Index

a posteriori recognition models 40, 297
absorptive capacity 148–9, 421, 467
academic mode 23
ad hoc innovation 36–7, 40, 297, 298, 310, 472
adaptive behaviour 115
advisory groups 442
agro-environmental knowledge-intensive services in France 303–21, 324–5, 474
back-up solutions 314
balances of power 318–19
chain of production of information 311
Chambers of Agriculture 324
classical consultant–client relations 309–10
commmercialization and entrepreneurial stage 315–16, 318
competences 308
consolidation or firm growth stage 315–16
contextualization 309
contractual or relational operations 310
coordination 313–14
crystallization or proto-industry stage 315–16, 317, 319
diversity 314
environmental advisory services for farmers 304–307
Info-Terra/Arvalis 307, 311, 315–16, 317, 318, 324
institutions, life cycles and end-user participation 315–19
intellectual processing of knowledge 309–10
just on time constraint 311
knowledge-intensive services (KIS) 303, 304, 306–307, 308–10, 319–20, 324
logistical and information processing operations 310
management style 313–15
NOVATEC 325
organizational implications for end-users 311–12
PLAIMONT Bubble Tag authentication system 325
principal medium of service 309
PROOFTAG 325
robustness 309, 314–15
service characteristics 308–309
technical characteristics 308
user-friendliness 309
values 313–15
Allergie Alpin (Austria) 50
allocative inefficiencies (market failures) 64, 412, 413–14, 415–20, 429, 443, 479, 480
analytical frameworks 11–12, 40
anti-commons effects 176–80, 183–4, 467
APE-INV project 185
application stage 115–16, 118–21
appropriability barriers 421, 474
architectural innovation 35, 39, 40, 41, 48, 50–51, 55, 57–8, 278, 298
arranger 66
assimilation (technologist) approach 39, 40, 423–4, 425–6, 427, 428, 465
associational or symbiotic PPPs 277
asymmetric information and uncertainty 416, 443, 479
Austria 47, 50, 51, 54–5
Allergie Alpin 50
General Hospital of Vienna 233
Serfaus-Fiss-Ladis 51
see also diabetes and defibrillation case studies; passenger transport
availability risk 73
awareness and training 451
Axel patents 178
back-office competences 98–9, 105, 317, 319
back-office innovation 310
balance inefficiencies 474
Bank of Tourism Potential (Slovenia) 32–4, 53, 339, 340, 344–5
barriers 211, 463
appropriability 421, 474
entrepreneurial fit in Denmark 375–7, 378
knowledge-intensive business services (KIBS) 339–41
knowledge-intensive services (KIS) 473, 474
passenger transport in Austria 398–9, 402–403
basic PPPs 275
battery charging points (Norway) 58
Belgium 170, 181
biases 295–7
double 481
industrial 10
market 10
medical 296
technological 10, 296, 426, 467, 480
bilateral cooperation 8
binary divide 475
bottom-up approach 6, 437, 455, 457
France: complex innovation in a hospital case study 297
heterogeneity 471–2
passenger transport in Austria 385, 387, 390, 393–4, 397, 399, 401, 402, 404, 407–408
R&D sector 447
bricolage 36, 40, 297
broad concept of innovation 387
bundling 275
bureaucracy 377, 435
CADUCEE project 288–9
Canada 294
capability deficiencies 418, 444
capacity planning (UK) 46
Care Concept project (Denmark) 259
caretaker mode 6
categories of goods/services based on inherent properties 62
Celorx 180
central actors 125–6, 127, 128–9, 132
Central and Eastern European countries (CEECs) 326
see also in particular Slovenia
central government 23
centrality 126, 127–8
Centre Hospitalier de Valenciennes (CHV) (France) 35, 39, 48, 280, 281–4, 285–8, 292–3, 294
change of state 29
capabilities-based approach 102, 269–70, 308–309, 317
circumstantial PPPs 275
citation premium hypothesis 181–2
classical consultant–client relations 309–10
client-facing competences 97, 105–106
closure phase 119, 120
closure planning 104
club goods 62
clustering 8–9, 42, 129
coefficient 131
high-tech 8
low-tech 8–9
coevolution 79
cognitive distance 235
cognitive service innovation 33–4
collaboration 313, 328
informal 141, 150
inter-organizational 141, 150, 152
Index

theoretical consequences 24–7
see also collaboration and trust in an emerging innovation model; cooperation; patterns of public–private collaboration

collaboration and trust in an emerging innovation model 247–62

competition 78–9, 377
licensed 74, 76

Competitiveness and Innovation Framework Programme (CIP) 439

complementarities 339, 434, 445–6, 463, 470–71, 473, 479

agro-environmental knowledge-intensive services 313

trust and information 476
complex innovation 34–5, 39, 40, 41, 388

complex innovation in a hospital case study (France) 265, 278–98

AHNAC 293

biases of innovation 295–7
bottom-up and top-down innovation 297

CADUCEE project 288–9


combinatory innovation principle 285

conflicting cultures, reconciliation of 291–3

constituent services 285, 288, 289–90

employment statuses 292–3

evolution over time and rationality 94–5

extensive innovation principle 285, 289–90

governance 293

Healthcare Cooperation Groups (HCG) 266, 277, 280

hospital payment system (T2A) 279

hybridization scenario 292

intensive innovation principle 285, 289–90

inter-organizational perspective 279, 281–4, 285

intra-organizational perspective 279, 289–90

leadership, trust and partnership capabilities 293–4

medical innovation 295, 296–7

non-medical innovation 296–7

organizational perspective 284–9

patient pathway model 288
personalization of strategies 294
Plan Hôpital 2007 265, 284, 296
Plan Hôpital 2012 277, 296
Regional Health Agencies (ARS) 266
Regional Hospital Services Agencies (ARH) 265–6, 281
regressive innovation 285
respiratory medicine network 283
Schéma Régional d’Organisation Sanitaire (SROS) 279, 281
skills definition and validation 293
technological versus non-technological innovation 295–6
complexity 39, 468
concept phase 403
conceptual frameworks 11–12
conceptual innovation 34, 49–51, 106
concessions 72, 75
concrete innovations 364
conflict resolution 98
conflicts of interest 211
connectors see enabling actors
consolidation (firm growth) phase 24, 25, 116, 120, 124–6, 471–2
characteristics-based approach 317
knowledge-intensive services (KIS) in France 315–16
passenger transport in Austria 389–90
Prooftag 317
constituent services 271–2, 274, 285, 288, 289–90
construction of innovation networks 234–5
consultants and financial service providers 27
consumer/voter preferences heterogeneity 99–101
contemporaneous standards competitions 91
contextualization 309
contracting out/outourcing 71, 75, 230, 241
contractual or relational service operations 269, 310
convergence process 130–31
cooperation 4, 21, 22–7, 31, 70, 79, 353–4
agro-environmental knowledge-intensive services 313
bilateral 8
breadth 143, 148–9, 151
facilitation 452–4, 481
integrative approach 412
marginal effects 160–61
public and private actors 22–4
technological 8
coordination 6, 313–14
market 5–6
co-production 38, 40, 42, 341, 414, 468
see also co-production of health innovations
co-production of health innovations 228–44
Austria 232, 233, 235, 236
commensurability and non-rivalry 236, 238–9, 242–3
compatibility 238
competences 236, 242
construction of innovation networks 234–5
critical success factors 238–41
Denmark 232, 233, 234, 239–40
empowerment 229
Europe 229–31, 235, 237
external factors 239–40, 243
financial incentives 239–40
France 232, 233, 234, 236, 240
government policy 231
knowledge services 234–5
meta analysis 231–7
description 231–5
features of innovation networks 235–7
national standards and targets 240
network composition 237
number of partners in each network 236
organizational networks 241
organizational/process innovation 234–5
outsourcing 241
patient-centred model 229–30, 237
preventative medicine 237
professional networks 241
self-management 229
Spain 232, 233, 234
specialist charity and volunteer groups: advocacy role 230–31, 237
Index 491

structural reorganization 239
technology-mediated services 234–5
third sector organizations 228–33, 235, 237, 238–9, 242
total outsourcing 230
trust 238, 243
United Kingdom 232, 233–4, 239, 240–41
Cottrell, Frederick 166–7
CPH West (Denmark) 369–71, 373
credence goods 63–4
credibility of network actors 119, 339
critical incidence technique 362
critical success factors 238–41

crystallization (proto-industry) stage 25, 315–16, 317, 319, 472
cultural factors and values 420, 421
decline phase 116
defibrillation case study see diabetes and defibrillation case studies; diabetes and defibrillation case studies in Austria
degree centrality 123–4, 128
delegating retreat of enabling actor 127–31, 132
delivery partnering (UK) 54
demand 99–100
risk 73
demarcation (service-oriented) approach 39, 40, 296, 423–5, 427, 428–9, 465
Denmark 46, 47, 49, 71
Gribskov 47
health school for illness case study 232, 234, 239
health services sector 232, 233, 234, 239–40
intellectual property 169, 171
see also elderly care case study; entrepreneurial fit in Denmark
Desmond programme 241
DÉTRACE (France) 57–8
development approach 73, 367–71
development model 262
Development Partnership (Denmark) 252–3, 254, 256, 257, 259, 260
development phase 118, 120
defibrillation case study see diabetes and defibrillation case studies in Austria 197–225, 232, 233, 235, 236, 477
Austrian Broadcasting Corporation (ORF) 215–19, 221, 233
Austrian Federal Constitution 204–205
Austrian Red Cross 213, 214–19, 221, 222, 224, 233, 235
commitment of partners 222
defibrillation case 35, 47, 206, 220–21, 222, 223, 224, 232, 233, 235, 236, 313–19
agent competences and roles 218
Austrian Broadcasting Corporation (ORF) 215–19, 221, 233
Austrian Red Cross 213, 214–19
brand creation 216
communication 219
critical events in time perspective 217
demand creation for service package in approaching large companies with subsidiaries 216
demand creation through media campaign 216
drivers of network formation 218–19
human resources creation and Red Cross organizations 217
Ministry for Health 219, 223
multidisciplinarity 219
nationwide organization and predominance of main agents 218
network development 215–18
new service model: key targets in set-up of markets 216–17
new service model: public access defibrillation by means of markets 214–15
new service paradigm: international developments 214
service package supply 216
statistical research, provision of 219
supply creation in call for tenders addressing AED firms 216
win–win situations 218–19
window of opportunity 219
diabetes case 205–13, 220–21, 222
advantages of new service model 213
conflicts of interest 211
critical events in a time perspective 210
discretionary influence 212
Dusseldorf model of structured diabetes training 209–10
evidence base for impacts of new healthcare services 212
financial constraints 211
hierarchical organizations 211
institutional influence 212
key individuals 212
knowledge-intensive services 213
network formation barriers 211
network formation drivers 211–13
new communication settings 212
new service model: competences and roles of agents 207, 208–209
new service paradigm: international developments 207–208
Physicians’ Chambers 207, 208, 210, 211, 212, 213
political support and funding 211–13
preferences of agents 213
public–private network development 209–11
social healthcare insurance fund 207, 208, 209, 210, 212, 213
traditional service model: competences and roles of agents 207
University Clinic Graz 209–10, 213
win–win situations 212
Dusseldorf model 209–10, 222
empowerment 198, 201, 204
externalities 204
governance 199–200
Graz University Clinic 209–10, 213, 222, 224
homogeneity 203
information asymmetry 203–204
institutional innovation strategies 204–206
network formation 220–24
Physicians’ Chambers 207, 208, 210, 211, 212, 213, 221, 222, 224
policy influence 222–3
prevention or preventative medicine 197–8
social embeddedness 199
social healthcare insurance fund 205–206, 207, 208, 209, 210, 212, 213, 221, 222, 223, 224
strategic alliances 200
structural funds 222–3
sub-systems 202–203
supply chain networks 200
diabetes education health study 241
differentiation approach 296
diffusion networks 389, 471
Digital Agenda for Europe 441
Directorates General (DG) Enterprise and Industry 437–8, 439, 442
Directorates General (DG) Information Society 438
Directorates General (DG) Research and Innovation 438
disaggregation 78
diversity 314
DoRIS (Austria) 55
double bias 481
double leadership 454
drivers 463
entrepreneurial fit in Denmark 375–7, 378
health services sector 211–13, 218–19
knowledge-intensive business services (KIBS) in Slovenia 338–9
knowledge-intensive services (KIS) 472–3
New Public Management 473
DuPont 177–9
duration model (patents) 182
dynamics 463
non-linear 79
see also policy developments and measures for enhancement of dynamics
e-skills initiative 441, 451
economic innovation 446
economies of scale and resource
mobility 443
education system 481
educational or pedagogical innovation
363, 365, 368, 469
elderly care case study in Denmark
232, 233, 252–62
Care Concept project 259
common interest 257–8
development model 262
Development Partnership 252–3,
254, 256, 257, 259, 260
Distrust 254–5
doubt 256
facilitation 260, 261, 262
honesty 261
method 253–4
Momentum 253, 254, 259, 260
public–private network 232
respect 261–2
scepticism 256–7
strategic objectives 258–60
trust 261–2
embeddedness 199, 389–90
emergence phase 125
emergent innovation 36, 40
empowerment 198, 201, 204, 229,
454–6, 481–2
EMPTE (UK) 46
enabling actors 122, 123–4, 126, 128,
131, 454
delegating retreat 127–31, 132
passenger transport in Austria
398–9, 402–403
end-user participation 315–19
end-users, organizational implications
for 311–12
Enterprise Europe Network (EEN) 439
entrepreneurial fit 475
entrepreneurial fit in Denmark 349–79
background and motives of partners
to enter networks 365–7
business entrepreneurship 358, 372
competition 377
cooperation 353–4
CPH West 369–71, 373
development of networks and
innovations 367–71
drivers and barriers 375–7, 378–9
empirical data and method 360–62
external conditions, changed 377
extrapreneurs 351, 358
frantrepreneurs 351
full-time or part-time entrepreneurs
358
function of entrepreneurship
371–3
ideology 376
In-Service Training Committee 365,
369–70, 371, 373, 375, 376
innovative efficiency and
institutionalization 373–5
innovative public–private networks
356–7
internal processes within networks
58–9
intrapreneurs 351
life cycle of networks 377
Megaflex 49, 349–50, 361, 362–4,
365–6, 367–9, 371–2, 374–5,
376–7, 378
methodological approach 360
Ministry of Education 365, 366,
369–71, 373, 377
network entrepreneurship 358, 359
new education and training
programmes (NEP) 349–50,
361, 364–5, 369–73, 374, 376–7,
378
public bureaucracy 377
public innovation 352–3
public–private networks as
different from public–private
partnerships 354–6
research question 350–52
roles of entrepreneurs 357–8
social entrepreneurship 357–8, 366,
372, 378–9
social innovation 352
societal problem 376
structural holes 359
third sector, role of 376
weak ties 359
entrepreneurial stage see
commercialization and
entrepreneurial stage
Entrepreneurship and Innovation
Programme (EIP) 439
environmental factors 393
see also agro-environmental knowledge-intensive services in France
environmental pressures 121, 123, 131
EQUAL 331
equity 64
Etourgune (Spain) 35, 50
Europe 37
2020 Strategy 441, 447
health services sector 229–31, 235, 237
intellectual property and university–industry technology transfer 164, 169–71, 181, 183–4, 185
see also patterns of public–private collaboration
European Computer Driving Licence (Slovenia) 53
European Framework Programme (7th) (2007–13) 3, 438, 440, 449
European Innovation Partnerships (EIPs) 447
European Institute of Technology (EIT) 441
ICT Labs 441
European Lead Market Initiative (LMI) 440
European Network of Living Labs (ENoLL) 440
European Science Foundation 185
European Technology Platforms (ETPs) 440, 447, 453
European Union 3–4, 59, 326, 330, 333, 437, 463
awareness and training 451, 452
Council 449
Framework Programmes 3, 438, 440, 449, 453
funds 339
Green Paper on PPPs 327
integrative approach 411, 425
public services and public sector 65
structural funds 331
supply and demand policies 445
support initiatives for SMEs 438
Europeanization of innovation 340
evolutionary inefficiencies 474–5, 479–80
evolutionist approach 115, 426, 428, 459
excludability 63, 64
exit strategies 129
experience goods 63
expert involvement and expert knowledge 415
expert panels 442
exploitation inefficiencies 474
exploitative research 123
exploration inefficiencies 474
explorative research 123
extensive innovation principle 285, 289–90
extensive organizing principle 273
external factors 239–40, 243, 377, 473, 474
external innovation and external knowledge 148–52
external organization interactions 104–105
externalities 64, 204, 416, 443, 479
extrapreneurs 351, 358
fairness 64
farmers’ cooperatives (France) 304, 307, 308–10, 311–12, 316, 317, 318–19
FARMSTAR (France) 51, 303, 305–307, 309–10, 311, 315, 316, 317–19, 324
features of innovation networks 235–7
financial barriers and constraints 211, 481
financial dimension 72
financial matters 68
financial risk distribution 463
Finland 169–70
firm size 142, 148–9, 467
flexibility 79, 339, 341, 455
Flexus (Norway) 58
formalization of arrangements 81–2
formation phase 118, 120, 123–4, 220–24, 471
France 48, 51, 52, 55–8, 72, 449, 470
Galileo Masters 52
health services sector 232, 233, 234, 236, 240
intellectual property 170, 171, 182, 184
National Centre for Scientific Research (CNRS) 234
Nord Logistique 57
public–private partnership for research 232, 234
rehabilitation therapies 234
Sophia 52
Supersonic Imaging 38, 48, 232, 234
transport services sector 408
VIATIC 55–7
virtual reality rehabilitation therapies 232
see also agro-environmental knowledge-intensive services; complex innovation in a hospital case study
franchises 72, 75
franentrepreneurs 351
front-office competences 98–9
fulfilment phase 119, 120
function phase 118–19, 120
funding 450–51
incentives 477
patterns 164–5
Galileo Masters (France) 52
generic policies 437
Germany 209, 449
intellectual property 169, 181–2, 184
Patent Office 170
golden shares 72
Golden Thread (Slovenia) 52, 334–6, 339, 340, 341–2, 345
governance 73, 199–200, 293
government 23, 445
policy 231
see also entries under political green policy agenda 99
Green Public Procurement (GPP) 449
Gribskov (Denmark) 47
growth phase see consolidation (firm growth) phase
Guinet, Jean 448
health innovations see co-production of health innovations
health services sector 13–14, 24, 26–7, 34, 40, 468, 471, 474
case studies 46–8
complex or architectural innovation 39
entrepreneurship importance 475
institutional change 477–8
non-technological innovation 38, 39
policies 469–70
specificities of services 29
technology adaptation 37–8
trust and information 476
see also co-production of health innovations; diabetes and defibrillation case studies; hospital innovation
Healthcare Cooperation Groups (HCG) (France) 266, 277, 280
heterogeneity 101–106, 434–5, 471
consumer/voter preferences 99–101
hierarchical organizations 211, 435–6
High Growth and Innovative SME Facility (GIF) 439
homogeneity 203
horizontal model see bottom-up approach
Horizontal Steering Board (HSG) 442
hospital innovation 265–99
characteristics-based approach 269–70
codified information processing 269
combinatory principle 273–4
competences 269–70, 272
complex or architectural 278
constituent services 271–2, 274
contractual or relational service operations 269
exogenous view 268
framework for analysis of hospital product 271
hospital as a complex package 268–73
innovation-oriented PPPs 275, 278
knowledge processing operations 269
logistical and material processing operations 269
organizing principles 273–4
product as conjunction of vectors of characteristics and competences 270
production-oriented PPPs 274–5
service or use characteristics 272
services definition 269
simple IPPPs 276–8
technological intensification 274
see also complex innovation in a hospital case study (France)
human embryonic stem cells (hESC) 178
Human Genome Project (HGP) 180
human resource management 334–6
Hungary 408
hybridization 24, 292, 298
implementation phase 118–19, 120, 403
impure goods/services 62
In-Service Training Committee (Denmark) 365, 369–70, 371, 373, 375, 376
incentivization 69, 78
incremental innovation 106
inducement 390
industrial biases 10
inefficiencies
balance 474
evolutionary 474–5, 479–80
exploitation 474
exploration 474
network 414, 417, 418–19, 444
systemic 415–20, 444, 452–3
see also allocative inefficiencies
Info-Terra/Arvalis (France) 307, 311, 315–16, 317, 318, 324
information asymmetry 63–4, 203–204
information and communications (ICT) sector 416–19, 437–8, 439, 441, 449, 452, 462
Policy Support Programme (PSP) 439–40
information dissemination 441–4
information intensity 65
infrastructural deficiencies 444
infrastructure approach 73
infrastructure assets 71, 73
infrastructure production 274–5
initiation 118, 120
passenger transport in Austria 390, 391–6, 400–401
INNO-Net: EPISIS project 442
innovation gaps 426, 446, 457
Innovation in Services 442
innovation-oriented PPPs 266, 275, 278
innovative efficiency 373–5
institutional change 474, 478
institutional deficiencies 419–20, 421, 444
institutional innovation strategies 204–206
institutional layering 200
institutionalization 356, 359, 362, 373–5
intangible and immaterial services 414, 425
intangible innovation 33–4, 35, 65
integrative approach 422–3, 426, 427, 428, 429
integrative approach 40, 41, 411–30, 465
absorptive capacity 421
allocative inefficiencies (market failures) 412, 413–14, 415–20, 429
appropriability barriers 421
assimilation approach 423–4, 425–6, 427, 428
asymmetric information and uncertainty 416
capability deficiencies 418
coordination of production and non-appropriability of new knowledge 415
cultural differences 421
cultural and social values 420
demarcation approach 423–5, 427, 428–9
evolutionist approach 426, 428
expert involvement and expert knowledge 415
externalities of knowledge production and non-appropriability of new knowledge 416
financial resources, lack of 421
ill-defined services 414
information and communication technology (ICT) 416–19
infrastructural conditions 419
institutional deficiencies 419–20, 421
intangible and immaterial services 414, 425
knowledge-intensive services (KIS) 416, 418–19, 422, 429
market structure and concentration 417
mutual understanding, lack of 421
network inefficiencies 414, 417, 418–19
organizational competences 418
organizational flexibility 421
proximity-dilemma to the markets 429
R&D 422–4, 429
rationales for science, technology and innovation (STI) policy intervention 412, 414–15
systemic approach 424–5, 426, 428, 429
systemic failures 412, 413–14, 419–20, 425, 429
systemic inefficiencies 415–20
technological bias 426
time horizons 421
intellectual processing of knowledge 309–10
intellectual property rights (IPR) 32, 416, 419, 441, 451, 467, 481
intellectual property and university–industry technology transfer 164–87
anti-commons issue 176–80, 183–4
authorship 174
commercial potential 165
cumulativeness 172–3, 176
disclosure clause 176
dual disclosure 173–4, 175, 178
Europe 164, 181, 183–4, 185
forward citation 180
freedom to operate 174, 180
funding patterns 164–5
IP fragmentation 176, 179
molecular biology 165
natural experiment 178
nature of academic inventions and patents 172–4
Oncomouse 177–8, 179
openness 174
patent ownership model 184
patent-publication pairs 178–9
patenting in Europe 169–71
patenting in United States 166–9
proofs of concepts and prototypes 183
reach-through clauses 176, 177
scientific productivity of academic inventors 175
systemic effects of diffusion 165
United States 164, 171, 180–81, 183–4
value of academic patents 180–82
intensive innovation principle 285, 289–90
intensive organizing principle 273
inter-organizational collaboration 141, 150, 152
inter-organizational perspective 279, 281–4, 285
interactional/KIBS-assisted or Schumpeter 3 model 27
interactive innovation process 30, 36, 65, 70, 388
interconnectivity 79
interlinkages 344
Internal Market for Services 452
Internet and world wide web 1
intra-organizational perspective 279, 289–90
intrapreneurs 351
intrinsic characteristics 96
introduction phase 116
invention networks 471
invisible innovation 26, 32–4, 37, 40–41, 298
predictable and unpredictable 298
ISTAG 442
ISTMT (France) 48
IT risk system (Spain) 47
Italy 170, 182, 184, 207–208
ITS Vienna Region see under passenger transport in Austria
Ixza Volán and Griffsoft (Hungary) 55
Japan 170, 181
Joint Technology Initiatives (JTI) 447, 453
joint ventures 72, 468
just on time constraint 311
Knowledge Innovation Community (KIC) 441
knowledge intensity 142
knowledge processing operations 269
knowledge services 234–5
knowledge sharing 463
knowledge sourcing 162–3
knowledge transfer 475
knowledge-intensive business services (KIBS) 26, 49–53, 105, 229, 452
knowledge-intensive business services (KIBS) in Slovenia 326–46, 474
barriers 339–41
Directorate for Tourism at Ministry of Economy 333
Dnevnik 334
drivers 338–9
ECDL and computer literacy 329–31, 339, 341–2, 345
Employment Service 329
Golden Thread 52, 334–6, 339, 340, 341–2, 345
impact of innovation networks 341–3
Institute for Entrepreneurial Research 336
KIBS 343–5
Maribor University 336
Ministry of Labour, Family and Social Affairs (MLFSA) 329–30
PPPs law 327
Public Agency for Promotion of Entrepreneurship and Foreign Investment (PAEFI) 337
Slovenian Tourist Board 332–4
Venture Factory 53, 336–8, 339, 342, 345
Knowledge-Intensive Services Innovation Platforms (KIS-IPs) 442
knowledge-intensive services (KIS) 14–15, 24, 34, 158, 438, 467, 469
barriers 473, 474
cooperation facilitation 452
drivers 472–3
entrepreneurship importance 475
health services sector 46, 234–5
heterogeneity 471
information dissemination and STI policy improvement 442
institutional change 478
integrative approach 416, 418–19, 422, 429
see also agro-environmental knowledge-intensive services in France; knowledge-intensive business services
knowledge base of firms 148–9, 151
Lead Market Initiative (LMI) 449
leadership 293–4, 476
double 454, 476
learning
conceptual 106
double-loop 106
on the job 36
networks 472
organizations 473
policy instrument 106–107
single-loop 106
social 106
lease 72, 75
Leder, Philip 177
legitimacy/legitimation 98, 339
licence requirements 64
life cycle of networks 6, 24, 25, 315–19, 471, 472
entrepreneurial fit in Denmark 377–8
passenger transport in Austria 388, 389
policy support 456–7
see also life cycle-based taxonomy
life cycle-based taxonomy 113–34
delegating retreat of enabling actor 127–31, 132
emergence phase 125
first dimension 117–21
formation phase 120
spontaneous formation versus planned formation 123–4
fourth phase (fulfilment, closure or sustaining) 119, 120
growth phase 116, 120, 125
growth by attraction versus growth by invitation 124–6
industry life cycle 116
initial phase (preparation or forming) 118, 120
market introduction phase 116
maturity phase 116, 120, 125, 132
egalitarian maturity versus
  hierarchical maturity 126–7
phase model (application stage)
  115–16, 118–21
planned networks 125, 126–7, 128, 130, 131
policy life cycle 116
preferential attachment, growth by
  127–31
product life cycle 116–17
saturation and decline phase 116
second dimension: mode of network
  formation 121–2
second phase (development) 118, 120
spontaneous networks 125, 126–7,
  128, 130, 131
third phase (implementation or
  function) 118–19, 120
limitation principle 115
local regeneration approach 73
lock-outs 90–94, 96–107
consumer/voter preferences
  heterogeneity 99–101
demand side 91–2
policy failure 92–4
political institutions heterogeneity
  106–107
service providers heterogeneity
  101–106
supply side 90–91
logistical and information processing
  operations 310
logistical and material processing
  operations 269
management practices 474
management sciences 36
manufacturing 148–9, 151, 157
market biases 10
market failures see allocative
  inefficiencies
market innovations 392
market power 443, 480
market services in traditional
  innovation networks 27–8
market-type mechanisms 71
marketability 339
marketing innovation 412, 436, 439
maturity phase 116, 120, 125, 126–7,
  132, 471
mechanization 90
median voter model 93–4, 96, 99
medical bias 296
medical innovation see hospital
  innovation
Megaflex (Denmark) 49, 349–50,
  361, 362–4, 365–6, 367–9, 371–2,
  374–5, 376–7, 378
mental frames 102
menu approach 427
merit goods 64
Microsoft 103
  Innovation Centre (MIC) 337
mode of functioning 6
mode of network formation 6, 121–2
Momentum (Denmark) 253, 254, 259,
  260
monopolies 72
  licence 72, 75
  natural or absence of competition 64
moral hazard 69
Moses, Robert 98
multi-agent framework 88–109, 387–8,
  468
  service paradigms 89–90
  TIF case study 94–6
  see also lock-outs
multi-level perspective 389–90
multi-peaked distributions 99–100
multiple embedded case study design
  362
mutual dependence 6
mutual venture 72
Naestved Health School (Denmark) 46
national innovation systems (NIS) 8
National Institutes of Health (NIH)
  178–9
nature of the innovation 37
needs of services, adaptation of
  innovation policies to 451–2
NEP (Denmark) 361, 364–5, 369–73,
  374, 376–7, 378
Netherlands 170
NETS (Spain) 47
network-based innovation 34
health services sector 47–8
transport services sector 55
network competences 473–4
network composition 237
network connections 104–105
network density 124
network development 215–18
Networked European Service and
Software Initiative (NESSI) 440
network expansion or contraction 119
network inefficiencies 414, 417,
418–19, 444, 452, 474–5
networking 70
network partnerships 328
networks and innovation networks
5–6, 72
new business models research 483
new education and training
programmes (NEP) (Denmark)
349–50, 361, 364–5, 369–73, 374,
376–7, 378
New Information and Communication
Technologies (NICTs) 295
new institutional economics 197
new performance indicators 457
new policy model 344–5
New Public Management (NPM) 60,
74, 78, 80, 82, 266, 435
drivers 473
knowledge-intensive business
services in Slovenia 327
passenger transport in Austria 384
New Service Development (NSD) 36
new service model 208–209
key targets in set-up of markets
216–17
public access defibrillation by means
of markets 214–15
new service paradigm 343
international developments 207–208,
214
New Skills for New Jobs initiative 441,
451
New Vocational Training System 38,
49
NNOVA initiative 441–2
non-appropriability see externalities
non-caretaker mode 6
non-excludable goods/services 61, 63
partial 62–3
non-medical innovation 296–7
non-rival goods/services 61
partial 62–3
non-rivalrous commensurability see
commensurable non-rivalry
non-technological innovation 10, 21,
32, 33–4, 38, 40, 41, 42, 436, 457,
468, 481
complex or architectural 39, 295–6
embodied 90
integrative approach 412, 422–3,
426, 427, 428, 429
organizational arrangements, range
of 80
simple 277–8
supply and demand policies 446
Nord Logistique (France) 57
Norway 58, 170, 407
SIS 58
NOVATEC (France) 325
novelty 104

Oncomouse 177–8, 179
open innovation 79, 427, 446, 457
openness of companies 141, 174
Organisation for Economic Co-
operation and Development
(OECD) 8, 448
classification system 308
organizational arrangements, range of
78–81
organizational competences 418
organizational dimension 72, 284–9
organizational experimentation (UK)
54
organizational flexibility 421
organizational innovation 34, 41, 298,
363, 412, 436, 457
agro-environmental knowledge-
intensive services 310,
311–12
health services sector 46–8, 234–5
integrative approach 439
knowledge-intensive business
services and tourism 50, 52–3
passenger transport in Austria 392,
394, 407
supply and demand policies 446
transport services sector 54–8
organizational networks 241
organizing principles 273–4
origin (adoption/production) of innovation 37
outputs 65
outsourcing 71, 75, 230, 241
ownership structures 69
partnership capabilities 293–4
passenger transport in Austria 384–405, 407–408
barriers 398–9, 402–403
bottom-up approach 385, 387, 390, 393–4, 397, 399, 401, 402, 404, 407–408
broad concept of innovation 387
Compano car-pooling scheme 55, 385, 394, 400–403, 407
barriers 402–403
context 400
enablers 402–403
initiation 400–401
lessons learned 403, 404
reconfiguration 401–402
complex and interactive innovation process 388
concept phase 403
consolidation 389–90
diffusion 389
economic arguments 392–3
enablers 398–9, 402–403
environmental aspects 393
Federal Ministry of Transport Innovation and Technologies (BMVIT) 399
guiding research questions 390–91
implementation phase 403
inducement 390
initiation 390, 391–6, 400–401
Intelligent Transport System 385
ITS Vienna Region 54–5, 393–4, 395–400, 404, 407
barriers 398–9
context 395
enablers 398–9
initiation 395–6
lessons learned 399–400
project organization 397
reconfiguration 396–8
life cycle perspective 388, 389
multi-agent framework 387–8
multi-level perspective on regime shifts and embeddedness 389–90
professionalization 389, 404
public mission 392–3
public–private innovation networks 387–9
reconfiguration 389–90, 391–5, 396–8, 401–402, 403, 404–405
social arguments 392–3
socio-technical regimes 386–7, 393, 402, 405
steering committees 397–8
system innovations 386–7
technological developments 391–3
technological niches 386
top-down approach 385, 387, 390, 393, 396–7, 399, 402–403, 404, 407–408
transition pathways 386–7
VEMA 396
VIP Vienna Region 397
VOR 396, 398, 401, 402
working committees 397–8
patents see intellectual property
path dependency 88, 89, 91–2, 100
patient-centred model 229–30, 237
patterns of public–private collaboration in Europe 139–53, 157–63
CIS 2008 143–4
classification of activities 157–8
data and methodology 143–5
descriptive statistics 159
eastern Europe 144–5, 146–7, 150, 151–2, 159–63
marginal effects of cooperation 160–61
marginal effects of knowledge sourcing 162–3
northern Europe 144–5, 146–7, 148–9, 151–2, 159–63
research findings 145–50
ordered logit regression estimates of cooperation 146
ordered logit regression estimates of knowledge sourcing 147
southern Europe 144–5, 146–7, 150, 151–2, 159–63
western Europe 144–5, 150, 151
PCPs 449
performance gaps 426, 446, 457
peripheral actors/specialists 126
PHARE 331
pharmaceutical firms 103–104
Physicians’ Chambers (Austria) 207, 208, 210, 211, 212, 213, 221, 222, 224
planned formation 123–4
planned innovation 35–7, 39–40
planned model 471
planned networks 6, 114, 125, 126–7, 128, 130, 131
policy approach 72–3
policy developments and measures for enhancement of dynamics 434–60
allocative inefficiencies 443
cooperation facilitation 452–4
empowerment of the public and third sector 454–6
information dissemination and STI policy improvement 441–4
policy support over life cycle 456–7
public and private networks for R&D and innovation 447–8
public procurement 448–9
regulation and framework conditions 441
research policy initiatives 438
sectoral initiatives 439–41
strengthening of service-specific innovation and innovation capabilities 450–52
support initiatives for SMEs 438–9
systemic and network inefficiencies 444
policy failure 92–4
policy gaps 446
policy innovation 106
policy-makers’ preferences 97–8
political elections 104
political environment and decision-making 68–9
political institutions heterogeneity 106–107
political support 72, 456–7
and funding 211–13
pre-commercial procurement (PCP) projects 440
predictable innovation 35–7, 298
preferential attachment, growth by 127–31
preparation phase 118, 120
principal medium of service 309
private finance initiative (PFI) 73
private goods 63
private ownership and operation 70–71
private–private collaboration 140, 143
PRO INNO Europe 442
process innovation 34, 54–8, 311, 342, 363, 415
product 29
convention 29
innovation 394
production-oriented public–private partnerships (PPPs) 28, 274–5
professional networks 241
professionalization 389, 404
professor’s privilege abolition 164, 182, 184
programmed innovation 298
programmed networks 6
prospective IPPPs 276
proto-industry stage see crystallization stage
provider 66, 67
provision and production distinction 67
public entrepreneurship 454, 455, 481
public goods 63
public innovation 352–3
public mission 392–3, 473
public ownership and operation 70–71
public policy 15–16, 42
public procurement 448–9, 473
public sector entrepreneurs 104
public services and public sector 65–70
comparison 66
public–public partnerships 23
pure community or user provision 74, 77
pure private goods/services 61
pure public goods/services 61, 71
pure public provision 75
R&D 8, 21, 32, 33, 462, 467
integrative approach 422–4, 429
intensity 141–2, 148–9, 150
lock-out 102
path dependency 89
Index

policies 452
public and private networks 447–8
sectoral initiatives 440
radical innovation 31, 463
lock-out 103, 106
service paradigms 89
rapid application model 37, 297
rationale for public and private services 60–65
reach-through clauses 176, 177
REACTIVE (France) 38, 40, 48
reconfiguration 389–90, 391–5, 396–8, 401–402, 403, 404–405
reductive approach 33
regime shifts 389–90
regressive innovation 285
recessive principle 273
regulation and framework conditions 441
regulatory system and institutions 66
reputation 6, 127–8
research networks 23
research policy initiatives 438
Research, Technological Development and Innovation (RTDI) 448
research-oriented procurements 449
resource-based perspective 142
rhetorical approach 98
rigidity 339–40, 474
risk 103
  aversion 340, 474
  financial 463
  premium demand price 100
  sharing 339
  transfer 73
rival goods/services 63, 64
robustness 309, 314–15

saturation and decline phase 116
scaling 90
Schumpeter II type of innovation 340
sciences, technology and innovation (STI) 23, 31, 412, 413–15, 436, 441–4
scientific productivity of academic inventors 175
second-mover strategy (wait and see) 103
sector-specific measures 437
sectoral initiatives 439–41
Segur (Spain) 50
self-interest 68
self-management 229
self-organization 79
self-organized innovation 39–40
semi-parametric Cox model 182
sequential competitions 91
sequential innovation models (stage-gate models) 40, 297
Serfaus-Fiss-Ladis (Austria) 51
service activities 28
service characteristics 272, 308–309
Service Directive 441
service innovation 30–41, 80
  concept of innovation 31–2
  integrative approach 412
  passenger transport in Austria 394
predictable and unpredictable innovation 35–7
rethinking 483
simple innovation and complex innovation 34–5
strengthening 450–52, 480–81
transport services sector 55, 57–8
types of innovation 37–41
visible and invisible innovation 32–4
service paradigms 89–90
service producer 66
service production 275
service provider competences and interactions 96–7
service provider heterogeneity 101–106
service or use characteristics 272
service-dominant logic 79
service-oriented approach see demarcation
ServPPIN Project 3, 22, 39, 253, 343, 420, 458
simple innovation 34–5, 37–9, 276–8
SIS (Norway) 58
Slovenia 52, 53
  institutional change 478
  see also knowledge-intensive business services (KIBS) in Slovenia
small world network structure 129–31
snob effect 92
social aspects of networks 469
social construction 42
social embeddedness 199
social healthcare insurance fund (Austria) 205–206, 207, 208, 209, 210, 212, 213, 221, 222, 223, 224
social innovation 298, 342, 352, 427, 446, 456, 457, 483
social justice 64
social motivation 68
social network analysis (SNA) 114, 127, 128, 131, 132
social rules, habits, routines and norms 199, 200
socio-technical regimes 386–7, 393, 402, 405
soft innovation 422–3, 426, 427, 428, 429
Sophia (France) 52
Spain 47
Etourgune 35, 50
health services sector 232, 233, 234
IT risk adjustment software tool 232, 234
social network site for health professionals 232
specialist charity and volunteer groups: advocacy role 230–31, 237
specificities: theoretical and policy implications 29–30
spontaneous formation 123–4
spontaneous innovation 39–40
spontaneous model 471
spontaneous networks 6, 114, 125, 126–7, 128, 130, 131
stage-gate models 40, 297
standards policy 481
start-up firms 102–103
state-owned enterprises, sale of 72, 75–6
Steenbock, Harry 167
steering committees 397–8
Stewart, Timothy 177
strategic alliances 200
Strategic Research Agendas (SRAs) 440, 447
strengthening of service-specific innovation and innovation capabilities 450–52, 480–81
structural funds 222–3, 331
structural reorganization 239, 477
sub-market 100–101
sub-systems 202–203
success of networks concept 6–9
empirical studies 7–9
experimental tools for public policies 9
theoretical success 7
Supersonic Imaging (France) 38, 48, 232, 234
supply chain networks 200
support initiatives for SMEs 438–9
sustaining phase 119, 120
Sweden 170
synergies 313, 434, 445, 446, 463, 470–71, 473, 479
synthesis approach 424–5, 465
systemic approach 424–5, 426, 428, 429, 447, 459
systemic inefficiencies 415–20, 444, 452–3
systemic innovation 415, 435
passenger transport in Austria 386–7, 392–5, 398, 404, 407–408
tangible innovation 35
technical characteristics 308
technological alliances see cooperation
technological base of companies 142
technological bias 10, 426, 467, 480
technological cooperation 8
technological developments 391–3
technological innovation 10, 31–2, 33–4, 38, 40, 41, 42, 298, 457, 463, 468
agro-environmental knowledge-intensive services 308
complex or architectural 39, 295–6
embodied 90
health services sector 47–8, 234–5
integrative approach 422–3, 428, 429
knowledge-intensive business services and tourism 50–53
organizational arrangements, range of 80
passenger transport in Austria 391, 393, 407–408
simple 276–7
transport services sector 54–8
technological niches 386
technological paradigm 89
Index

505

technological trajectory 89
technologist approach see assimilation approach
technologist bias 296
technologist definition of innovation 344
technology base of firms 148–9
technology transfer see intellectual property and university–industry technology transfer
technology-mediated services 234–5
temporal variables 29, 69–70, 81–2, 132, 421
territorial dimension 467
third sector organizations 26–7, 41, 435, 468–9, 470
empowerment 454–6
entrepreneurial fit in Denmark 354, 373, 376
entrepreneurship importance 475
health services sector 228–33, 235, 237, 238–9, 242
institutional change 478
organizational arrangements, range of 80–82
service activities 28
supply and demand policies 445, 446
timing see temporal variables
top-down approach 6, 297, 455, 457
heterogeneity 471–2
passenger transport in Austria 385, 387, 390, 393, 396–7, 399, 402–4, 403, 404, 407–408
tourism 26, 34, 49–53, 469, 471
tradable or transferable permits 74, 77
traditional service model 207
training 451, 481
transition pathways 386–7
Transport Innovation Fund (TIF) case study 88, 94–6, 105, 107–109
Association of Greater Manchester Authorities (AGMA) 94–5, 107
Greater Manchester Passenger Transport Executive (GMPTE) 88, 94, 105–106, 107, 109
transport services sector 15, 24, 26, 34, 472, 473, 474
case studies 54–8
entrepreneurship importance 475
external factors 477
lock-out 92, 100
simple and complex innovation 35
trust and information 476–7
trial and error 36
triangulation 362
triple helix model 23–4
trust 6, 81, 119, 152, 293–4, 453
health services sector 238, 243, 261–2
see also collaboration and trust in an emerging innovation model
types of innovation 37–41
uncertainty see asymmetric information and uncertainty
United Kingdom 46, 54, 71, 72, 449
capacity planning case 232, 233–4
diabetes education 229, 232
health services sector 232, 233–4, 239, 240–41
intellectual property 170
lock-out 107
National Research Development Corporation 169
transport 407
United States
Bayh–Dole Act (1980) 164, 168
Court of Appeals for the Federal Circuit 168–9
Diamond v. Chakrabarty case 168
federal land endowments 166
funding 168
intellectual property and university–industry technology transfer 164, 166–9, 171, 180–81, 183–4
Land Grant universities 166–7
Research Corporation 167, 175
Wisconsin Alumni Research Foundation (WARF) 167, 175, 178
university–industry technology transfer see intellectual property and university–industry technology transfer
unplanned innovation 35–7, 39, 40
unpredictable innovation 35–7
user-facing competences 106
user-friendliness 309
values 313–15
cultural and social 420
Public–private innovation networks in services

lambda-type 313–15
sigma-type 313
theta-type 313
varieties of organizational
   arrangements for public services
   supply 70–78
Venter, Craig 180
Venture Factory (Slovenia) 53, 336–8,
   339, 342, 345
VIATIC (France) 55–7
visible innovation 32–4, 37, 41, 298
voter preferences heterogeneity 99–101
voucher systems 73–4, 77
willingness to pay 99–100
win–win situations 212, 218–19
Windrum and Garcia-Goñi model
   96–7, 100, 105, 107
working committees 397–8
World Bank 70
Xpert programme 241