443–448, 459
Risk service contracts, 13, 47, 49, 438, 455
Roberts, Mark C., 14, 15
Rockefeller, John D., 388, 390
Rodriguez, Ali, 441–442
Rodrik, Dani, 19
Røed Larsen, Erling, 33
Rogoff, Kenneth, 22–23, 25, 72–73
Rolling-stock leasing companies (ROSCOs), 311
Rose, Andrew K., 73
Rosenthal, Robert W., 22
Royalties, 228
Argentina and, 372, 378, 391
Bolivia and, 331–344, 349, 352n4, 5, 6, 353n12, 13, 355n26, 27, 28, 356n36
Canada and, 4, 409, 489–490
changing contracts on, 4, 7
concession contracts and, 50 (see also Concession contracts)
corporate income taxes and, 276, 279
ex post uncertainty and, 56–59
grievance and, 56–59
increased profits and, 162–163
optimal resource extraction contracts and, 162
production-sharing agreements (PSAs) and, 11–18, 47–52, 58, 59n1, 60n7
real options approach and, 265–266, 269, 276, 279
sales tax vs. income tax, 229
traditional contracts and, 10–11
United Kingdom and, 162, 317
Royalty/tax (R/T) systems, 11–13, 17
RPI-X approach, 34
Austria and, 296–297
origins of, 295–299
simplicity of, 294
United Kingdom and, 294–300, 304, 311–315, 318, 327–328
various sector applications of, 294
Russia, xi, 4, 23, 112, 317, 454
Sachs, Jeffrey D., 22
Sakhalin concession, 23
Sákovics, József, 20
Sanctions, 23, 35, 73–74, 198
Sandleris, Guido, 73
San Jose Pact, 480–481
Scharfrodsny, Ernesto, 123
Schelling, Thomas C., 202, 219
Schlumberger, 491–492
Schmidt, Klaus M., 20
Schnitzer, Monika, 22
Schumpeterianism, 385
Schwartz, Eduardo S., 9, 30–31, 198, 263–287
SENIAT, 442
Shannon, Chris, 125
Shell, 372, 374, 419, 422, 425, 468–469
Shleifer, Andrei, 198
Shokhor, Stanislav, 30
Shugart, Matthew Soberg, 387, 398n62
Siegel, Daniel R., 30
Simard, Dominique, 2, 11, 17
Sincor, 439, 448–449
Slade, Margaret, 30
Smith, James E., 30
Snyder, Christopher M., 20
SOCAL, 374, 388
Social Democratic Party, 426, 429
Soskice, David, 123
South Africa, 30
Southern Water, 303
Sovereign debt
credibility and, 62
default and, 3 (see also Default)
host country (HC)/multinational corporations (MNCs) relationship and, 20–26, 35–36, 37n1
literature on, 2, 9, 114
reputational spillover and, 116
self-enforcing contracts and, 117
willingness-to-pay problem and, 114
Sovereign theft
business nationalism and, 74
Cobb-Douglas production function and, 83–84
coerced sale and, 98
constant relative risk aversion (CRRA) and, 83
costs of, 71–74
defaultable debt and, 76–91
desperation and, 70–71
equity contracts and, 70, 78, 84, 86, 96, 102, 115, 117
expropriable direct investment and, 78–91
first-best contracts and, 75–76
foreign direct investment (FDI) and, 70, 86–89, 94–107, 115
future investments and, 71–73
Great Depression and, 98, 111–112
historical perspective on, 96–105
intervention and, 98
Lagrange multipliers and, 92
long-run benefits of, 71
market relevance and, 113–115
measures of, 97–98
models of, 75–96
moral hazard and, 114
nationalization and, 97, 107n2
opportunism and, 70–71
optimal self-enforcing contract and, 91–96
patterns in, 111–112, 116
patterns of, 98–102
profit and, 70, 72, 79, 91–94
punishment and, 69, 72, 74–75, 89, 105, 107n2
reputation and, 72–73, 89, 100, 112–116
sanctions and, 73–74
self-enforcing contracts and, 91–96, 115, 117
short-run benefits of, 70–71
spillover and, 88–89, 98–100, 116
Sovereign theft (cont.)
theoretical perspectives on, 69–74
Zettelmeyer commentary and, 111–117
Sovereignty at Bay (Vernon), 9
Spiegel, Mark M., 73–74
Spilimbergo, Antonio, 123
Spiller, Pablo, 415
Spillover
host country (HC)/multinational corporations (MNC) relationship and, 22, 35
individualism and, 156
sovereign theft and, 73, 88–89, 98–100, 116
Stabilization funds, 27, 32–33
Standard auctions, 178–180
Standard Oil, 7, 372–375, 388, 390, 425, 468
Statoil, 439, 443, 448–449
Stelmach, Ed, 409
Stensland, Gunnar, 30
Stokes, Susan, 386, 390, 397nn51,55, 399nn58,59, 399n70
Sturzenegger, Federico
Argentina and, 382–383, 388, 390, 393
host country (HC)/multinational corporations (MNC) relationship and, 1–43
sovereign theft and, 113, 116
Subsidies
optimal resource extraction contracts
and, 164–165, 181–185, 190–191, 193n10
production contract guidelines and, 228, 231, 235, 252
Suez crisis, 469
Summers, Lawrence, xiii, 33, 61–67
Sunk costs
Bolivia and, 332, 347, 359
contract theory and, 49, 52–53
host country (HC)/multinational corporations (MNC) relationship and, 2, 19–22, 38n8
optimal resource extraction contracts
and, 161–164
sovereign theft and, 69
United Kingdom and, 290, 293, 318
Sunley, Emil M., 2, 11, 17
Sunnevåg, Kjell J., 14–15, 32
Suter, Christian, 97
Szusterman, Celia, 384
Tai, Laurence, 1–43
Tarbell, Ida, 388
Taxes
Argentina and, 4, 375, 378–381
Bolivia and, 331, 334–349, 361, 364–366
Brown, 15
charity model and, 124–126
distortions and, 239–244, 257
efficiency and, 126–130
EFV surtax and, 477
exploitation, 418, 443
external enforcement mechanisms and, 417–426
full-fledged cash flow, 167
GRAB function and, 197–199, 205, 208, 220
impact on private profits of, 244–247
incentive effects and, 121
increase of, 7
Law 1689 and, 335–336
oil production contracts and, 244–247, 251–252, 257
oil sector and, 120–138, 146–150, 151nn9,16–157
optimal resource extraction contracts
and, 164–168, 177–178, 182, 186–190, 193n1
overtax and, 228, 235
petroleum revenue, 317
political economy and, 412–417
real options approach and, 263–266, 269, 276, 279–282, 285nn2,5, 286n10
resource rent (RTT), 14–15
SENIAT and, 442
surface, 418–419
third-party influences and, 65
time inconsistency and, 325–328
traditional contracts and, 11
United Kingdom and, 293–310, 315–317, 328
Venezuela and, 409, 412, 417–426, 429–436, 443
volatility of, 243–244
windfall, 162–166 (see also Windfall taxes)
worker’s utility and, 127
Tax Regime Index, 451
Technology
environmental issues and, 491
GRAB function and, 211–213
research spending and, 491–492
spillover effects and, 22, 35, 73, 88–89, 98–100, 116, 156
Texas, 427, 452
Thatcherism, 298, 308
Index

Venezuela (cont.)
association agreements (AAs) and, 439–452, 457–458
asymmetry of knowledge and, 468–470
available institutional knowledge and, 414
banking crisis of, 440–441
Betancourt and, 429, 431
blockade of, 423
Cairo Gentlemen’s Agreement and, 470
Caldera, Rafael and, 433–434, 436–437
Castro, Cipriano and, 418
Chávez, Hugo and, 409, 441–442, 449, 452
CITGO and, 438
communism and, 409, 426
concessions policies of, 410, 412, 417–418, 422–424, 437, 460n16, 461n20, 462n31, 468–472
control issues and, 470–474
COPEL and, 433
credibility and, 415, 423, 425, 434, 441, 454
CVP and, 472
Decree 1510 and, 443, 446
Decreto Sanabria and, 431–432, 436
Espinasa commentary and, 467–483
external enforcement mechanisms and, 417–426
fiscal reference prices (FRPs) and, 432–433, 436
fiscal stability and, 414
Fiscal Terms Index and, 451
Gómez, Juan Vicente and, 418, 423, 426, 468
Great Depression and, 417–418
heterogeneous agents and, 414
holdup and, 52
Hydrocarbons Law and, 412, 422, 426–429, 431, 442
Income Tax Law and, 440
international context and, 470–474
international oil companies (IOCs) and, 409–410, 416, 429, 435–439, 450, 460n14, 467–469, 480
labor strike and, 481–482
Lake Maracaibo oil discoveries and, 423–424
as largest oil exporter, 417
Law of Reversion and, 434
Leoni, Raúl and, 436
López Contreras, Eleazar and, 426
maximum total fee and, 455
Medina Angarita, Isaías and, 426
Mining Laws and, 418–419
Minister of Energy and Petroleum and, 482
Ministry of Mines and Hydrocarbons and, 469–471
nationalization and, 4, 146, 410, 429–441, 477–480
Oil Nationalization Law and, 437
oil production contracts and, 243
OPEC and, 467, 470–473
operational fee per barrel and, 455
operational service agreements (OSAs) and, 437–448, 454–458
optimal resource extraction contracts and, 162
Orinoco Belt and, 437, 442, 444–447, 475
Pérez Alfonso, Juan Pablo and, 436, 470–471
Pérez Jiménez, and, 428, 431, 435
Petróleos de Venezuela (PDVSA) and, 435, 437–451, 454–459, 462n36, 37, 38, 468, 474–482
Petroleum Law and, 419
political economy and, 412–417
principal-agent issues and, 414
property rights and, 410, 413–415, 418, 426, 434, 453, 462n31, 467, 472
real options approach and, 290
Regulatory Climate Index and, 451
renationalization and, 437–441
renegotiations and, 409–417, 422, 425–436, 441–454, 459, 467, 474
reopening contracts and, 437–441, 454–459
right-wing reformists and, 120
rise of foreign direct investment (FDI) in, 417–426
risk exploration (RE) agreements and, 440, 443–448, 459
San Jose Pact and, 480–481
Index

- Schools of Petroleum Engineering and, 469
- SENIAT and, 442
- sovereign theft and, 441–452
- Suez crisis and, 469
- taxes and, 412–426, 429–436, 443
- Tax Regime Index and, 451
- timing of contract and, 414
- traditional contracts in, 11
- Western diplomacy and, 418
- Ventura, Jaume, 74
- Vernon, Raymond, 9–10, 33, 326
- Villegas, Carlos, 341
- Vishny, Robert W., 198
- Volatility, xi–xii, 29, 33
  - Argentina and, 387
  - individualism and, 122–123
- United Kingdom and, 312
- Venezuela and, 409, 411, 414, 416
  - War of the Pacific, 338
- Weidenmier, Marc D., 73
- Weighted average cost of capital (WACC), 302–303, 312–314
- Welfare gain, 178–180
- Wernerfelt, Nils, xii–xiii, 197–226
- West Texas Intermediate (WTI), 452
- Windfall taxes
  - Bolivia and, 336
  - GRAB function and, 199, 220
  - optimal resource extraction contracts and, 162–166, 177
  - United Kingdom and, 295–298, 301, 304–312, 315, 317, 328
  - Venezuela and, 435, 444–446, 450–452
- Wirjanto, Tony S., 30
- Woodhouse, Erik J., 31–32
- Wood Mackenzie, 448
- World Bank, 31
- Argentina and, 381
  - Bolivia and, 335–336, 352nn7,8, 355n27, 366
  - contract theory and, 61, 64–66
  - sovereign theft and, 97
  - third-party influences and, 65–67
- Venezuela and, 458
  - World Values Survey, 123
  - World War I era, 111
  - World War II era, 74, 293–294, 418, 426, 429, 469
  - Worrall, Tim, 21
  - Wright, Brian D., 72
  - Wright, Mark L.J., xii
  - host country (HC)/multinational corporations (MNCs) relationship and, 2, 23–25
  - sovereign theft and, 69–110
  - Zettelmeyer commentary and, 111–117
- Wyatt, Nelson, 4
  - Yacimientos Petrolíferos Fiscales (YPF), 399
    - Bolivianos (YPFB), 352nn7,8, 353n11
    - equity participation scheme and, 352n3
    - ENARSA agreement and, 340, 355n30,32
    - Law 1194 and, 331
    - Law 1689 and, 339
    - Law 3058 and, 340
    - reform and, 334–335, 339–340
    - transfer calculations and, 352n5
  - Yacimientos Petrolíferos Fiscales (YPF), 399
    - Frondizi, Arturo and, 387
    - Huergo, Luis and, 390
    - La Plata refinery and, 372
    - monopoly of, 372–381
    - Peronism and, 372–375, 380–384
    - Yañez, Monica, 392–393
    - Yrigoyen, Hipólito, 391
    - Yue, Vivian Z., 77
    - Yukos, 4
  - Zeckhauser, Richard, xii–xiii, 19, 197–226
  - Zenger, Todd, 28
  - Zettelmeyer, Jeromin, 3, 23, 111–117

Index 519