

Index

- abuse of a dominant position
 - European Commission's approach to 263, 267–76, 277, 279, 341
 - German NRA's power to act on 220
- Accent 236, 242
- access pricing
 - cost plus principle 228, 229, 277–8, 279
 - in Germany 219, 228, 229, 272–3, 277
 - in the Netherlands 221, 228, 229
 - PCR and 12–14
 - retail-minus principle 228, 229, 277–8, 279
 - in Spain 224, 228, 229
 - strategies to deter (inefficient) bypass 125–31, 132–3
 - Third Postal Directive and 276–9, 346
 - in UK 226, 227, 228, 229, 230, 277–8
- accounting and cost
 - accounting implications of the EU's Third Postal Directive 338–50
 - data requirements for cost accounting in the mail communication system 370–83
 - economies of scale in mail processing 315–35
 - tradeoffs in product costing 352–65
- Africa *see* Sub-Saharan Africa, postal services in
- age, customers'
 - and demand for mail 78, 82–3, 84
 - and service quality demanded 110, 112, 117
- Aghion, P. 76
- AKZO case 341
- Albion Water Limited v Water Services Regulation Authority* 278
- Alesina, Alberto 76, 85
- allocative efficiency 6
- Ambrosini, X. 30, 47, 108
- Amerlynck, B. 168, 171
- Ansón, J. 295, 296, 306
- antitrust legislation 6, 253
- Aoki, Masahiko 22
- Arellano, M. 295, 303, 304, 309, 311
- Armstrong, Mark 136, 137, 295, 301, 302
- Arthur D. Little, Inc. 45
- Article 82 (EC) 263, 269, 272, 273, 275, 277, 279, 341
- Attheraces v British Horseracing Board* 272
- auditing requirements 342–3
- Australia, post offices in 37
- Austria and Austrian Post
 - automated sorting in 132
 - company turnover and demand for mail in 98
 - post offices in 37
 - privatization in 11
- automobile navigation systems 189
- average variable costs, pricing below 268, 341
- Awerbuch, S. 372
- BAA (London Airports) 241, 242
- bakeries 49, 50, 54
- Balogh, T. 234, 242
- Bank of America NSA 213
- Bank One/Chase NSA 200–201, 206–8
 - changing circumstances affecting 209–11
 - marketing campaigns and 212
- banks
 - accessibility in France 49, 50, 52–3, 54, 57
 - distribution in Italy 43–5
 - mail sent by 26–7, 136, 141
 - mergers 206–8, 209–11
 - public infrastructure investments financed by 40
 - self-delivery and collection by 300
- Banque Postale* 49, 52
- bar codes 379
- Barro, R.J. 76
- Baumol, William J. 8
- Belgium
 - post offices in 37
 - service quality incentives in 242
- Bénabou, R. 76
- Bernard, S. 30, 345
- Bertrand equilibrium prices 129
- Billette de Villemeur, Etienne 16, 127
- binary choice problems 111
- Blinder, A.S. 78
- Bloch, Francis 125, 127, 134, 182
- Boldron, F. 30, 31, 167, 168, 171
- Bolton, P. 76
- Bond, S. 295, 303, 304, 309, 311
- Bosch, Christian 92, 98
- Bourguignon, H. 244
- Bozzo, A.T. 316, 318, 319, 321, 326, 335, 375, 381

- Bradley, M.D. 335, 372, 373
 Braeutigam, Ronald R. 7–8
 brand loyalty 121
 Brealey, R. 244, 245
British Airways plc v Commission 263, 269–70, 271
 British Telecom 7, 242, 243
 broadband 95, 121, 347
 BT 7, 242, 243
 Bulgaria, licensing regime in 284, 290
 bulk mail
 companies focusing on 222, 226, 227
 competition in 45, 225, 227, 228, 252
 equivalent terms of access for 277
 USO and 347
 VAT on 220, 222
 zonal pricing for 345
Bundeskartellamt 219
Bundesnetzagentur 196, 198, 219, 220, 221
 Burns, P. 121
 Bush, George W. 249, 253
 business cycles 96, 102
 Business-to-Business (B2B) mail flows
 demand for
 company turnover and 98
 economic and demographic dispersion and 74–6, 79–84
 own price elasticity of demand 96–7
 substitution by electronic communications 91, 93, 94, 95–8, 103, 104
 trends in 75, 89, 90, 95
 and network externalities 301–2
 parcel business lost by USPS 5
 Business-to-Consumer (B2C) mail flows
 companies focusing on 222–3, 227, 229
 demand for
 economic and demographic dispersion and 74–6, 79–83
 own price elasticity of demand 99–100
 substitution by electronic communications 91–2, 93, 94, 98–101, 103, 104, 264
 trends in 75, 89, 90, 95, 98, 263
 network externalities in Sub-Saharan Africa 301, 303, 306
 Businesspost 222, 223
 bypass
 prices, volume and welfare with entry through 155–60, 166
 pricing and investment strategies to deter 125–34
 route-cost profiles and outcome of FMO in bypass model 169–82
 C-licences 220
 C2C mail flows *see* consumers, mail sent by
 CAA *see* Civil Aviation Authority (CAA)
 call externality 28, 33, 34
 Calzada, J. 16, 244
 capital asset pricing model (CAPM) 233, 237–8
 CAPM alpha risk 239–40, 244
 CAPM beta risk 238–9, 244
 Capital One NSA 199, 200, 203–4, 209
 carrier identification 289
 cash on delivery (COD) 108–9
Cassa Depositi e Prestiti 40
 Castronovo, V. 40
cavallari 39
 Cazals, C. 233
 Cazenave, T. 244
 CEN/TS 15523 (2006) 381, 382
 CERP *see* Committee of European Postal Regulators (CERP)
Chronopost case (2003) 347
 Chu, E. 335
 Citipost 220
City Mail case 274
 Civil Aviation Authority (CAA) 241, 245
 Civil Service Retirement System (CSRS) 255
 Clements, M.P. 64, 69
 club goods 190, 191, 192
 two-sided markets analysis and club effects 300–303
 Coase, R. 46
 Coasian bargain 40–41
 Cobb–Douglas model 376
 Cohen, Robert H. 49, 57, 335, 348, 372
 co-location strategies of competing services 53
 Colvin, J. 335, 372
 Combs, P.P. 47
 commercial services networks
 accessibility in France 48–54
 Commission for Energy Regulation 242
 Commission of the European Communities 189
 Committee of European Postal Regulators (CERP) 291, 339, 340, 343
 common costs, allocation of 339–42, 346, 348
 common pool resources 190, 191
 compensation to customers 234, 243–4
 competition fund 167
 competitive fringe 134, 152
 competitive products 251, 252–3, 257
 complaints 258, 285, 288, 289
 conflict of interest 266–7
 conjoint analysis 108
 consistency principle 339
 consolidation services 218
 constrained access (deferred bypass) 129–31
 investment incentives under 132–3

- convenience stores, mail collection from 109, 110
- conveyance and delivery obligations 287
- coordination costs 378
- Correos y Telégrafos 224, 225
- Correspondence Delivery Law (2003) 118
- 'correspondence' mail, proportion of 380–81
- cost accounting
 - data requirements for, in the mail
 - communication system 370–83
 - requirements in EU 339–42, 345, 346, 348–9
 - see also* product costing, tradeoffs in
- cost causality principle 339, 340
- cost elasticities of cost pools 353, 356–63, 364, 365, 367
- cost-of-service regulation 7
- cost plus principle 228, 229, 277–8, 279
- cost pools 353, 354
- Council of European Energy Regulators 242
- Council of Ministers 167, 275, 279
- counter services 36–7
- courier services 287, 291
- courthouses 49, 50, 53, 54
- CRA 373
- credit/debit cards 27–8, 137, 138, 210, 218
- Cremer, H. 30, 35, 45, 134, 244
- Crew, Michael A. 7, 11, 13, 15, 16, 18, 30, 48, 125, 127, 134, 150, 168, 178, 237, 300, 306, 365, 372
- Critelli, Michael 89
- cross-border mail 273, 274
 - accounting systems for 345–6
- cross-elasticity of demand
 - discount elasticity of first class and Standard Mail 202, 204, 206, 208, 211–12
 - incumbent's letter price and demand faced by entrant 126
- cross-subsidies
 - EU competition law approach to 267–9
 - from low-cost to high-cost customers 4, 5, 26–7, 29, 32–3, 180–81
 - PCR and incentives for 7, 8, 9, 11
 - in two-sided markets 28, 137–9, 145, 146, 147, 307
- Cusack, Thomas 76
- customer complaints 258, 285, 288, 298
- customer direct access (CDA) 226, 228
- d'Alcantara, G. 168, 171
- D-licences 219, 220, 221, 286
- damaged items 243
- data protection 283, 285
- De Donder, Philippe 16, 125, 150, 151, 154, 161, 162, 171, 233
- De Rycke, Marc 100, 112
- delivery costs
 - cost accounting for 375, 377
 - fixed 127, 128–9, 131, 171–2
 - per unit 127, 128–9, 131, 174–6
 - route-cost profiles and market entry under FMO 167–82
- delivery flat rate 139, 140, 141, 145
- delivery frequency
 - demand related to 28, 108, 109–10, 118, 119
 - in EU member states 346–7
 - licensing requirements for 290
 - USO constraint on 169, 170
- delivery mode, demand related to 108
- delivery scheduling 333
- delivery speed
 - demand related to 108, 109, 110, 111, 112, 117, 118, 119
 - see also* next-day delivery
- Delivery Stop Point Density 169, 172–3
- Deloitte 225
- demand externalities 57–8
- demand for mail
 - country-specific fixed effects and 79
 - demand analysis of small package market in Japan 107–20
 - derived from utility of a representative sender 171, 183
 - forecast uncertainty in dynamic models 63–70
 - impact of economic and demographic dispersion on aggregate mail volumes 74–85
 - substitution of letter mail for different sender–receiver segments 89–104
- Denmark
 - ethnic diversity in 78
 - post offices in 37
- Dense Stop Point route profile 168, 171, 172, 173, 174, 176, 178, 179–80, 181
- Deutsche Post AG (DPAG)
 - access to network of 219, 272–3, 277
 - acquisitions by 223, 225
 - European Commission cases against 219, 267–8, 272–3, 277
 - exempt from VAT 220
 - and licensing regime 286
 - and postcode system 195–6
 - Royal Mail agreement with 277
 - scope economies exploited by 5
- DHL/Deutsche Post* 272
- DHL Global Mail 225, 228
- Dietl, Helmut M. 148, 216–17, 218, 222, 230
- Digital* case 275

- direct mail
 - growth rate in EU 264
 - licensing regime applicable to 286
 - physical return to sender 139
 - electronic notification in lieu of 199, 200, 204, 205, 210–11
 - selective discounts to 275–6
 - sender pays postage on 136, 138
 - share of German mail market 221
 - treated as printed matter 221
 - volume discounts for *see* volume discounts
 - in regulated posts
- Discover NSA 200, 204–6, 209
- displacement ratio 155, 164, 171, 181
- Distribution Bar Code Sorting (DBCS)
 - machines 316
- document exchange services 217
 - examples in EU countries 220, 227
 - licensing regime for 220, 286
- Dual route-cost profile 168, 172–3, 175, 176, 177, 178, 180–81
- Dutch Ministry of Economic Affairs 222
- Dutch Postal Act 221
 - new 222
- DX Network Services 227

- E-Communications Network 371
- EC Treaty
 - Article 82 (EC) 263, 269, 272, 273, 275, 277, 279, 341
 - derogations contained in 288
- economies of scale *see* scale economies
- economies of scope *see* scope economies
- ECORYS 216, 219, 225, 230, 291, 293
- ECOSOC 296
- Efficient Component Pricing 252, 258
- El Pais* 224
- elasticity of demand for mail *see* price
 - elasticity
- electronic Address Correction Service (ACS)
 - returns 199, 200, 204, 205, 210–11
- electronic communications
 - penetration of 93, 95, 98, 101, 103
 - substitution for letter mail 23, 107, 222
 - for different sender–receiver segments 89–104, 264
 - see also* email, substitution for letter mail;
 - Internet; mobile phone text messages; telefax; telephone
 - communications
- ELF index 78
- Elkelä, Kari 91, 102
- Elsenbast, W. 108
- email, substitution for letter mail 23, 89–90, 222
 - for different sender–receiver segments 91, 93–104
- email addresses 99, 103
- English Court of Appeal 272
- Entrega en Mano 225
- entry barriers 3, 129, 131, 291, 342
- equiproportional mark-up (EPMU)
 - regulation of mail network operator (MNO)
 - only 150–51, 153, 154, 157, 158–60, 165–6
 - regulation of PO as a whole 150, 153, 155–6, 164
- Ericsson, N.R. 64, 70
- Estache, A. 295
- Estavez-Abe, Margarita 76
- EU Directives
 - First Postal Directive (97/67/EC)
 - accounting implications of 338–9, 350
 - avoided costs principle in 278
 - licensing regimes under 282–3, 288, 289
 - Second Postal Directive (2002/39/EC)
 - accounting implications of 339, 345–6
 - no requirement to grant access under 278
 - non-discriminatory access required by 278
 - Telecoms Framework Directive (2002) 338
 - Third Postal Directive (approved July 11, 2007)
 - accounting implications of 338–50
 - content of 265–7, 274
 - licensing regimes under 282, 283–4, 291
 - and postcode systems 189
 - pricing of access to postal services
 - network 276–9, 346
 - removal of prohibition on cross-subsidies 267–9
 - and scope of competition legislation 279–80
 - subsidies payable from regulator to USP under 170
- Euro Mail Group 223
- European Commission 47, 372
 - Postal Directives *see* EU Directives
 - Postal Notice (1998) 342, 350
 - proportionality principle of 288–91
 - and VAT 220
- European Court of First Instance 267, 268, 269, 272, 277
- European Court of Justice 263, 266, 269, 283, 288, 289, 341
- European Parliament 3, 167, 275, 279, 341, 350
- European Regional Development Fund 47
- European Union
 - Directives *see* EU Directives
 - and application of competition law 263–80
 - see also* Full Market Opening (FMO)

- excludability 190
 in use of postcodes 191, 192
 exemption from penalties 241
 exigent case 255–6
 Express Mail 252
 express services 252, 287, 291
- fair competition 7–8, 252–3, 257
 fake destinations 196
 FEDEX 5
 Felisberto, Càtia 137, 139
 Fenster, L. 383
 Fève, Frederique 97, 100, 301
 FiCom 95
 fidelity rebates 268
 financial exposure limit 241–2
 financial services offered by post offices 40, 45, 46
 financial stability of USPS 250–51, 254–5
Financieel Dagblad 223
 fines 220, 226, 234
 limits on 241–2
 Finland
 econometric models used in 63
 licensing regime in 285, 290
 pay-or play mechanism in 181
 post offices in 37
 reserved area in 264
 Finland Post 63
 first class mail
 cross-elasticity of demand in relation to Standard Mail 202, 204, 206, 208, 211–12
 cross elasticity of demand in relation to telecommunications prices 96
 own price elasticity of demand for 99–100, 102, 201, 202, 204, 205–6, 208, 211
 predicting demand volumes for 65–6, 68
 for volume discounts 200, 201–3, 209–12
 price stability of 251
 service standards for 252, 257
 volume discounts on marketing mail 199–213
 volume shifts between Standard Mail and 203–4, 205, 207, 259
 willingness-to-pay for service quality improvements 242
 First Handling Pieces (FHP), data on 374–5
 First Postal Directive (97/67/EC) *see* EU Directives
 flats sorting
 ML estimate of translog production function 328–9
 production function for 321–3
 returns to density and scale 324–5
- FMO *see* Full Market Opening (FMO)
 forecast uncertainty in dynamic models, applied to demand for mail 63–70
 Fourth Council Directive (78/660/EEC) 342
 France
 accessibility of public services and commercial services networks in 48–54
 definition of USO in 24
 government's general expenditure in 75
 licensing regime in 285–6, 293
 post offices in 37, 47
France Telecom S.A., formerly Wanadoo Interactive S.A. v Commission 268
 franchises 37, 41, 225
 French Competition Council 270
 Friedli, Beat 137, 139
Fromançais case 288
 Full Market Opening (FMO)
 funding the USO under 4–6, 125
 implementing PCR under 11–14
 post-FMO pricing 128–9, 170, 173, 179, 184–5
 pre-FMO pricing 127–8, 170, 173, 184
 regulatory accounting requirements following 338–50
 role of regulation under 6–11
 Fuller, W. 38
 Funderberg, Drew 126
- gas distribution 242, 243
 gas stations 49, 50, 54
 gas suppliers 243
 Gautier, Axel 125, 127, 134, 182
GB-Inno-BM 266
 gender, customers', and service quality demanded 110, 112, 117
 geographic postcodes 191, 192, 193, 195, 196, 197, 198
 German Ministry of Economics and Labour 220
 German Postal Law 219, 267, 272, 277
 Germany
 access pricing in 219, 228, 229, 272–3, 277
 definition of USO in 24
 full liberalization of postal market in 219, 220
 licensing regime in 219, 220, 221, 286, 291–2, 293
 post offices in 37
 postcode system in 192, 195–7
 service quality factors in 108
 VAT regime in 220
 GINI coefficient 77, 80–81, 83–4
 Gleazer, Edward L. 85
 Gleiman, Edward 250

- global price caps 13–14, 127
 Goethe, J.W. 370
 Goicoechea, M.A. 295
 Goldfeld, S.M. 335
 Gori, S. 372
 Government Planning and Results Act (GPRA) (1993) 259
 graveyard spiral 178
 Greater London 345
 Greece, post offices in 37
 gross domestic product (GDP)
 and demand for mail 74, 77, 80, 89, 96, 99, 238–9
 and public services provided 57
 stock market index and changes in 239
 in Sub-Saharan African countries 296
 Grossekkettler, H. 190
 Grossman, Martin 74, 148
 Grouping Index 167, 169, 171
GSK v Commission 272
 Gupta, S.N. 335

 Hall, Peter A. 76
 Hamilton, J.D. 335
 Harding, Matthew C. 74, 77, 83, 92, 97, 100, 102
 Hartley, M. 335
 Hatfield derailment 242
 Hays Management Services SA 273
 Hearn, John 341
 Heino, Aulikki 91, 92, 93, 94, 95, 96
 Hendry, D.F. 64, 69, 70
 Hermanos 225
 Hicks, J.R. 15
 Hill, Rowland 5, 39, 136, 139, 300, 306–7
Hoffman La Roche v Commission 270
 Holt, L. 242, 244
 hospitals 49, 50, 54
 Hotelling's law 53, 141, 143
 households, number of, and demand for mail 79
 HSBC NSA 200, 209
 Hungary, licensing regime in 286–7, 290
 hybrid mail 264

 Ida, T. 121
Ilots 48
 income inequality
 and demand for mail
 baseline panel data model 78–80, 83–4
 differences across developed countries 75
 industrial action 241
 industrial engineering models 365
 inputs, mail products as 26–7
 INSEE 48

 Instrumental Variables (IV) estimator 319, 320, 374
 insurance 240
 integrated mail logistics service 286
 Intelligent Mail 252, 375
 interconnection rates 145
 interest rates 200
 internal benchmarking 376
 Internal Market 264, 338, 348
 International Accounting Standards (IAS) 343
 Internet 30, 45, 79, 80, 91, 92, 137, 138, 196, 378
 Internet access services 268
 Internet search engines 137, 138
 investment
 direct incentives for 126, 132, 133, 134
 inequality and 76
 service quality and 232, 237–40, 244
 strategic incentives for 126, 132–3, 134
 strategies to deter bypass 126, 131–4
 Ireland
 post offices in 37
 service quality incentives in 242
Irish Sugar 271
 Israel, satellite free P.O. boxes in 307
 Italy
 ethnic diversity in 78
 post offices in 36–7, 39–41
 comparison of distribution of post offices and banks 43–5
 service quality incentives in 242
 Iversen, Torben 76

 Jaag, Christian 148
 Japan
 liberalization of postal sector in 117–18, 119, 120
 post offices in 37
 service quality in small package market 107–20
 Japan Post
 privatization of 107, 118, 119
 share of small package market 108
 Japanese Ministry of Internal Affairs and Communications (MIC) 117–18, 119, 121
 Japanese Ministry of Land, Infrastructure and Transport (MLIT) 121
 Jimenez, L. 78, 82, 92
 John, R. 45
 Jones, S. 244
 Joskow, P. 232
 Judge, G.G. 320, 335, 336

 Kappel Commission 45
 Karlsson, Peter 342

- Kay, J. 70
 Kennedy, B.P. 77
 Kleindorfer, Paul R. 7, 11, 13, 15, 16, 18, 21, 22, 30, 48, 125, 127, 134, 150, 168, 178, 237, 300, 306, 335, 365, 372
 Kolbe, A. 244, 245
 Koppe, Peter 92, 98
 Kraus, A. 237
 Kunz, Pieter 230
 Kuroda, T. 121
 Kuznets, S. 76
- La Poste
 conflict of interest within 266–7
 partnerships with commercial storekeepers 58
 retail network and news-stands network of 51
- Labour Distribution Code (LDC) 319
 labour variability 317–18, 326–7
 Laffont, Jean-Jacques 13, 16, 127, 136, 140, 141, 142, 143
 Laspeyres Index 11–12
 leakage discounts 201, 205, 206, 207
 LECG 343, 372, 373, 376–7
 'less restrictive alternative' test 288, 289
- letter mail
 continuing monopoly in US 249, 251, 253
 own price elasticity of demand for 96–7, 99–100, 102, 171
 sorting
 production function for 321–3
 returns to density and scale 324
 substitution by electronic communications 23, 107, 222
 for different sender–receiver segments 89–104, 264
see also Business-to-Business (B2B) mail flows; Business-to-Consumer (B2C) mail flows;
 consumers, mail sent by; first class mail; second class mail
- letter price
 stability of 251, 255–6
 strategies to deter (inefficient) bypass 125–31, 132–3
- level playing field 3, 7, 222, 223, 252–3, 257, 292
- libraries 49, 50, 54
- licences
 regimes in the EU 282–92
 and service quality 234, 236–7, 289–90, 291
 and USO 236–7, 283–4, 291–2
- linear stochastic switching regressions 320
- Linx 353
 Lisbon strategy 47
 Littlechild, Stephen C. 7, 15
 Litzenger, R. 237
 local mail services 217
 examples in EU countries 220, 221, 222, 225, 227, 229
 local and social contribution fund 119
 Logit models 111, 112, 113, 120
 Multinomial Logit models (ML) 121
 Nested Logit models (NL) 121
- London Underground 243
- Lorenz curve 77, 80
- low-income households, and demand for mail 81
- low-volume products, product costs of 364
- Luxembourg, post offices in 37
- Maddala, G.S. 111, 112, 320, 335, 336
- mail communication system, data requirements
 for cost accounting in 370–83
 mail system reference model 370–72
 mailer-generated data 378–82, 383
 postal cost accounting 372–8, 382–3
- mail network operator, (MNO), explicit
 objective functions and constraints for
 regulation of 150–61, 163–6
- mail preparation services *see* consolidation services
- mail processing
 cost accounting for 373–5, 376–7
 returns to scale in 315–35
- mail tracking 236, 243, 259, 286, 379
- mail volume data 376–7, 380, 381
- mailer-generated data 378–82, 383
- MailMerge 223
- Maki, A. 111
- Mäkinen, Mirja 96, 100
- Malta, licensing regime in 287–8, 289–90
- Management Operating Data System (MODS) 315, 318–20, 374–5, 383
- marginal costs of mail processing 317–18, 334
- Margolis, R. 45
- market dominant products 251, 254, 256, 257
- market failure 191, 193, 194–5
- market power of incumbent PO 5, 9, 11, 12, 14
- marketing budgets 211, 212
- Maruyama, S. 117, 120
- mass mail providers 217–18
 examples in EU countries 221, 222–3, 225, 229
- Mayer, T. 47
- McFadden R^2 113
- McHugh, John M. 250

- Mean Squared Error (MSE) 356, 358, 359, 361–2, 363
- measuring service quality 234
- medical laboratories 49, 50, 54
- 'meeting competition' defence 275
- Meltzer, Allan H. 76
- mentally challenged persons 222
- Merewitz, L. 335
- mergers 206–8, 209–11
- Michelin* 268
- Michelin II* 269, 271
- minimarkets 50, 54
- minimum coverage obligations 290
- minimum headroom 226
- Ministry of Transport and Communications
Finland (MoTC) 92, 95
- Miyauchi, T. 111
- mobile phone networks 138
- mobile phone text messages 89–90, 91–2, 93, 95
- mobile phone users 79, 80
- mobile services 41
- MODS *see* Management Operating Data System (MODS)
- Moene, Karl Ove 76
- money order transfer networks (MO operators) 298
- Moniteur Belge 242
- Monte Carlo simulations 64–9
- Moriarty, R. 335, 376
- mortality rates 77
- MoTC *see* Ministry of Transport and Communications Finland (MoTC)
- Multinomial Logit models (ML) 121
- municipalities 198
- museums 49, 50, 54
- Musgrave, R.A. 198
- Myers, S. 244, 245
- Nader, Fouad H. 89, 92
- Nankervis, J. 63, 65
- national full-service providers 218
examples in EU countries 225, 227, 228, 229
- national geographical profile requirement 226, 230
- National Regulatory Authorities (NRAs), regulatory accounting requirements of, in the EU 338–50
accounting implications of functions of NRAs under Third Postal Directive 343–50
determining net cost of USOs 346–8, 349
interoperability of postal networks 345–6
price control 344–5
accounting principles 339
- Neels, K. 326, 335
- negotiated service agreements, (NSAs) 199–213
Bank of America NSA 213
Bank One/Chase NSA 200–201, 206–8, 209–11, 212
Capital One NSA 199, 200, 203–4, 209
Discover NSA 200, 204–6, 209
HSBC NSA 200, 209
Washington Mutual NSA 200, 207, 211, 213
- Nelson, F.D. 335
- NERA 46, 346, 370
- Nested Logit models (NL) 121
- Netherlands
access pricing in 221, 228, 229
development of competition in 222–3
interaction between regulation and 223
licensing regime in 291
mandate of regulator in 222
post offices in 37
reserved area in 221, 223, 264
VAT regime in 222, 223
- network externalities in two-sided markets 27–8, 33–5, 137, 138, 139, 147
negative 305–6
in Sub-Saharan African postal markets 301–2, 303, 305–6, 307
- Network Rail 241, 242
- networked local mail services 217
examples in EU countries 220, 221, 222, 225
- New Zealand, sender pays principle in 139
- New Zealand Post 139
- newspapers 251, 287, 347
- niche services 218
economies of scope utilized by 348
examples in EU countries 221, 223, 227, 229
- Nikali, H. 70, 91, 92, 93, 94, 95, 96, 100, 102
- Nikkei Research Co. 109
- Niskanen, William A., Jr. 8
- non-discrimination principle 189, 226, 265, 276, 278, 279, 346
interpretation of 271–6
- non-geographic postcodes 191, 192, 193, 196, 197
- Norsworthy, J.R. 335
- Norway
ethnic diversity in 78
post offices in 37
- NSAs *see* negotiated service agreements (NSAs)
- objectivity principle 339
- OECD 75, 85
income inequality in OECD countries 75
- Ofcom 245
- Office Fédérale de la Statistique 58

- Ofgem 241, 245
 Ofwat 241, 242
 OPTA 222
 ORR 241
 outsourcing 41, 45, 126, 221
 overnight delivery service 286
 Oxera 48
- package rate, demand related to 109, 110, 111, 112, 113, 117, 118
 Panzar, John C. 7–8, 16, 30, 136, 140, 148, 335, 346, 372
 parcel mail
 abuse of a dominant position in market for 268
 fair competition in 252
 price elasticity of demand for 100
 see also small packet market, Japanese, service quality in
 Pareto optimum 6
 passports 218
 pay-or-play mechanism 168, 174, 181, 285
 PCR *see* Price Cap Regulation (PCR)
 Pearsall, E.S. 320, 332, 335, 336
 peer-to-peer networks 137
 Penny Post 300, 307
 pension obligations 251, 254
 performance-based incentives 213
 periodicals 251, 252, 285, 287, 347
 Perotti, R. 76
 Persson, T. 76
 petrol stations 49, 50, 54
 pharmacies
 accessibility in France 49, 50, 52–3, 54, 57
 link with commercial services 57
 distribution in US 41–2, 44–5
 piggy backing 327
 PIN AG 220, 221
 plant output, measures of 374–5, 376
 P.O. boxes
 cumulated and marginal effects of variations in number of 309–11
 distribution in Sub-Saharan Africa 297, 298
 postcodes relating to 192, 196–7
 pricing arrangements for 136, 139, 145, 147–8
 in Sub-Saharan Africa 295, 298–307
 service quality provided by 305–6
 population size, and demand for mail 79, 94
 portfolio diversification 237, 239–40, 244
 Portugal
 post offices in 37
 service quality incentives in 242
 Post Express 225
 post offices
 accessibility of 47–58, 108, 109, 111, 112, 119, 298, 299
 see also collection points
 comparison of selected countries 37
 cumulated and marginal effects of variations in number of 309–11
 franchises 37, 41
 in Italy 36–7, 39–41
 comparison of distribution of post offices and banks 43–5
 in rural areas 6, 36, 37–8, 40–41, 44, 47, 50–51, 53, 54, 57, 297, 298
 in the US 36–7, 38–9
 comparison of distribution of post offices and pharmacies 41–2, 44–5
 Postal Accountability and Enhancement Act (PAEA) (2006) 249–60
 background to 249–50
 considerations for future of reformed USPS 258–60
 evaluating achievement of goals 254–5
 goals 250–54
 PCR adopted by 15, 208, 249–50, 251, 255–6, 258–9
 Postal Rate Commission restructured as Postal Regulatory Commission under 213, 249
 reserved areas defined in 107
 Postal Directive Committee 291
 Postal Directives *see* EU Directives
 Postal Notice (1998) 342, 350
 postal rate proceedings 316, 317
 postal reform
 and application of competition law in the EU 263–80
 consequences of Postal Accountability and Enhancement Act (PAEA) (2006) 249–60
 and licensing regimes 282–92
 in Sub-Saharan Africa 295–307
 Postal Reorganization Act (PRA) (1970) 208, 213, 253
 postal savings 40
 implicit interest rate on 45–6
 Postal Service Retiree Health Benefits Fund 255
 Postal Services Commission 198
 postcards 93
 postcodes, regulation of, in competitive markets 189–98
 conclusions 197–8
 efficiency from a social perspective 193–5
 postcodes as public goods 190–93
 Postcomm 226, 230, 233, 237, 241, 270, 277–8, 287, 340, 345

- Poste Italiane 38, 40–41, 43–4
- Poverty Line 77
- predatory pricing 263, 267–8, 341, 344
- Premiere One Limited 288
- presorted traffic 169
 - companies focusing on 223, 227
 - cost accounting data affected by 374, 377
 - and mail processing productivity 333
 - predicting demand volumes for 65–6, 68
- Preston, A. 372
- Price-cap regulation (PCR)
 - accounting system for 344–5
 - applied to USPS 249–50, 251, 255–6, 258–9
 - cost of capital used in setting 237
 - demand changes under different structures 238–9
 - efficiency properties of 7–11, 18–22
 - implementing under FMO 11–14
 - and investment incentives 133
 - and regulation of NSAs 208–9, 213
 - service quality incentives within 232, 233, 234, 242, 244*see also* global price caps
- price control, accounting systems for 344–5
- price discrimination 263, 267, 268, 269–76, 277
- price elasticity of demand for mail
 - bank mail 164
 - Business-to-Business (B2B) 96–7
 - Business-to-Consumer (B2C) 99–100
 - Consumer-to-Consumer (C2C) 102
 - first class mail 99–100, 102, 201, 202, 204, 205–6, 208, 211
 - for monopoly USP 171, 301
 - single piece mail 163
 - Standard Mail 202–3, 204, 206, 208, 211
 - in two-sided markets 301
- price leadership 127
- price stability 251, 255–6
- price subsidies
 - justification for 25–6
 - USO funded with 10, 167, 168, 169, 170, 173, 174, 176, 178, 180, 181
 - shadow cost of 169, 173, 181, 184
 - USO funded without 3, 4, 14, 170, 181
- PricewaterhouseCoopers (PwC) 3, 131, 148, 182, 293
- pricing flexibility 5, 6
 - PCR and 7, 11, 12–14
- pricing under entry
 - access, bypass and productivity gains in competitive postal markets 125–34
 - national postal strategies after a full market opening 167–82
- pricing in competitive two-sided mail markets 136–48
 - pricing, welfare and organizational constraints for postal operators 150–61
- Priority Mail
 - fair competition in market for 252
 - sorting
 - returns to density and scale 324, 325
- privatization
 - alternatives to 249, 260
 - and demand for a level playing field 3
 - of Japan Post 107, 118, 119
 - and market dominance 5
 - volume discounts following 199
- Probit models 111, 113
- procaccia* 40
- product costing, tradeoffs in 352–65
 - impact of combining cost pools 356–65
 - impact of costing errors (bias) and uncertainty (variance) 355–6
 - volume variable cost model 353–5
- production functions for mail processing 321–3
 - labour variabilities derived from 326–7
- productivity
 - investment to increase 126, 131–4
 - of USPS 251–2, 256
 - in mail processing 315–35
- profit maximization
 - cost allocation under 342
 - coverage of network under 28, 34–5
 - efficiency properties of PCR for 7–8, 9, 10, 21
 - incentives for USPS 208, 212
 - by retail business (RB) 154, 158–60
 - and service quality 119, 120
- profit sharing 10
- proportionality principle 288–9
 - licensing and 289–91
- pseudo residual claimants 10–11
- PTS 197, 198
- PTT Post 223
- public goods
 - postcodes as 190–93
 - theory of 190–91
 - USO as mechanism for 28–9
- public infrastructure investments 40
- public interest 283, 288
- public procurement policies 348
- public provision of private goods 25
 - justification for 25–6
- public services networks
 - accessibility in France 48–54
 - influence of public services on commercial activities 54–7
 - categories of 49
- Putnam, Robert 85
- PwC *see* PricewaterhouseCoopers (PwC)

- Quandt, R.E. 315, 335
- R^2 83–4, 332
see also McFadden R^2
- radio frequency identification (RFID) tagging 245
- radio and television broadcasting 137–8, 190
- Railtrack 241–2
- Ramsey, J.M. 335
- Ramsey pricing 9, 21, 33, 152, 153, 155, 157, 163–6, 318
- RAND Europe 236, 242
- rate of return regulation (ROR) 7
- RBB Economics 222
- Reay, I. 108, 232, 238, 244
- receiver pays principle 139
- recording industry 92
- redistributive pricing, USO as 24–5
 economic background 25–6
 redistributing in a sender-pays sector 26–7, 32–3
- regional policies
 constraints imposed by 51
 USO as instrument of 29
- registered mail 379
- regulation
 incentive regime for service quality of USPs in the postal sector 232–44
 negotiated volume discounts in a regulated post 199–213
 and pattern of competition in the EU 216–30
 postcodes in competitive postal markets 189–98
 role under FMO 6–11
- regulatory accounting requirements of NRAs in the EU 338–50
 accounting implications of functions of NRAs under Third Postal Directive 343–50
 determining net cost of USOs 346–8, 349
 interoperability of postal networks 345–6
 price control 344–5
 accounting principles 339
 audit 342–3
 cost allocation 339–42
 frequency of preparation 343
 transparency of accounts 339, 343
- regulatory uncertainty 227, 228
- reserved area
 cross-subsidization of universal services outside reserved sector with profits from 267–9
 in Finland 264
 in Germany 219, 264, 277
 in the Netherlands 221, 223, 264
 in Spain 223–4
 in Sweden 264
 timetable for abolition in the EU 264–5
 in UK 225–6, 228, 264
 in US 107
 and USO 3, 4, 30, 47–8, 58, 107
- residual claimants 7, 8, 9, 10, 22, 208, 213
 creating pseudo residual claimants 10–11
- retail business (RB), explicit objective
 functions and constraints for regulation of 150–61, 163–6
- retail-minus principle 228, 229, 277–8, 279
- retained earnings 255
- retiree health benefit obligations 254–5
- retiree pension obligations 251, 254
- returns to scale *see* scale economies
- Richard, Scott F. 76
- Riordan, M. 27, 30, 35
- risk management 161
- rivalry 190
 in use of postcodes 191–2
- Roberts, M. 319, 326, 335, 372, 373, 374–5, 379
- Rochet, Jean-Charles 136, 137, 139, 295, 301, 302
- Rodrik, D. 76
- Rogerson, C. 335
- Rovizzi, L. 244
- Roy, B. 30
- Royal Mail
 access agreements with 226–7, 228, 229–30, 277–8
 cost accounting by 340, 372, 376–7, 382–3
 discriminatory discounting by 270
 licence conditions 198, 227, 270, 277, 279, 287
 rural post offices maintained by 47
 zonal pricing considered by 345
- Runyon, Martin 250
- rural carriers 38, 333
- Rural Free Delivery (RFD) 38
- S-curves 90–91
- Saint-Paul, Gilles 76
- sales revenue maximization 8
 efficiency properties of PCR under 9, 21
- same-day delivery service 286
- Sandd 222–3
- Sappington, David E.M. 8–9, 21, 232, 244
- Sargan test 309
- satellite free P.O. boxes 307
- savings-based cap on volume discounts 199, 200–201, 207, 210, 212
- scale economies
 cost function reflecting 8

- delivery exhibiting 169, 170
- in mail processing 315–35
- selective discounts contributing to 275
- in two-sided markets 138–9
- USO supported by 4, 5
- scope economies 4, 5, 8, 40, 348
- scope of regulatory intervention 236–7
- screens 319–20
- seasonal variations 332, 374
- second class mail
 - cross-elasticity in relation to telecommunications prices 96
 - predicting demand volumes for 65–6, 68, 112
 - price elasticity of demand for 100, 102
 - willingness to pay for service quality improvements 242
- Second Postal Directive (2002/39/EC) *see* EU Directives
- Second World War 76
- secondary schools 49, 50, 54
- Selekt Mail 222–3
- sender pays principle
 - adoption in Italy 39–40
 - adoption in Sub-Saharan Africa 303–7
 - applied by designated postal operators' competitors only 302–3
 - in competitive postal markets 136
 - effect on transactions costs of switching to 305–6
 - origination of 136, 139, 300–301, 306–7
 - redistributive pricing under 26–7, 32–3
 - and total demand for mail 139
- separation of regulatory and operational activities 265–7
- Sertel, Murat R. 21, 22
- service quality
 - bottlenecks due to insufficient 306, 311
 - incentive regime for USPS in the postal sector 232–44
 - core components of regulatory intervention 234–7
 - regulatory incentives 240–44
 - risks to the regulated business 237–40
 - in Japanese small package market 107–20
 - USO and service quality 107, 108, 117–19, 120
 - licensing regimes and 234, 236–7, 289–90, 291
 - outperformance of 242
 - as a product characteristic 232
 - of USPS 252, 256–7
- Sidak, J. Gregory 8–9, 21
- single piece product
 - global price cap on 150, 154, 158–60, 165–6
 - uniform tariffs for 170, 266
- small and medium-sized companies 97–8
- small packet market, Japanese, service quality in 107–20
- SMS messaging *see* mobile phone text messages
- social capital 85
- social insurance 76
- social services provided by POs 119
- social tariffs 25
- social and territorial cohesion 29, 47, 57
- sociale werkplaatsen* 222
- Soininvaara, Osmo 96, 100
- sorting, automated *see* automated sorting
- sorting centres, centralized 131
- sorting networks, rationalization of 131
- Soskice, David 76
- Spain
 - access pricing in 224, 228, 229
 - development of competition in 224–5
 - interaction between regulation and 225
 - mandate of regulator in 224
 - post offices in 37
 - reserved area in 223–4
 - VAT regime in 224
- Spanish Ministry of Development 224
- Spanish Postal Act 224
- Special Mail Services (SMS) 227
- specific egalitarianism 25
- spillovers 189
- spot operators 218, 229
- stamp price *see* letter price
- Standard Mail
 - cross elasticity of demand in relation to first class mail 202, 204, 206, 208, 211–12
 - own price elasticity of demand for 202–3, 204, 206, 208, 211
 - price stability of 251
 - service standards for 252
 - volume shifts between first class mail and 203–4, 205, 207, 259
- state subsidies 339, 348
- statement of mailing submission (SMS) 381–2, 383
- stock market flotations 240
- stock market index 239
- Strack, W.D. 335
- Sub-Saharan Africa, postal services in 295–307
 - free delivery and club effects 303–7, 309–11
 - survey of postal delivery 296–300
 - two-sided markets analysis and club effects 300–303
- subsidiarity principle 24
- substitution effects, nature of 90–92
- substitution models 93–5
- sunk costs 3, 148

- Suresa CIT 225
 Survey Research Center Co. 109
 Sweden
 competition in postal market in 3, 45, 348
 ethnic diversity in 78
 government's general expenditure in 75
 postcode system in 195, 196–7, 198
 reserved area in 264
 single-piece price increase in 5
 Swinand, G. 244
 switching costs 121
 Switzerland
 ethnic diversity in 78
 letter market in 144
 post offices in 37
 sender pays principle in 139, 147
 Tabellini, G. 76
 Takis, W. 335
 taxes 76, 252, 290
 see also value-added tax (VAT)
 technology changes
 and FHP variations 374
 and service quality 238, 252
 and structural changes in the demand for mail 64, 67–9
 and substitution of letter mail for different sender–receiver segments 89–104
 telecommunications
 common costs in 340
 network externalities in 27, 30, 137
 numbering following liberalization 189
 prices in Finland 92, 95
 cross-elasticity of demand for mail in relation to 96
 prices in Germany 92
 self-delivery and collection by telecommunications companies 300
 service quality incentives in 242, 243
 USO in 347
 Telecoms Framework Directive (2002) 338
 telefax 93
 temperature-controlled handling 109
 Teräsvirta, Timo 96
TetraPak case 268
 text messages *see* mobile phone text messages
 Third Postal Directive (approved July 11, 2007)
 see EU Directives
 Thisse, J.F. 47
 Thompson, D. 244
 Thompson, Fred 251
 Thress, T.E. 70
 time-certain delivery service 286
 time horizon 67, 69, 70, 306
 Tirole, Jean 13, 16, 126, 127, 129, 136, 137, 139, 295, 301, 302
TNT/Canada Post, DBF Post Dienst, La Poste, PIT Poste & Sweden Post 272
 TNT Post 5, 221, 222, 223, 227, 228, 230
 tobacco dealers 49, 50, 54
 Tobin, J. 25
 Toledano, J. 295, 296, 306
 Tolley, G.S. 70
 Total Factor Productivity (TFP) 256, 374, 375
 Total Pieces Fed (TPF) 374, 375
 Total Pieces Handled (TPH) 374, 375
 TPG Post UK Limited 277
 tracking and tracing 236, 243, 259, 286, 379
 train operating companies 243
 transactions costs
 between MNO and RB 161
 of data collection and maintenance 378
 of NSAs 209
 PCR and 7, 11
 postcodes and 189, 193, 194
 in Sub-Saharan African postal markets 302, 303
 two-sided markets and 138
 uniform pricing and 30
 of zonal pricing 345
 transfer prices for intermediate services 150–51, 153, 154, 157, 158–60, 165–6
 transparency principle 189, 226, 265, 269, 276, 339, 343, 346
 transport networks, rationalization of 131
 transportation
 cost of 372
 returns to scale in 315
 Treaty of Rome (1957) 47, 288
 Trinkner, Urs 74, 148
 two-sided markets
 changes in liberalized markets 147–8
 network externalities in 27–8, 33–5, 137, 138, 139, 147
 negative 305–6
 in Sub-Saharan African postal markets 301–2, 303, 305–6, 307
 optimal pricing structures in liberalized postal markets 144–7
 postal market as 28, 139–40
 price elasticity in 301
 pricing structures in 137–9, 301
 tying 263, 273
 typing rebates 270
 UK Competition Appeal Tribunal 278
 UK Mail 226, 227, 228, 277–8
 UK Office of Fair Trading 275–6

- uncertainty, cost estimates affected by 355–6, 361–2, 363–4
- unemployment, and demand for mail 76, 80
- uniform price
 - accounting systems and 345
 - adopted in Italy 39–40
 - increase in 5–6
 - limitations in Third Postal Directive 266, 274
 - redistribution achieved through 25, 26–7, 29
 - transaction costs avoided by 30
 - USO constraint on 168, 169, 170
- Unipost 225
- United Kingdom
 - access pricing in 226, 227, 228, 229, 230, 277–8
 - compensation schemes in 243
 - development of competition in 3, 226–7
 - interaction between regulation and 228
 - econometric models used in 63
 - liberalization of postal market in 227, 228
 - licensing regime in 198, 226, 227, 270, 277, 279, 287, 291
 - mandate of regulator in 226
 - outperformance incentives in 242
 - post offices in 37, 47
 - postcode system in 197, 198
 - reserved area in 225–6, 228, 264
 - VAT regime in 226, 228, 230
- United States
 - econometric models used in 63
 - ethnic diversity in 78
 - government's general expenditure in 75
 - mail per capita in 36
 - policy decisions in 107
 - post offices in 36–7, 38–9
 - comparison of distribution of post offices and pharmacies 41–2, 44–5
 - postal reform in *see* Postal Accountability and Enhancement Act (PAEA) (2006)
 - rural carriers in 38, 333
 - see also* United States Postal Service (USPS)
- United States Postal Service (USPS)
 - break-even constraint applied to 199, 208, 255
 - business lost by 5
 - considerations for future of reformed USPS 258–60
 - cost accounting by 340, 353–5, 357, 372, 373–5, 382–3
 - econometric models used by 63, 374, 375
 - efficiency of 251–2, 256
 - electronic Address Correction Service (ACS) offered by 199, 200, 204, 205, 210–11
 - fair competition in competitive products 252–3, 257
 - In-Office Cost System (IOCS) 374
 - long-term financial stability of 250–51, 254–5
 - Management Operating Data System (MODS) 315, 318–20, 374–5, 383
 - bad data in samples 319–20, 328, 330, 332, 375
 - performance reporting by 259
 - post office closures by 38–9
 - preservation of USO 249, 253–4, 257–8
 - price cap regulation applied to 249–50, 251, 255–6, 258–9
 - price stability provided by 251, 255–6
 - Reports 213, 214, 340
 - returns to scale in 315–35
 - service quality and performance of 252, 256–7
 - volume discounts offered by 199–213
- Universal Postal Union (UPO) 297, 299, 310
- universal service compensation fund 283, 284, 286, 339, 348
- Universal Service Obligation
 - and accessibility of the postal retail network 47–58
 - definition of 24
 - determining net cost of 346–7, 349
 - and distribution of post offices in Italy and the US 36–45
 - fixed delivery cost imposed by 127, 133
 - funding of 3, 4–6, 47–8, 57–8, 125, 167–82, 257, 283–4, 290
 - international comparisons of 108
 - licences and 236–7, 283–4, 291–2
 - and network externalities 28, 139, 147
 - preservation by USPS 249, 253–4, 257–8
 - reducing costs of 5, 6, 48
 - regulation and the USO under entry 3–22
 - scope of 5–6, 346–7
 - and service quality 107, 108, 117–19, 120
 - social costs and benefits of 23–30
 - in telecommunications sector 347
 - transferable between operators 239–40
- UPS 5
- UPS v Commission* 267, 269
- Urbandisa 225
- US Congress 249, 250, 252, 259, 260
- US Federal Trade Commission 253
- US Government Accountability Office (GAO) 251
- US Postal Rate Commission 199, 200, 210, 250, 254, 259, 317, 318, 319, 340, 373, 375
- restructured as US Postal Regulatory Commission 213, 249
- US Postal Regulatory Commission 249, 250, 252, 253, 254, 257, 258–9, 316, 317, 318

- US Postal Rate Commission restructured as 213, 249
- US Senate 252
- US Treasury 255
- USO *see* Universal Service Obligation
- USPS *see* United States Postal Service (USPS)
- utility companies, self-delivery and collection of mail by 300

- value-added mail products 219, 221, 224, 379
- value-added tax (VAT)
 - in Finland 95
 - in Germany 220
 - in the Netherlands 222, 223
 - in Spain 224
 - in UK 226, 228, 230
- value chains 371, 373
- Varian, H. 35
- Vickers, John 15
- Virtual Mobile Operators (VMOs) 41
- Vodafone 41
- volume discounts in regulated posts 199–213
- volume variable cost (VVC)
 - cost accounting data requirements relating to 373–8
 - impact on VVC estimates of aggregating cost pools 356–65, 367–9
 - mailer-generated data used for computing 378–82, 383
 - volume variable cost model 353–5
- von Stackelberg games 134, 170

- WACC *see* weighted average cost of capital (WACC)
- Waddams Price, C. 244
- wage maximization, efficiency properties of PCR under 9, 21–2
- walk sequencing/walk route optimization 131
- Waller, Peter 216–17, 218, 222, 230
- Wallerstein, Michael 76
- Wallis, K. 64

- Ward, Benjamin 9, 21
- Washington Mutual NSA 200, 207
 - changing circumstances affecting 211
 - withdrawn by USPS 213
- water and sewerage companies 241, 242, 243, 278, 300
- weighted average cost of capital (WACC) 237–8, 239, 240, 241, 244
- Weisman, D. 240
- welfare state, and demand for mail 76, 82
- Wells, F.J. 335
- WIK-Consult 3, 7, 220, 222, 226, 243, 292, 342, 344, 345, 346, 350
- Wilkes, S.S. 320
- Williamson, Oliver E. 8, 18
- willingness to pay
 - for service quality 6, 108, 232, 234, 235–6, 242
 - in two-sided markets 136, 138
- within-model forecast errors 64, 67, 68, 69
- Wolter, Kirk M. 365
- working family members, and service quality demanded 112, 117
- worksharing
 - agreements in Spain 224
 - meaning of 125
 - PCR and 12–14
- worksharing discounts 12–14, 256, 258, 278, 381
- World Bank 296
- Wright, Julian 147
- wrongly-addressed mail 287, 289
- wrongly-delivered mail 287, 289

- X-efficiency 5, 6, 7, 9
- X factor 12

- Y factor 12
- Yarrow, George 15

- zonal access agreements 227
- zonal pricing 227, 345

