
Index

- Abbink, K. 142, 441, 442–3, 444, 446, 460
ABF/GBI case (2008) 117–20
Abrantes-Metz, R. 109, 110
Acemoglu, D. 129, 423, 427
adjustment costs 478–9, 498
adoption approach 503–4, 506, 508
advance production 457–8, 459
agency theory 249, 281, 422
agent appointment games 248–9, 274, 278, 280
Airbnb 290
Airtours case (2002) 115, 116
Alcalá, F. 377, 380, 382
Alexeev, M. 162–3
allocation rule 44
altruism 257, 401, 403
Amazon 289
Amegashie, J. 129, 158
Amir, R. 430, 431
'amnesty plus' program 66–7, 68
Anderson, S. 26, 179, 184, 189, 192, 202, 213, 305–6, 307
Angelucci, C. 67–8
anticommons effect 370–73
anticompetitive mergers 20, 21, 26, 30, 91, 92–3, 108, 115, 120
Antimonopoly Law (Japan, 2005) 69
antitrust authorities
 and horizontal mergers 8–9, 15, 18, 19, 24, 27–30
 and leniency in cartels 58, 60, 65, 67–8, 76, 77, 78, 80–81, 83–4
AP (asymmetry in payoffs) effects 112–13
APAs (all-pay auctions) 127, 128, 129, 131, 132, 133, 135, 138, 142, 157, 158, 167
applied research 477, 501–2
appropriability 467, 478, 480–81, 502
Armantier, O. 59, 444
Armstrong, M. 28, 180, 194, 195, 202, 214, 300, 310–11, 312, 313, 314–15
Arrow, K. 368, 475
asymmetric information 99, 136–7, 315, 369
 and auctions 318, 327–8
 and corruption 421, 423, 424, 446
 and endogenous timing in contests 157, 164–5, 167
 and experimental industrial organization 463, 465
 and healthcare 394, 395, 404, 411–17
 R&D models 475, 481, 493
 and strategic delegation 248–9, 258–9
Athey, S. 99, 109, 202, 211–12, 326, 506
Aubert, C. 60, 61, 112
auctions 318
 asymmetric information 318, 327–8
 buyers' related issues 329–30
 combinatorial auctions 330–32
 and contests 127, 128, 129, 131, 132, 133, 135, 136, 138, 142
 and coordinated effects 109, 110
 and efficiency 333–4
 elementary auction theory 318–23
 and entry 332–3
 and experimental industrial organization 458, 464
 financial constraints 333
 first price auctions 320, 328, 332, 333, 433, 434
 Internet advertising 323–6
 Internet auctions 326–30
 and leniency in cartels 83–4
 open ascending auctions 323, 326, 328, 333–4
 position auctions 318, 323–6
 reservation price 326–7, 328–9
 revenue equivalence theorem 318, 319, 320–21, 330, 332
 second price auctions 320, 323, 324–5, 327, 331, 332, 333–4
 sellers' related issues 327–9
 Vickrey-Clarke-Groves auctions 318, 321–3, 324–5, 327, 330–31, 332, 333–4
authoritative budgeting 277–8
avoidance activities 85
Aw, B. 496, 497, 498, 499
axiomatic approach 133

backstop technologies 357
backward induction 201, 251, 266, 394
'bad technology' 427
Bagnoli, M. 279–80
Bagwell, K. 99, 168, 261, 456, 466
Baik, K. 136, 152, 153–4, 156, 165, 167
Bajari, P. 109, 329

- 'bargaining effect' 20
- 'bargaining failure' 29
- Bar-Isaac, H. 199, 201
- Barreda-Tarrazona, I. 263, 462–3
- Barron, P. 439, 445
- basic research 477, 500–502
- Basu, Kaushik 425–6
- Baumann, F. 165, 168–9, 245–6
- Baye, M. 127, 132, 158, 180, 182, 184–5, 272
- Bayesian equilibrium 136, 189, 483
- Bayes-Nash equilibrium 319–20, 324
- Becker, G. 60, 125, 442
- behavioral screening approach 109
- 'belief effect' 270–71
- Belleflamme, P. 310, 311, 312, 313, 314, 315
- Benchenkroun, H. 343, 345, 355–6, 361
- Berry, S. 34, 142
- Bertrand models 36, 84, 177–8, 255–6, 280, 351–2
 - and experimental industrial organization 454, 455, 458, 459, 460
 - and horizontal mergers 7, 9–14
 - and leniency in cartels 65, 68, 73, 77, 78, 80, 84
- Bertrand, M. 439–40
- Bessen, J. 368–9, 372–3, 383
- best-reply/response function 24, 41, 83, 232–3, 303, 308, 329, 435
 - and contests 129–30, 133, 141
 - and endogenous timing in contests 147–51, 152–3, 154–5, 159, 166, 168
 - and experimental industrial organization 455, 459, 462, 468
 - and strategic delegation 251–3, 255–6, 259, 267, 270
- best-shot contests 138
- Beviá, C. 130, 132, 160
- Bhardwaj, P. 262, 272
- bidders' beliefs 320–21, 325, 328
- Bigoni, M. 80–81, 82
- 'black box' of R&D 476–7, 500–509, 510
- Boldrin, M. 367, 371, 372, 373–4, 387
- Boly, A. 59, 444
- 'Bonus' legal framework 77
- Bos, I. 64, 73
- bottom cartels 34, 39–41, 54–5
- Brand, B. 274–5
- Brandts, J. 457, 458, 459, 460, 466
- Brekke, K. 37, 400
- Brenner, S. 70–71, 74
- bribery 424–6, 427, 428–9, 430–31, 432–7, 439–40, 441, 442, 445–6
- Brown-Kruse, J. 461, 462
- Bruttel, L. 459–60
- Brynjolfsson, E. 503, 505, 506, 507
- Buccrossi, P. 61, 67, 425
- Bulow, J. 150, 333
- Burdett, K. 183–4
- Burguet, R. 29, 434
- Burr, C. 430, 431
- Business International 438
- 'business-stealing' effect 240, 241, 243
- butter and guns* strategies 156
- buying power 100
- buy-it-now price 327, 330
- Cabral, L. 295, 328
- CAFC (Court of Appeals for the Federal Circuit) 367, 370, 371, 373
- Caillaud, B. 299, 313
- Canada–United States Free Trade Agreement 22
- cannibalization effect 36, 49, 50
- capitation rates 404–5, 412
- capitulation wages 428
- cartels
 - collusive agreements in vertically differentiated markets 34, 35–6, 37, 39–44, 50, 53–6
 - and consumer search 192–3
 - and coordinated effects 95, 99, 102, 108–10
 - and differential oligopoly games 345, 346, 354–7
 - leniency in *see* leniency in cartels
 - partial cartels 34, 35, 37, 40–42, 83
- Casadesus-Masanell, R. 257
- Cassiman, B. 507–8
- CDM (Crépon, Duguet and Mairesse) model 476, 485–6, 490–92, 493, 495, 496, 498
- Ceccagnoli, M. 481, 492, 508
- CFI (Court of First Instance) 100, 114, 115, 116
- Chang, M.-H. 62, 70, 71, 72
- Che, Y. 128, 132, 434
- Chen, J. 325–6
- Chen, Y. 36, 202
- Chen, Z. 64, 65, 67
- 'chicken and egg' problem 185, 313
- Choi, J. 66, 379, 431
- Chowdhury, S. 81, 85, 141, 142
- CIS (Community Innovation Surveys) data 486, 491, 495, 496, 501, 507, 508, 509
- Clark, D. 133, 142
- Clayton Act (1914) 8
- click-through rates 324–6
- Coate, S. 305–6
- Cobb-Douglas production function 485, 486, 489, 491, 496
- coexistence of platforms 312–13
- collecting societies 382–4
- collective reputation 244–5, 437–8
- collusion
 - coordinated effects *see* coordinated effects

- and experimental industrial organization 454–5, 457–8, 459–61
- leniency in cartels *see* leniency in cartels
- sustaining 95–6, 97, 98, 99–100, 101–6, 109, 112, 116, 118–19, 120
- tacit collusion 91–2, 94–5, 98, 102, 108–9, 115–20, 434, 455, 458, 459–61
- in vertically differentiated markets 34–5, 50
 - cartels 34, 35–6, 37, 39–44, 50, 53–6
 - coalitions 35–6, 40–41, 42–4, 48–50
 - cooperative approach 42–4
 - duopoly 35–7, 49
 - endogenous mergers and alliances 47–50
 - full price collusion 39–40
 - mergers 36–7, 47–50
 - n*-firm markets 37–42
 - non-cooperative approach 44–7
 - partial cartels 34, 35, 37, 40–42
 - whole industry agreements 42–7
- Colombo, L. 351–2
- combinatorial auctions 330–32
- common resources 347–52
- community rating 405, 412
- comparative statics 126, 129, 148, 240, 242, 392–3, 435, 436, 467, 468
 - and consumer search 181, 188–92, 204, 208
- compatibility/incompatibility (network effects) 292–4, 295, 296
- competition intensity 72
- competitive advantage 119, 136, 263, 294, 295
- competitive bottlenecks 302–5, 306, 307, 308–9
- Compte, O. 433, 434
- conditional commitment 166
- conflict models 156–7, 160
- conglomerate mergers 7, 106
- Connor, John 69, 73, 75
- consumer misperceptions 244
- consumer search 177–80, 212–14
 - buyer heterogeneity 203–12
 - and comparative statics 181, 188–92, 204, 208
 - coordination problem 182–5
 - demand heterogeneity 178, 203–6
 - Diamond paradox 177–8, 179, 183, 185–6, 196, 203, 204, 206
 - efficient sellers 196–9
 - and hazard rate 190, 191, 192, 195, 197, 198, 201, 206, 208, 219–20
 - and homogeneous products 177, 178, 180, 187, 188, 190–91, 193, 196, 197–9, 203–6, 207, 209
 - imperfect buyer information 180–82
 - intensive and extensive margins 208–9
 - and marginal cost 177, 181, 182, 183, 186, 187, 188, 190, 196–200, 221
 - matching products to consumers 187–95
 - mergers and cartels 192–3
 - and monopolistic competition 189–90, 191–2, 195, 196–7, 201, 206, 208, 213, 219–21
 - ‘myopic’ search 179, 188, 194, 210
 - optimal search behavior 182, 187–8, 199, 200–203
 - ordered search 179–80, 194–5, 200–203, 209–12, 213
 - price advertising 184, 186–7, 194, 217–18
 - and price competition 188, 191, 193, 212, 213, 214
 - and price dispersion 178–9, 180–87, 196, 197–8, 199, 204, 213, 217–18
 - product choice and search 199–200
 - and product differentiation 179, 184, 187, 188, 191–2, 194, 197–8, 199–200, 208, 211, 213, 219–21
 - random search 189, 195, 213
 - search cost heterogeneity 178, 203, 206–8, 211–12
 - seller heterogeneity 196–203
 - sequential search 185–6, 189, 194, 196, 205
 - simultaneous search 182–5, 217
- consumer surplus 257, 294, 457–8
 - and consumer search 185, 186, 196, 204
 - and differential oligopoly games 339, 345, 351–2, 358
 - and healthcare 397, 398–9
 - and horizontal mergers 9, 24, 26, 27–9
- content platforms 288
- contest designers 125, 126, 133–4, 136–7, 138–40, 141, 155, 158
- contests 125–6
 - and asymmetric information 136–7
 - and auctions 127, 128, 129, 131, 132, 133, 135, 136, 138, 142
 - contest success function *see* CSF
 - dynamic contests 134–6
 - eliminary contests 134–5
 - endogenous timing *see* endogenous timing in contests
 - group contests 137–8, 142
 - leveling the playing field 141
 - multi-winner contests 142
 - and Nash equilibrium 126–8, 129–31, 134, 136, 138–40, 142
 - naturally occurring 125
 - and noise 139–41
 - optimal contest design 129, 138–41
 - planned 125, 133–4
 - recent surveys 141–2
 - Tullock contests 129, 133, 138, 139, 140, 151, 153, 157–9, 160
- control 453

- ‘Convention on Combating Bribery of Foreign Public Officials’ (OECD) 420
- conventional risk adjustment 404
- convex costs 11, 459
- convex demands 11–12
- cooperative games 18–19, 30, 42–4
- coordinated effects (in mergers) 91–2, 120
 - anticompetitive mergers 91, 92–3, 108, 115, 120
 - assessment of merger effects 104–7
 - and cartels 95, 99, 102, 108–10
 - communication 102–4
 - coordinated price pressure index 111–12
 - coordination problem 92, 93–4, 96–8, 105, 111
 - corporate and governance structure 104
 - cross-price elasticities 113
 - defining collusion 94–6
 - demand factors 99–101
 - diversion ratios 111, 113
 - enforcement problem 92, 93, 95, 96, 97, 105
 - European merger policy 92, 96–7, 98, 100, 104, 108, 113–20
 - explicit collusion 94–5, 99, 102, 109, 16, 117, 120
 - factors facilitating collusion 96–104
 - history of collusion 92, 94, 108, 109
 - horizontal mergers 92–3, 95, 96–7, 98, 100, 104, 105–6, 116–17
 - incremental payoffs 112
 - and market structure 91–2, 94, 96, 105, 111, 114, 119
 - multi-market contact 99, 105–6, 118, 119, 120
 - quantifying in practice 107–13
 - screening for 108–10
 - supply factors 96–9
 - sustaining collusion 95–6, 97, 98, 99–100, 101–6, 109, 112, 116, 118–19, 120
 - tacit collusion 91–2, 94–5, 98, 102, 108–9, 115, 116, 117, 118, 119, 120
 - transparency 101–2, 103, 104, 110, 115, 117, 118
 - understanding collusion 92–107
 - and unilateral effects 91, 93, 105, 107, 114, 116
 - vertical mergers 106–7, 120
- coordination problem 82, 92, 93–4, 96–8, 105, 111, 182–5
- copayment 399, 400
- copyrights 367–8, 374–6
 - collecting societies 382–4
 - copying levies 382
 - copyright term 375, 377–8, 380, 384
 - derivative works 376–7
 - new business models 384–5
 - piracy 375, 378–81
 - simple general intellectual property model 391–3
- Corchón, L. 126, 129, 130, 132, 133–4, 136, 137, 160
- Corporate Leniency Policy (1993) 60, 63, 72
- corruption 420–21, 446
 - bribery 424–6, 427, 428–9, 430–31, 432–7, 439–40, 441, 442, 445–6
 - bureaucracy selection and compensation 426–9
 - bureaucrat wages 443–4
 - bureaucratic incentives 441–5
 - and competition 429–36, 445–6
 - delegation and agency 422–4
 - delegation, monitoring and punishment 442–3, 444–5
 - direct estimates 439–40
 - and ‘double-marginalization’ 430, 445, 446
 - empirical evidence 438–46
 - experimental estimates 441
 - favoritism 433
 - fighting against 441–6
 - fine details in illegal negotiations 424–6
 - ‘hold-up’ problem 421, 424–5, 445
 - incentives 444–5
 - indirect estimates 440–41
 - and market failure 421, 423, 426–7, 428, 442
 - measurement of 438–41
 - multiplicity of equilibria 436–8
 - perception of 438–9
 - persistence of 436–8
 - principal–supervisor–agent model 420, 422–4
 - and public procurement 421, 432–5
 - and rents 421, 422–3, 429–30
 - repetition of interaction 425, 426
 - and reputation 425, 426, 437–8
 - ‘whistle-blowing’ 426, 446
- cost asymmetries 98, 99, 105, 459
- cost uncertainty 17, 198–9
- costless recall 200–201
- Coughlan, A. 271–2
- countervailing effect 193, 307
- Cournot models 36, 228
 - and differential oligopoly games 343, 346, 347–8, 349–50, 352, 358, 361
 - and experimental industrial organization 454, 455, 456–7, 459, 460
 - and horizontal mergers 7, 9–14
 - and strategic delegation 249, 251–2, 255–6, 259, 263–4, 279
- Cournot–Nash equilibrium 147, 235, 251, 342, 345
- CP (change in profits) effects 112
- CPPI (coordinated price pressure index) 111–12
- Crépon, B. 485, 490, 491, 494

- cross-group network effects 287, 288–90, 297–9, 300–303, 309, 310, 311, 312–13, 314–15
- cross-ownership 104, 106
- cross-price elasticities 113
- CSF (contest success function) 125–6
 all-pay auctions 127, 128, 129, 131, 132, 133, 135, 138, 142
 axiomatic approach 133
 contest designers 133–4, 138, 140, 141
 difference-form CSF 127–8
 dynamic contests 135
 and endogenous timing in contests 148–9, 150–53, 156, 157, 159, 160–62, 164, 169
 group contests 137–8, 142
 logit-CSF 129–30, 131–4, 135, 136
 lottery-CSF 138, 150, 151–3, 156, 159, 161, 162
 mechanism design 132, 137
 microfoundations of 132–4
 optimal contest design 129, 138–41
 stochastic performance 132
 ties 130–31
- CSR (corporate social responsibility) 358, 361
- CT (cheap talk) auctions 325
- Cube View* 505
- cumulative harm 229–36
- ‘cutting edge’ R&D 502
- Czarnitzki, D. 481, 501–2
- D’Aspremont, C. 9, 278, 467
- Dahm, M. 128, 130, 133–4, 396
- Daughety, A. 229, 237, 245
- Davies, S. 73, 75–6
- Davis, D. 455, 457–8, 464
- De, O. 71, 75–6
- De Zeeuw, A. 359–60
- deadweight loss 57, 58, 85, 373, 442
- defection payoffs 44
- delta core 42–3
- demand heterogeneity 178, 203–6
- demand movements 99–100
- demand uncertainty 101
- demand volatility 100–101
- derivative works 376–7
- ‘destabilizing effect’ 64, 67
- deterrence effects 58, 59, 60, 61, 70–73, 78, 79, 81, 82, 84, 86, 442–3, 444, 445–6
- Di Tella, R. 429, 444
- Diamond paradox 177–8, 179, 183, 185–6, 196, 203, 204, 206
- Diamond, Bob 58
- Diamond, P. 185, 204–5, 212
- difference-form CSF 127–8
- difference-in-differences approach 72–3
- differential oligopoly games (in environmental and resource economics) 338–43
 cartel behavior 345, 346, 354–7
 common resources 347–52
 corporate social responsibility 358, 361
 costly exploration 356–7
 Cournot oligopoly 343, 346, 347–8, 349–50, 352, 361
 feedback strategies 345, 347–51, 355, 357, 361
 Green R&D 346, 358
 Hotelling rule 353, 355, 357
 international trade 360–61
 and monopolistic competition 354–5
 natural resource extraction 339, 342, 343, 346–57
 non-renewable resources 346, 352–7
 open-loop rules/strategies 340–43, 345, 347–50, 351, 354–6, 358, 361
 and perfect competition 353, 354, 355
 polluting emissions 339, 341, 343–6, 357, 358–9, 361
 Porter hypothesis 358, 359–60
 renewable resources 347–52, 357
 replacement technologies 356–7
 and welfare 339–41, 343, 345, 351–2, 357, 358–9, 361
- ‘Diner’s Dilemma’ 234
- direct revelation auctions 321, 334
- direct risk selection 405
- Directive on Antitrust Damages Actions (EU) 57, 67
- ‘discouragement effect’ 135
- discrete choice models 112, 179, 192, 306, 494, 499
- discrete-time models 16, 73, 74
- distribution channels 264, 271–3
- diversion ratios 111, 113
- ‘divide-and-conquer’ strategy 300, 313
- Dixit, A. 129, 132, 136, 148, 150–51, 152
- Djankov, S. 439, 443
- Dockner, E. 260, 357
- DOJ (US Department of Justice) 58, 60, 68, 69, 71
- dominance test 113–14, 116
- Dong, A. 72–3
- Doraszelski, U. 496–7, 498
- ‘double-marginalization’ 430, 445, 446
- downstream mergers 19–21, 22
- Dragone, D. 345, 346
- DS Smith/Linpac Containers* merger case (2004) 109–10
- due care standard 234
- Duflo, E. 440, 444–5
- Dufwenberg, M. 425, 455

- Duguet, E. 481, 494
- duopoly
- collusive agreements in vertically differentiated markets 35–7, 49
 - and consumer search 184, 194–5, 198, 202
 - and experimental industrial organization 457, 460, 463
 - and horizontal mergers 7, 15, 20, 21
 - and leniency in cartels 63, 78, 80, 82, 84
 - and network effects 293–4, 307, 309, 313
 - and strategic delegation 249, 251–2, 255–6, 260, 262–4, 271, 272–3, 274, 278–80
- duplicate health insurance 414–16
- dynamic contests 134–6
- eBay 326–7, 328–9, 330
- EC (European Commission) 58, 69, 70–71, 73, 74–6, 85, 100, 113–15, 116, 117, 118–19
- Edelman, B. 324–5
- efficiency gains 7, 8, 10, 13, 19, 20–21, 26, 30, 67, 105, 116, 193, 442
- efficiency wages 427–8
- efficient sellers 196–9
- EIRD (euro interest rate derivatives) 58
- elementary click model 324–5
- eliminary contests 134–5
- Ellis, R. 408, 409–10, 411
- Ellison, G. 202, 205, 211–12, 326
- Ely, J. 329–30
- emission taxes 343, 345, 346, 360, 361
- empty core 44
- endogenous mergers 14–19, 30
- endogenous sunk costs model 17
- endogenous timing (in contests) 147–8, 169
- conflict models 156–7, 160
 - contest success function 148–9, 150–53, 156, 157, 159, 160–62, 164, 169
 - first-mover incentive 147, 148, 150, 154–5, 163–4, 166, 168–9
 - fixed price contests 148–56
 - fund-raising lotteries 159
 - imperfectly observable commitment games 168–9
 - information asymmetry 164–5, 167
 - litigation 158, 169
 - logit-CSF 148–9, 150, 151
 - lottery-CSF 150, 151–3, 156, 159, 161, 162
 - and Nash equilibrium 147, 148–51, 152, 154–5, 159–63, 164–6, 168–9
 - other-regarding preferences 158–9
 - prize contests 156–64
 - promotion tournaments 158
 - promotional effort model 157
 - R&D models 157
 - reimbursement schemes 158, 169
 - relative-performance reward schemes 158
 - rent-seeking 158, 161, 162–3, 164–5, 166, 167, 168
 - second-mover incentive 153, 154–5, 164, 165, 169, 267
 - sequential-move games 147, 148–53, 154, 155, 159, 163–5, 167–8, 169
 - simultaneous-move games 147, 148, 152–3, 155–6, 159, 163–5, 167, 169
 - and sophisticated commitment games 166–7
 - and specific commitment games 165–6
 - Stackelberg games 147, 148, 150, 151–2, 154–5, 163, 165–6, 168
 - and strategic complementarities 147–8, 150, 154, 161, 162, 164, 166–7, 169
 - and strategic incentives 148, 156, 159, 161, 162–3, 164, 169
 - and strategic substitutes 147, 150, 154, 161, 162, 164, 166, 169
 - Tullock contests 151, 153, 157–9, 160
 - war/attrition models 157
- enforcement problem* 92, 93, 95, 96, 97, 105
- Engel, C. 455, 468
- Engelberg, J. 328–9
- English auctions 84, 326
- entry/entry games 190, 192, 306–7, 332–3, 380, 466
- and coordinated effects 97, 100, 115, 118, 119, 120
 - and horizontal mergers 16, 17, 26, 30
- envelope theorem 253, 267, 319–20, 321, 322
- environmental and resource economics, differential games in *see* differential oligopoly games
- environmental standards 345, 361
- equivalence principle 423
- European Court of Justice 114, 117
- European Merger Regulation (1989) 92, 113–16
- evolutionary theory 493
- excess capacity 13, 97, 118, 458
- exogenous mergers 9–14, 30
- exogenous sunk costs model 17
- expected harm 226–7, 228, 229–31, 232, 234, 236, 237–9, 245–6
- experience goods 375, 463–5
- experimental industrial organization 453, 468–9
- advance production 457–8, 459
 - and collusion 454–5, 457–8, 459–61
 - control 453
 - entry deterrence 466
 - experience and credence goods 463–5
 - facilitating institutions 460–61
 - and homogeneous products 455, 456, 460–61, 467
 - oligopoly models 454–8

- one-shot and repeated games 454–5, 457, 460, 461–2, 468
 price competition 454, 455, 456, 457, 464, 467
 quantity competition 454, 455, 456–7, 458, 459, 467
 R&D 467
 replicability 453
 sequential choice 456–7
strangers and partners 454–5
 strategic behavior 466–7
 supply and demand conditions 459–60
 supply function competition 454, 458, 459
 tacit collusion 455, 458, 459–61
 explicit collusion 94–5, 99, 102, 109, 16, 117, 120
 extensive margins 209, 478, 482, 484, 510
 external technology sourcing 507–9
- Facebook 289
 ‘failure to launch’ problem 184
 Farrell, J. 13, 17, 24–5, 26
 Faulí-Oller, R. 11–12, 14, 21–2
 favoritism 433
 FDI (foreign direct investment) 8, 24
 ‘fear of betrayal’ effects 67
 feedback strategies 345, 347–51, 355, 357, 361
 Ferraz, C. 440, 442, 444
 Ferreira, J. 382, 383
 Fershtman, C. 254, 255, 258, 261, 262, 263
fighting brand 47, 50
 Finan, F. 440, 442, 444
 first price auctions 320, 328, 332, 333, 433, 434
 first-mover advantage/incentive 147, 148, 150, 154–5, 163–4, 166, 168–9, 279, 456, 466
 first-order conditions (FOCs) 10, 13, 39, 40, 149, 220, 345, 348, 392, 406, 483
 and contests 128, 134, 138
 and network effects 294, 298, 302–3, 306
 and products liability 227–8, 231, 234–5, 239–40, 242
 and strategic delegation 252–3, 267, 270–71
 first-order stochastic dominance 181, 201, 203, 207, 209
 first-price sealed-bid 84, 109, 433, 434
 FMC (full marginal cost) 239–41, 242, 243, 244
 Fonseca, M. 153, 455
 ‘foreseen needs’ 408
France v. Commission (1998) 114
 franchise fees 264, 265, 268–9, 270, 271
 free recall assumption 187, 192
 free-riding 7–8, 15, 17–19, 42, 66, 81–2, 119, 137, 329
 frictions 369, 373–4, 375, 378–9, 391–3
 Friehe, T. 245–6
 fringe game 354–6
 FTAs (free trade agreements) 386
 Fu, Q. 135, 136, 165, 168
 Fullerton, R. 132, 139
 fund-raising lotteries 159
- Gabszewicz, J. 37, 39, 41, 42, 43, 47–9
 Galasso, A. 370, 371
 Gale, I. 128, 132
 Gal-Or, E. 249, 258
 Ganuza, J. 246, 435
 Gärtner, D. 65, 74
Gencor v. Commission (1999) 114
 Global Corruption Barometer 439
 Gneezy, U. 263, 455
 González, P. 396, 397–400
 González, X. 482, 483, 484
 González-Maestre, M. 13, 14, 272, 279, 377, 380, 382
 ‘good technology’ 427
 Gopal, R. 381, 384
 Griliches, Z. 485, 486, 488, 489, 501
 grim strategy 44, 46
 Groot, F. 354–5
 group contests 137–8, 142
- Hall, B. 371, 476, 485, 488, 492
 Hamaguchi, Y. 78–9, 83, 84
 Hamilton, J. 147, 153
 Handke, C. 378, 380–81
 Hann, M. 67–8
 hard communication 102
 Harrington, J. 61–2, 64, 65, 70, 71, 72, 95, 110
 Harris, C. 357, 467
 Hasker, K. 327, 329
 hazard model 71, 74
 hazard rate 190, 191, 192, 195, 197, 198, 201, 206, 208, 219–20
 HDZ (homogeneous of degree 0) 128, 133
 healthcare 394–5, 417
 and asymmetric information 394, 411–17
 duplicate vs opt-out private health insurance 414–17
 hospital quality competition 400–404
 indemnity insurance 413
 insurance markets 394–5, 404–11, 413–17
 insurers’ behavior 407–11
 menu vs single contract competition 412–13
 multidimensional screening 414
 pharmaceutical competition and innovation model 397–400
 pharmaceutical drugs market 395–400
 private health insurance under symmetric information 404–5
 risk-adjustment system 404, 411

- service-level selection 405–11, 412
- shadow price 406–7, 408–9
- single service/exogenous prices model 401–2
- statutory health insurance 404–11
- timing of healthcare game 394–5, 396–7
- transportation costs 400, 401, 403, 408, 413
- Heifetz, A. 257–8
- Helpman, E. 385–6
- HHI (Herfindahl-Hirschman Index) 24, 25, 108, 502
- Hinloopen, J. 77, 78, 79–80, 81, 82, 84
- Hirshleifer, J. 127, 129
- Hoffmann, M. 152, 159
- ‘hold-up’ problem 421, 424–5, 445
- Holt, C. 80, 455, 464
- homogeneous products 77, 80, 244, 270–71
 - and consumer search 177, 178, 180, 187, 188, 190–91, 193, 196, 197–9, 203–6, 207, 209
 - and coordinated effects 97, 98, 117
 - and differential oligopoly games 339, 347, 358
 - and experimental industrial organization 455, 456, 460–61, 467
 - and horizontal mergers 10, 24, 27, 29
- Horizontal Merger Guidelines (EU, 2004) 8, 96–7, 98, 100, 104, 108, 116–17
- Horizontal Merger Guidelines (US, 2010) 24, 25, 26, 29, 108
- horizontal mergers 7–9, 30
 - and antitrust authorities 8–9, 15, 18, 19, 24, 27–30
 - and Bertrand oligopoly 7, 9–14
 - contract choice 20–21
 - and coordinated effects 92–3, 95, 96–7, 98, 100, 104, 105–6, 116–17
 - and Cournot oligopoly 7, 9–14
 - and dynamic games 8, 16–17, 26–7, 30
 - dynamic setting 26–7, 30
 - and efficiency gains 7, 8, 10, 13, 19, 20–21, 26, 30, 105, 116
 - endogenous mergers 14–19, 30
 - and entry 16, 17, 26, 30
 - exogenous mergers 9–14, 30
 - free-riding 7–8, 15, 17–19
 - international context 22–4
 - joint profits 7, 9–10
 - and linear demand 10–11, 12, 13, 17, 26
 - and marginal cost 10, 13, 15, 17, 23, 27, 29
 - and market structure 8, 15, 18–19, 21–2, 23, 27
 - multi-brand firms 14
 - ownership and management separation 13–14
 - and product differentiation 11, 14, 17, 18, 20
 - static setting 24–6, 30
 - and strategic delegation 279
 - in vertically related industries 8, 19–22
 - and welfare 8, 16, 17, 19, 20, 21–2, 24–9
- horizontal product differentiation
 - and consumer search 179, 184, 187, 188, 197–9, 208, 219–21
 - and experimental industrial organization 461–3
 - and healthcare 398–9, 400, 413
 - and network effects 294, 300–301
 - and products liability 237, 238, 241
- Horn, H. 18, 20, 21, 22–3
- Hortaçsu, A. 209, 328, 329
- Hossain, T. 329–30
- ‘hostage exchange’ 425
- Hotelling model 36, 250, 264, 266, 270, 302–3, 304, 310–12, 314–15, 353, 355, 357, 461–2
- Houba, H. 63, 67
- Huck, S. 263–4, 456, 462, 464
- Hunt, R. 368–9
- ‘Ideal’ legal framework 77
- imperfect buyer information 180–82
- imperfect competition 168, 189, 225, 243–6, 313, 316
- imperfectly observable commitment games 168–9
- incentive contracting 250–64, 274, 279–80
- incremental bidding 329
- incremental payoffs 112
- indemnity insurance 413
- Inderst, R. 21, 22
- Index of Corruption (International Country Risk Guide) 443
- indirect selection 405
- information asymmetry *see* asymmetric information
- innovation inputs/outputs 476, 480, 481, 485, 490–92, 493–6, 501, 502, 510
- instigator clauses (cartels) 63–4
- insulating tariffs 309–10
- intellectual property 367–8, 386–7
 - copyrights *see* copyrights
 - frictions 369, 373–4, 375, 378–9, 391–3
 - globalization and political economy issues 385–6
 - and lobbying 372–4, 377, 379–80, 382, 387, 391
 - patents *see* patents
 - and rent-seeking 372–4, 377, 387, 391
 - simple general model 369, 391–3
 - and welfare 367, 369, 371, 372, 375–7, 379–80, 381, 382, 386, 391–3
- intensive margins 209, 478, 482, 483, 484, 510
- intermediate cartels 34, 39–41, 53–4
- intermediated trade 314
- International Copyright Act (US, 1891) 378
- Internet auctions 326–30
- inverse demand 189, 190, 199–200, 227, 230, 234, 238, 240, 255, 275, 291–2, 293, 332

- Jacquemin, A. 9, 467
 Janssen, M. 182, 193, 198–9, 207, 208, 223
 Japan Fair Trade Commission 68, 69–70
 JASRAC (Japanese collecting society) 383
 Jaumandreu, J. 496–7, 498
 Jehiel, P. 328, 332
 Jia, H. 127, 131, 132
 Johnson, J. 199–200
 joint dominance 114–15
 joint profits 7, 9–10, 42, 83, 193, 459, 462, 467
 joint search effect 192
 Judd, K. 183–4, 254, 255, 258, 261, 262
 Jullien, B. 102, 299, 313
- Kamien, M. 7, 15–16
 Katz, M. 261, 272, 293
 Kaufmann, D. 438–9
 Kerschbamer, R. 465
 Kim, J. 165, 379, 382
 Klette, J. 485, 488, 489
 knowledge capital model 476, 485, 486–8, 489, 496, 498
 Koçkesen, L. 257, 261
 Kofman, F. 59, 423
 Kolmar, M. 152, 159
 Kopel, M. 262, 274–5, 277–8, 279
 Korea Fair Trade Commission 68
 Kreps-Scheinkman model 454, 461
 Krueger, A. 125, 377
- L&E (law and economics) analyses 225–9
 Labrecciosa, P. 351–2
 Laffont, J. 422, 423
 Lambertini, L. 35, 36, 350, 351, 358
 Lamy, L. 328, 332
 Landes, W. 373, 376, 378
 Le, V. 443–4
 ‘learning by doing’ 400, 401, 493
 ‘learning by exporting’ 497
 Lee, S. 137, 167
 Leininger, W. 127, 136, 151, 152–4, 156
 Leitzel, J. 162–3
 ‘lemons problem’ 425
 leniency in cartels 57–9, 85–7
 and antitrust authorities 58, 60, 65, 67–8, 76, 77, 78, 80–81, 83–4
 asymmetric firms 63–5
 avoidance activities 85
 and Bertrand game 65, 68, 73, 77, 78, 80, 84
 damages 57, 67, 86
 delegation 67
 descriptive studies 68–70
 deterrence effects 58, 59, 60, 61, 70–73, 78, 79, 81, 82, 84, 86
 and duopoly 63, 78, 80, 82, 84
 dynamic models 59, 61–2, 66–7, 70, 73, 80, 81, 83
 econometric studies 70–76
 empirical evidence 68–76, 86
 experimental evidence 76–85, 86–7
 instigator clauses 63–4
 investigative effort by competition authorities 65–6
 laboratory experiments 59, 76–7
 level of fines 79, 80–81
 market game experiments 77–9, 83
 multi-market contact 66–7, 86
 recidivism 65, 69, 76, 78, 80, 84
 ringleader treatment 64, 75–6, 81–3
 and self-reporting 59, 60, 62, 63, 66, 75, 78, 79–80, 81, 85
 theoretical studies 59–68, 85
 and welfare 57, 58, 78–9, 80, 83, 84, 86–7
 ‘Leniency’ legal framework 77
 Lerner, J. 368, 371
 level playing fields 141
 ‘leverage strategy’ 298–9
 Levine, D. 367, 371, 372, 373–4, 387
 liability costs 241–2, 244, 245
 linear contracts 258, 259–60, 269, 271, 273, 280
 linear demand 10–11, 12, 13, 17, 26, 260, 272, 279, 356
 linear feedback rules 348–51, 357, 361
 linear wholesale prices 21, 268–9
 Linster, B. 151, 164
 litigation 57, 158, 169, 237–8, 371–3, 387, 391
 Liu, D. 325–6
 lobbying 127, 367, 372–4, 377, 379–80, 382, 387, 391
 Löffler, C. 260, 279
 logit-CSF 129–30, 131–4, 135, 136, 148–9, 150, 151
 Lommerud, K. 14, 21, 36
 Long, N. 22, 343, 345, 361
 López-Cuñat, J. 13, 14, 279
 lottery-CSF 138, 150, 151–3, 156, 159, 161, 162
- Macho-Stadler, I. 396, 397–400
 Mairesse, J. 484–5
 manager types 274–7
 mandatory enrolment 405
 Mansfield, E. 500–501
 Mantovani, A. 350, 351
 manufacturer-retailer bargaining 273, 275
 marginal cost 126, 334, 429, 439
 and consumer search 177, 181, 182, 183, 186, 187, 188, 190, 196–200, 221
 and differential oligopoly games 339, 345, 355
 and endogenous timing in contests 152, 156, 161, 162

- and experimental industrial organization 458, 461, 464, 467
- and healthcare 397, 399, 400, 401
- and horizontal mergers 10, 13, 15, 17, 23, 27, 29
- and network effects 292, 293, 296, 298, 302, 314
- and products liability 237–8, 239–41, 242, 243, 244
- R&D models 475, 477–8, 489, 497
- and strategic delegation 250, 252, 258, 265–6, 267, 270, 273–4, 275, 278
- Marini, M. 36, 38–39, 43–44, 47
- market failure 292, 315, 421, 423, 426–7, 428, 442, 465, 475, 481
- market game experiments 77–9, 83
- market power 315, 354, 382–4, 398–9, 400, 429, 455
 - and consumer search 191, 192, 193, 195
 - and coordinated effects 91–2, 93, 107, 113–14
 - and horizontal mergers 7, 8, 15, 17, 23
 - R&D models 475, 480, 485, 487, 493, 502, 510
- market-sharing* function 157
- Markov perfect equilibrium 16–17, 350
- Marvão, C. 65, 69, 75, 76
- Marx, L. 66–7, 73
- Maskin, E. 332, 369
- Mason, C. 352, 466
- ‘Matthew effect’ 135
- McAfee, R. 11, 132, 139
- McGuire, T. 408, 409–10, 411
- mediated demand 394
- membership fees (platforms) 297–8, 299, 300–302, 303–4, 309–10, 312–15
- menus of contracts 412–13
- mergers 7, 27, 29, 106, 192–3, 279, 331–2
 - anticompetitive mergers 20, 21, 26, 30, 91, 92–3, 108, 115, 120
 - collusive agreements in vertically differentiated markets 36–7, 47–50
 - coordinated effects *see* coordinated effects
 - horizontal *see* horizontal mergers
 - unilateral effects 9, 91, 93, 105, 107, 114, 116
 - vertical mergers 7, 106–7, 120
- Merton, Robert K. 135
- Meurer, M. 372–3
- Milgrom, P. 331, 332, 466, 503, 506, 507
- Miller, N. 70, 71, 260, 274
- Milliou, C. 20, 21, 273
- minimum quality standard 35–6
- ‘minimum type’ assumption 320, 321–3
- mixed strategy equilibria 168, 181, 204, 205, 223, 457, 459
- MNEs (multinational enterprises) 23
 - mobile capabilities 23–4
 - Mohnen, P. 476, 484, 492, 505
 - monopolistic competition model 189–90, 191–2, 195, 196–7, 201, 206, 208, 213, 219–21, 354–5
 - Mookherjee, D. 428, 432
 - Moraga-González, J. 182, 192, 193, 194, 208–9
 - ‘moral cost’ 436–7
 - moral hazard 258, 259, 262, 395, 405, 463, 465, 468, 475–6, 481
 - Morgan, J. 135, 159, 168, 169, 182, 184–5, 456
 - Motta, M. 13, 14, 59, 60, 61, 64, 66, 67
 - MUA (multi-unit auction) model 458
 - Müller, W. 456, 459, 466
 - multi-battle team contests 135
 - multidimensional screening 414
 - multihoming 300, 302–5, 307, 314
 - multi-market contact 66–7, 86, 99, 105–6, 118, 119, 120
 - multi-winner contests 142
 - Münster, J. 133, 165, 167
 - MWS (Miyazaki–Wilson–Spence) equilibrium 412–13
 - Myatt, D. 199–200
 - Myerson, R. 327, 328
 - ‘myopic’ search 179, 188, 194, 210
- Napster 379, 380, 381
- Nash equilibrium
 - and auctions 319–20, 324, 326
 - collusive agreements in vertically differentiated markets 39, 42, 45, 46
 - and consumer search 186, 206
 - and contests 126–8, 129–31, 134, 136, 138–40, 142
 - and endogenous timing in contests 147, 148–51, 152, 154–5, 159–63, 164–6, 168–9
 - and experimental industrial organization 455, 458, 459, 461, 462
 - and healthcare 412, 413
 - and horizontal mergers 12, 16–17
 - and strategic delegation 260, 262, 278
 - subgame perfect 46, 147, 151–3, 154–5, 159, 163–4, 165, 166, 168–9, 260
- Nash, John 126
- natural oligopolies 211
- natural resource extraction 339, 342, 343, 346–57
- negative network effects 287
- negligence 234, 243, 244, 246
- ‘negotiation value effect’ 371
- neoclassical accelerator model 478
- Nestlé/Perrier* case (1992) 105, 114
- network effects 286–7, 315–16

- compatibility/incompatibility 292–4, 295, 296
 competitive bottlenecks 302–5, 306, 307,
 308–9
 cross-group effects 287, 288–90, 297–9,
 300–303, 309, 310, 311, 312–13, 314–15
 defining 287–8
 demand for network goods 290–91
 duopoly model 293–4, 307, 309, 313
 economics of markets 290–96
 Hotelling model 300, 302, 303, 304, 310, 311,
 312, 314–15
 illustrations 289–90
 investment issues 313–15
 management on two-sided platforms 297–316
 and marginal cost 292, 293, 296, 298, 302, 314
 media markets 305–7
 membership fees 297–8, 299, 300–302, 303–4,
 309–10, 312–15
 monopoly pricing 297–9
 monopoly provision of network goods 291–2
 multihoming 300, 302–5, 307, 314
 negative effects 287
 positive effects 287, 288, 289, 291, 297–8, 299,
 300, 310
 price instruments 308–10
 pricing under platform competition 299–305
 and product differentiation 294, 300–301, 302,
 307
 provision of competing network goods 292–6
 singlehoming 300–302, 303–6, 308–9, 310–11,
 312–13, 314
 standards wars 295–6
 within-group effects 287, 288–90, 297, 308,
 310–13
see also platforms
 ‘New Hampshire effect’ 135
 Nguyen, G. 384–5
 Nilssen, T. 26–7
 Nitzan, S. 133, 137, 167
 no liability regimes 226–9, 230–36, 244–5
 Nocke, V. 15, 17, 23, 27, 29, 30, 106
 noise (in contests) 139–41
 ‘noisy-leader game’ 168
 non-cooperative firms/games
 collusive agreements in vertically differentiated
 markets 38–9, 42, 44–7
 and differential oligopoly games 339–40, 346,
 348, 352, 356
 and horizontal mergers 7, 15, 18, 26, 30
 and products liability 237, 240, 241–3, 244
 non-empty core 42–4
 Non-Horizontal Merger Guidelines (EU, 2008)
 106–7
 non-linear feedback rules 348–50, 351, 357
 non-mobile capabilities 23–4
 non-renewable resources 346, 352–7
 ‘normal’ agents 309
 normal-form games 126, 251, 266, 323
 ‘notice failure’ 373
 Novos, I. 375, 378–9
 NPEs (non-practicing entities) 372
 number of firms (supply factor) 96–7

 Oberholzer-Gee, F. 380
 OECD (Organisation for Economic Co-operation
 and Development) 72, 420
 Olken, B. 439, 440, 442, 445
 OLS (ordinary least squares) estimations
 74, 483
 Olson, Mancur 137
 one-shot games 425, 441, 445, 454–5, 457
 open ascending auctions 323, 326, 328, 333–4
 open enrolment 405
 open-loop rules/strategies 340–43, 345, 347–50,
 351, 354–6, 358, 361
 optimal contest design 129, 138–41
 optimal search behavior 182, 187–8, 199,
 200–203
 opt-out health insurance 414–17
 ordered search 179–80, 194–5, 200–203, 209–12,
 213
 ordinary least squares analysis 74, 483
 other-regarding preferences 158–9, 274
 ‘outlets effect’ 106–7
 out-of-pocket premia 405
 output patterns 110
 over-bidding 330
 owner-manager bargaining 262–3

 Pagnozzi, M. 261, 269–70, 271
 Panthöfer, S. 416–17
 partial cartels 34, 35, 37, 40–42, 83
 partial collusion 36, 41, 54
 partial ownership 104, 106
 participatory budgeting 277–8
 partition function game 42–3
 partners 454–5
 passive beliefs 189, 199, 261, 269, 270, 271
 ‘patent thickets’ 370–71, 391
 ‘patent trolls’ 372, 374, 391
 patents 367, 368–9
 anticommons effect 370–73
 frictions 369, 373–4
 and lobbying 372–4
 R&D models 481, 491, 494–5, 502
 and rent-seeking 372–4
 simple general intellectual property model
 391–3
 pay-for-performance incentives 263
 Pazgal, A. 260, 274

- PC (plain complements) 149, 166
 Peitz, M. 313, 377, 379
 Pérez-Castrillo, D. 396, 397–400
 perfect competition 272, 292, 353, 354–5, 414, 485
 perfect substitute contests 138
 Persson, L. 18, 22–3
 PEs (practicing entities) 372
 Pesendorfer, M. 16–17
 Peters, B. 493, 494, 497, 498, 499
 Petrakis, E. 20, 21, 273, 278
 Petrikaite, V. 192, 193
 PETS (public expenditure tracking surveys) 440, 443
 pharmaceutical drugs market 395–400
 PIC (Private International Cartels) dataset 73, 75
 Piccolo, S. 261, 269–70, 271
 piracy 375, 378–81
 ‘planned obsolescence’ 296
 platform investment incentives 314–15
 platforms 286–7, 315–16
 coexistence of 312–13
 competitive bottlenecks 302–5, 306, 307, 308–9
 illustrations 289–90
 managing network effects on two-sided platforms 297–316
 managing user participation 287
 markets with platforms 288–9
 media markets 305–7
 membership fees 297–8, 299, 300–302, 303–4, 309–10, 312–15
 monopoly pricing 297–9
 multihoming 300, 302–5, 307, 314
 price instruments 308–10
 pricing under platform competition 299–305
 singlehoming 300–302, 303–6, 308–9, 310–11, 312–13, 314
 see also network effects
 PMGs (price-matching guarantees) 460–61
 Png, I. 378, 428, 432
 policy separability 229, 233
 polluting emissions 339, 341, 343–6, 357, 358–9, 361
 Polo, M. 59, 60, 61, 64, 66, 67
 Porter hypothesis 358, 359–60
 position auctions 318, 323–6
 positive network effects 287, 288, 289, 291, 297–8, 299, 300, 310
 Posner, R. 373, 376, 378
 ‘preemption effect’ 65–6, 350–51
 preemptive mergers 18
 price advertising 184, 186–7, 194, 217–18
 price competition 14, 18, 112
 collusive agreements in vertically differentiated markets 36, 38, 50
 and consumer search 188, 191, 193, 212, 213, 214
 and experimental industrial organization 454, 455, 456, 457, 464, 467
 and strategic delegation 255, 259, 262, 267–8, 270, 274, 278–9, 280
 price dispersion 178–9, 180–87, 196, 197–8, 199, 204, 213, 217–18
 price-per-click model 324–5
 price-reducing mergers 27, 29
 price wars 101, 110, 118, 329
 principal–supervisor–agent model 420, 422–4
 private value assumption 322–3, 327, 332
 product differentiation
 and consumer search 179, 184, 187, 188, 191–2, 194, 197–8, 199–200, 208, 211, 213, 219–21
 and coordinated effects 94, 112
 and differential oligopoly games 351–2
 and experimental industrial organization 456, 460, 461–3, 467
 horizontal *see* horizontal product differentiation
 and horizontal mergers 11, 14, 17, 18, 20
 and intellectual property 379
 and network effects 294, 300–301, 302, 307
 pharmaceutical drugs market 397, 398–9
 and products liability 237–8, 241–2
 and strategic delegation 255, 260, 264, 265, 272, 273, 274, 280
 vertical 211, 237, 399
 vertically differentiated markets *see* vertically differentiated markets
 product-generated harms 243–6
 product market competition 229, 260, 274–5, 280–81, 480
 productivity approach 504–6
 products liability 225
 consumers 225–7
 cumulative harm 229–36
 efficiency and primary results 228
 expected harm 226–7, 228, 229–31, 232, 234, 236, 237–9, 245–6
 firms 227–8
 imperfect competition models 243–6
 independent cumulative harm from n products 234–6
 interdependent cumulative harm from n products 236
 and marginal cost 237–8, 239–41, 242, 243, 244
 and market structure 225, 229–36
 monopoly provision of safety 230–34
 negligence 234, 243, 244, 246

- no liability regimes 226–9, 230–36, 244–5
- oligopolistic provision of safety 234
- and product differentiation 237–8, 241–2
- product-generated harms 243–6
- production cost modification 237–43
- strict liability regimes 226–9, 230–36, 244–5, 246
- traditional law and economics analyses 225–9
- and welfare 228–9, 231–2, 235, 244
- projection core 42–3
- promotion tournaments 158
- propitious selection 414
- PROs (performing rights organizations) 383
- ‘protection from fines’ effect 60, 67, 79
- ‘protection from punishment’ effect 80, 81
- proxy bidding 327
- PTO (Patent and Trademark Office) 368
- public funding (of R&D) 475–6, 481–4, 501, 510
- public goods 7, 132, 137, 159, 244, 444, 476, 481, 491
- public procurement 421, 432–5
- ‘punishment effect’ 105, 106
- ‘puppy dog’ strategies 267
- purchase probability 211–12
- pure commitment 166
- pure strategy
 - and consumer search 181, 198–9, 205, 206, 222
 - and contests 127–8, 131, 136, 141
 - and endogenous timing in contests 164, 166, 168
 - and experimental industrial organization 455, 456, 457, 462
- quadratic costs 11, 26, 358
- quantity competition 255, 259–60, 267, 270, 272–4, 352, 430, 454–5, 456–7, 458, 459, 467
- quantity-setting duopoly 260, 264
- R&D (research and development) 475–7, 510
 - adjustment costs 478–9, 498
 - adoption approach 503–4, 506, 508
 - applied research 477, 501–2
 - and appropriability 467, 478, 480–81, 502
 - basic research 477, 500–502
 - ‘black box’ of 476–7, 500–509, 510
 - CDM model 476, 485–6, 490–92, 493, 495, 496, 498
 - classical determinants 479–84
 - collusive agreements in vertically differentiated markets 36
 - and complementarity 503–9, 510
 - composition of 500–502, 510
 - demand side interaction 488–90
 - determinants of 475–6, 477–84, 490–92, 494, 500–501, 509, 510
 - and differential oligopoly games 346, 357, 358
 - and endogenous timing in contests 157
 - and experimental industrial organization 467
 - external technology sourcing 507–9
 - and firm size 479
 - and future productivity 497–9
 - Green R&D 346, 358
 - and healthcare 397
 - and horizontal mergers 9, 17, 21, 22
 - industry determinants 480–81
 - innovation inputs/outputs 476, 480, 481, 485, 490–92, 493–6, 501, 502, 510
 - innovation and productivity 476, 484–500, 510
 - and intellectual property 369
 - knowledge capital model 476, 485, 486–8, 489, 496, 498
 - marginal cost/revenue balance 477–8
 - and market power 475, 480, 485, 487, 493, 502, 510
 - patents 481, 491
 - productivity approach 504–6
 - and products liability 237
 - public funding of 475–6, 481–4, 501, 510
 - recent structural models 476, 496–500
 - and strategic delegation 262, 272, 274, 278–9, 280
 - subsidy decisions 483–4
 - technological inputs/outputs 476, 481, 485, 491, 492–6
 - total factor productivity 475, 485, 487–8, 489, 493, 495
 - unobserved heterogeneity 506–7, 508
 - ‘race to the courtroom’ effect 79–80, 81, 82
- random search 189, 195, 213
- ratio-form CSF *see* lottery-CSF
- rebranding 47
- reduced-form profits 239, 253, 266–7
- reference pricing 400
- reimbursement schemes 158, 169
- Reinganum, J. 196, 229, 237, 245, 356
- Reinikka, R. 440, 443
- Reisinger, M. 274, 308–9
- relative-performance reward schemes 158
- Renault, R. 179, 189, 192, 202, 205, 213
- renewable resources 347–52, 357
- rent-seeking 405
 - and endogenous timing in contests 158, 161, 162–3, 164–5, 166, 167, 168
 - and intellectual property 372–4, 377, 387, 391
- repeated games 44, 46, 64, 77, 80, 424, 441, 454–5, 457, 460, 461–2, 468

- replicability 453
- reputation formation 465
- reputational penalty 246
- reservation price 179, 182, 188, 196, 197, 204–5, 207, 223, 326–7, 328–9, 339
- revealed preference principle 503
- revenue equivalence theorem 318, 319, 320–21, 330, 332
- Rey, P. 60, 65, 102, 269, 271
- Reynolds, S. 327, 467
- Riegler, C. 277–8
- Riis, C. 133, 142
- Riley, J. 132, 332
- ringleaders (cartels) 64, 75–6, 81–3
- risk-adjustment system 404, 411
- risk dominance 60, 168
- Robert, J. 186–7
- Robert, M. 497–8, 499
- Roberts, J. 466, 503
- Röller, L. 28, 505
- Rose-Ackerman, S. 421, 430
- Rosen, S. 37, 135, 375
- Rosenthal, R. 181–2
- ‘routine’ R&D 502
- RPM (resale price maintenance) 102, 271

- saddle point stability 341, 343
- Salant, S. 7, 10, 12, 13, 17, 354, 355
- Sandonís, J. 21–2
- Sassenou, M. 484–5
- Sauvagnat, J. 62, 65
- Schankerman, M. 370, 371
- Schargrodsky, E. 444
- Schelling, T. 165–6, 248
- Schneider/Legrand case* (2003) 115
- search ad auctions 324–6
- search cost heterogeneity 178, 203, 206–8, 211–12
- search frictions 177, 178
- second-mover advantage/incentive 153, 154–5, 164, 165, 169, 267
- second-order conditions 138, 227, 292, 303
- second price auctions 320, 323, 324–5, 327, 331, 332, 333–4
- ‘self-fulfilling prophecies’ 291, 296
- self-reporting 59, 60, 62, 63, 66, 75, 78, 79–80, 81, 85
- seller investment incentives 313–14
- Sengul, M. 249, 263
- sequential mergers 12, 16, 26–7
- sequential-move games 147, 148–53, 154, 155, 159, 163–5, 167–8, 169
- sequential search 185–6, 189, 194, 196, 205
- Serena, M. 136–7, 138, 141
- service-level selection 405–11, 412
- SFE (supply function equilibrium) model 458
- shadow price 344, 345, 406–7, 408–9
- Shaffer, G. 22, 271
- Shapiro, C. 13, 17, 24–5, 26, 293, 370
- Shelegia, S. 198–9
- Sherstyuk, K. 461, 462
- shill bidding 328–9
- Shleifer, R. 430–31
- Shogren, J. 136, 152, 153–4, 156
- SI (strategically independent) efforts 150, 160, 162
- Sickles, R. 327, 329
- simultaneous-move games 147, 148, 152–3, 155–6, 159, 163–5, 167, 169
- simultaneous search 182–5, 217
- single contract competition 412–13
- singlehoming 300–302, 303–6, 308–9, 310–11, 312–13, 314
- size asymmetries 97–9, 457
- Skaperdas, S. 131, 133, 134, 161–2
- Sklivas, S. 254, 255, 261
- Slutsky, S. 147, 153
- ‘small’ agents 309
- sniping 329–30
- social norms 287, 421, 436
- social planning/planners 241–3, 246, 343–4, 345
- Soetevent, A. 77, 78, 79–80, 81, 82
- soft communication 102
- sophisticated commitment games 166–7
- Sørgard, L. 14, 26–7, 36, 157
- Spagnolo, G. 60, 61, 65, 76, 425
- SPE (subgame perfect equilibrium) 46, 136, 239–40, 242, 260, 352, 456, 466
 - and endogenous timing in contests 147, 151–3, 154–5, 159, 163–4, 165, 166, 168–9
- specific commitment games 165–6
- Spence, A. 228, 244
- SSOs (standard-setting organizations) 295
- Stackelberg games
 - and differential oligopoly games 354, 355, 357
 - and endogenous timing in contests 147, 148, 150, 151–2, 154–5, 163, 165–6, 168
 - and experimental industrial organization 454, 456–7
 - and strategic delegation 250–54, 263, 264–8
- staff rotation 446
- Stahl, D. 178, 186–7, 206–7, 208, 213, 223
- stand-alone utility 290–91, 297
- ‘Standard’ legal framework 77
- standards wars 295–6
- statutory health insurance 404–11
- stealing effect 36, 49, 50, 240–41
- Stern, S. 370, 506
- Stigler, G. 9, 60, 178, 180, 184, 442
- Stiglitz, J. 185, 203, 269, 271, 371, 385, 386, 387

- STIM (Swedish Performing Rights Society) 381
 stochastic invention model 467
 stochastic performance 132
 stock options 259
strangers 454–5
 strategic commitments 248, 260–62, 264
 strategic complementarities 9–10, 38, 130, 141, 459
 and endogenous timing in contests 147–8, 150, 154, 161, 162, 164, 166–7, 169
 R&D models 503–9
 and strategic delegation 255–6, 257, 258–9, 261, 263, 268, 271
 strategic delegation 248–50, 280–81
 alternative vertical restraints 268–9
 and asymmetric information 248–9, 258–9
 and best-reply function 251–3, 255–6, 259, 267, 270
 and Cournot duopoly 249, 251–2, 255–6, 263–4, 279
 decentralization 271–2
 distribution channels 264, 271–3
 and duopoly 249, 251–2, 255–6, 260, 262–4, 271, 272–3, 274, 278–80
 empirical and experimental evidence 263–4
 firm's supply side 277–8
 franchise fees 264, 265, 268–9, 270, 271
 further applications 278–80
 Hotelling models 262, 266, 270
 and incentive contracting 250–64, 274, 279–80
 leader-follower models 261–2, 279
 linear contracts 258, 259–60, 269, 271, 273, 280
 linear wholesale prices 268–9
 manager types 274–7
 manufacturer-retailer bargaining 273, 275
 and marginal cost 250, 252, 258, 265–6, 267, 270, 273–4, 275, 278
 material and behavior payoffs 257–8
 model assumptions and extension 254–64, 268–73
 observability of contracts 260–62, 269–71
 Oligopolistic markets 255–7
 organizational design 277–8
 owner-manager bargaining 262–3
 performance measures 259–60, 281
 and price competition 255, 259, 262, 267–8, 270, 274, 278–9, 280
 and product differentiation 255, 260, 264, 265, 272, 273, 274, 280
 product market competition 260, 274–5, 280–81
 and quantity competition 255, 259–60, 267, 270, 272, 273, 274
 and R&D 262, 272, 274, 278–9, 280
 and Stackelberg games 250–54, 263, 264–8
 and strategic commitments 248, 260–62, 264
 and strategic complementarities 255–6, 257, 258–9, 261, 263, 268, 271
 and strategic incentives 249, 251, 255, 265–6, 272–3, 274–5, 278–9, 280
 and strategic substitutes 253, 258, 263, 267, 271, 280
 and strategic transfer pricing 273
 take-it-or-leave-it contracts 262–3, 273
 vertical separation 249–50, 264–73
 strategic divisionalization 271–3
 strategic incentives
 and endogenous timing in contests 148, 156, 159, 161, 162–3, 164, 169
 and strategic delegation 249, 251, 255, 265–6, 272–3, 274–5, 278–9, 280
 strategic risk 60, 65, 67, 81
 strategic substitutes 9–10, 130, 459
 and endogenous timing in contests 147, 150, 154, 161, 162, 164, 166, 169
 and strategic delegation 253, 258, 263, 267, 271, 280
 strategic transfer pricing 273
 strategic uncertainty 103
Strategies of Commitment 248
 Strauss, Richard 384
 strict liability regimes 226–9, 230–36, 244–5, 246
 structural screening approach 109
 submodular games 148, 257
 'success breeds success' hypothesis 476, 493, 494
 sunk costs 17, 157, 429, 476, 478, 484, 493
 supermodular games 148, 257, 504
 'superstar effect' 375, 377, 382
 supply function competition 454, 458, 459
 sustaining collusion 95–6, 97, 98, 99–100, 101–6, 109, 112, 116, 118–19, 120
 Svensson, J. 440, 443
 symmetric beliefs 269–71
System Test 505
 tacit collusion 91–2, 94–5, 98, 102, 108–9, 115–20, 434, 455, 458, 459–61
 Taiwan Fair Trade Commission 68–9
 Takalo, T. 483–4
 take-it-or-leave-it contracts 262–3, 273
 technological inputs/outputs 476, 481, 485, 491, 492–6
Tetralaval/Sidel case (2003) 115
 TFP (total factor productivity) 475, 485, 487–8, 489, 493, 495
 'thicket effect' 371
 three-stage games 15, 48
 ties (contest success function) 130–31

- Tirole, J. 422, 423, 437
top cartels 34, 39–41, 54–6
‘top dog’ strategies 253, 267
Topkis, D. 503, 504
total search costs 191, 212, 213, 219–20
Toulemonde, E. 311, 312, 313, 314, 315
trading platforms 288, 314
tragedy of the anticommons 370, 373
tragedy of the commons 347, 352, 370
transparency 101–2, 103, 104, 110, 115, 117, 118
Transparency International 439
transportation costs 8, 22, 264–5, 301–2, 400, 401, 403, 408, 413
TRIPS (Trade-Related Aspects of Intellectual Property Rights) agreement 385, 386
Tullock contests 129, 133, 138, 139, 140, 151, 153, 157–9, 160
Tullock, G. 125, 129
two-part tariffs 20–22, 264, 268–9, 272, 273, 308–9
two-stage games 18, 75, 158, 166, 167, 272, 325, 392, 491
- Uber 290
UK Competition Commission 109–10
unbranding 47
unexpected demand shocks 100
unilateral effects 9, 91, 93, 105, 107, 114, 116
unilateral precaution 225–9
unobserved heterogeneity 506–7, 508
upstream input markets 275–7
upstream mergers 19–22
- Várdy, F. 168, 169, 456
Varian, H. 179, 181, 206–7, 213, 223–4, 324–5, 384
variance screen (of collusion) 110
Vasconcelos, H. 13, 17
VCG (Vickrey-Clarke-Groves) auctions 318, 321–3, 324–5, 327, 330–31, 332, 333–4
Verdier, T. 423, 427
verifiability 465
vertical mergers 7, 106–7, 120
vertical product differentiation 211, 237, 399
vertical separation 249–50, 264–73
vertically differentiated markets, collusive agreements in 34–5, 50
cartels 34, 35–6, 37, 39–44, 50, 53–6
coalitions 35–6, 40–41, 42–4, 48–50
cooperative approach 42–4
duopoly 35–7, 49
endogenous mergers and alliances 47–50
full price collusion 39–40
mergers 36–7, 47–50
n-firm markets 37–42
non-cooperative approach 44–7
partial cartels 34, 35, 37, 40–42
whole industry agreements 42–7
vertically related industries 8, 19–22
Veugelers, R. 507–8
Vickers, J. 28, 259, 264, 274, 357, 467
Vishny, R. 430–31
von Stackelberg, H. 147, 165–6
voracity effect 351
Vroom, G. 263, 279
Vuong, V. 497–8, 499
- Waelbroeck, P. 377, 379
Waldfoegel, J. 34, 380
Waldman, M. 375, 378–9
Wandschneider, F. 64, 81, 82, 85
war/attrition models 157
Wärnerud, K. 137, 164
Watts, S. 279–80
weakest link contests 138
Weitzman, M. 178, 200–201, 203, 210, 212
welfare 133, 292
and consumer search 180, 184–5, 192, 193, 195
and differential oligopoly games 339–41, 343, 345, 351–2, 357, 358–9, 361
and horizontal mergers 8, 16, 17, 19, 20, 21–2, 24–9
and intellectual property 367, 369, 371, 372, 375–7, 379–80, 381, 382, 386, 391–3
and leniency in cartels 57, 58, 78–9, 80, 83, 84, 86–7
and products liability 228–9, 231–2, 235, 244
Wernerfelt, B. 271–2
WGIs (Worldwide Governance Indicators) 439
Whinston, M. 27, 29, 30
‘whistle-blowing’ 426, 446
Williams, J. 328–9
Williamson, O. 8, 27
willingness to pay 15, 17, 37, 375, 379, 424–5
and auctions 326, 330, 331
and consumer search 200, 202, 212
and network effects 292, 294, 297, 298, 303, 306, 313
and products liability 226, 227, 237, 239–40, 241, 244, 245–6
and strategic delegation 274, 275, 281
Wilson, R. 320, 333
within-group network effects 287, 288–90, 297, 308, 310–13
Wolinsky, A. 20, 21, 179, 187, 189, 198, 201, 208, 213
Wooders, J. 327, 332

Woodpulp case (1988) 110
Wooldridge, J. 494, 495
World Bank 439
Wright, J. 300, 313
WTO (World Trade Organization) 386

Xepapadeas, E. 359–60
X-inefficiency 345

Yang, C.-L. 151, 152–3
Yildizparlak, A. 131, 136

Zang, I. 7, 15–16
Zhou, J. 71–2, 73, 74, 192
Zhou, V. 17–18
Ziss, S. 14, 20, 272, 279

