Index

academic spin-offs 47
Acha, V. 139, 166, 168, 170
added-value solutions 76
AEGIS survey 25, 36, 46, 222
dynamic capabilities 144
European Union 68, 73, 74, 75–81
product supply chains 167, 171, 176
age of firm 27, 102, 104
alertness 122, 220
Arundel, A. 168
Austria 203, 204
‘Austrian paradox’ 206
Barcelona target 207, 208
Belgium 203, 204
Bender, G. 228
Benefit of the Doubt (BoD) 198
binomial distribution (Bernoulli) 105
Birch, D. 118, 123–4
‘black boxes’ 210
Brazil 70
Bröring, S. 142
Bush, V. 197, 208, 209
capabilities 44–5, 84, 220–21, 230–31
absorptive 2, 86, 90
bricolage 51
learning 195
managerial 88
organizational 86, 89
production 89
R&D 33
transformational 88, 89, 90
transformative 50–52, 220–21, 231
see also dynamic capabilities
capability-driven pattern 49, 55–7, 61, 62
China 70
clothing sector see textiles and clothing sector
codified knowledge 195
collaboration agreements 31–2, 33
see also technological collaborations
Commission of the European
Community 227, 234
Community Innovation Survey (CIS) 32, 196
company-specific knowledge and
innovation capabilities 220
competence-/capability-building 84
competitive advantage 17, 71, 87, 147
competitive pressure 8, 49, 57–60, 61, 62, 219
competitiveness 22, 74
cost 34, 58, 74
see also impact of KIE on growth
and competitiveness of
European traditional industries
Competitiveness and Innovation
framework Programme (EU) 229–30
complementarity 48, 89
Confirmatory Factors Analysis (CFA) 147, 162–5
constraints on KIE 7–8, 61
cooperative relations 31–3, 53, 56, 89, 147
see also collaboration agreements
copyright 35
corporate entrepreneurship 2, 9, 47, 49, 55–6, 57, 58, 73
cost competition 34, 58, 74
Croatia 26, 74, 145
cultural factors 233
cumulativeness 207
customer-oriented firms 23, 24, 51, 95, 98–9, 145, 221
product supply chains 168–9,
170–71, 174, 176–80, 186
Czech Republic 26, 74, 145, 202, 203, 204
demographic characteristics 27–8

den Hertog, P. 210

Denmark 26, 199, 203, 204

dynamic capabilities 145

Export Council 224–5
growth and competitiveness of
traditional industries 74, 75

patterns of KIE 47, 50, 52, 55

policy measures 224–5

product supply chains 176–80, 186

disembodied knowledge 179, 182, 186

DISKO survey (Denmark) 199
distributed knowledge bases 23, 63

Doing, Using and Interacting (DUI)
199

dynamic capabilities 138–57, 162–5

AEGIS survey 144

alliance-related 163
case-study data, description of 153
Confirmeratory Factors Analysis
(CFA) 147, 162–5
development per case-study firm 155

environmental dynamism 140–41,
143

firm selection criteria 150

firm size 151

food and beverage sector 142, 143,
144, 145, 148–9, 150, 152–6

globalization 142

industrial distribution (sample) 145

innovation 142–3, 151

licensing and contracting out
research 147

market-sensing 145–6, 151–4, 155,
156, 162, 165

methods 144–50

empirical strategy 144

quantitative case studies 148–50
 quantitative survey 144–5
quantitative variables 145–8

technical cooperation agreements
147

networking 146–7, 150, 151, 154–5,
156, 157, 164, 165

new product development (NPD)
146, 151–2, 154, 155, 163, 165

performance measures 148

product differentiation 151

R&D 147, 156, 163

regulatory changes 143

reliability analysis 165

results 150–55

case analyses 152–5

impact of dynamic capabilities on
performance 150–52

social changes 143

strategic alliances 147

technological collaborations 147,
150, 151–2, 154–5, 156, 164,
165

technological innovation 151

technology pressure 142–3

technology-sensing 145–6, 150,
151–2, 154, 155, 156, 162, 165
textile and clothing sector 142, 144,
145, 148–9, 150, 152–6

theoretical background 139–44

relevance of dynamic capabilities
to low-tech industries 139–41

volatility of global environment
142–3

trade liberalization 142

wood and furniture sector 142, 144,
145, 148–9, 150, 152–6

EC Directorate-General for Research
and Innovation 194, 202

eco-innovation 230

educational attainment and expertise
75–6, 83

embodied knowledge 31

entrepreneurial management 138

entrepreneurship 19, 138, 234–5

see also corporate entrepreneurship

environmental changes 166, 175

evironmental dynamism 140–41, 143

Estonia 203, 204

European Commission 89, 199, 205,
228

European Industrial Policy 68

European Union 5–6, 203, 204, 222
dynamic capabilities 144, 145,
148–9

new policy rationale 193–4, 202–06,
208–09

triadic competition with Japan and
United States 208, 209

see also impact of KIE on growth
and competitiveness of

European traditional industries

EC Directorate-General for Research
and Innovation 194, 202

eco-innovation 230

educational attainment and expertise
75–6, 83

embodied knowledge 31

entrepreneurial management 138

entrepreneurship 19, 138, 234–5

see also corporate entrepreneurship

environmental changes 166, 175

evironmental dynamism 140–41, 143

Estonia 203, 204

European Commission 89, 199, 205,
228

European Industrial Policy 68

European Union 5–6, 203, 204, 222
dynamic capabilities 144, 145,
148–9

new policy rationale 193–4, 202–06,
208–09

triadic competition with Japan and
United States 208, 209

see also impact of KIE on growth
and competitiveness of

European traditional industries
Eurostat 175

evolutionary economics 195, 196, 206, 208, 209, 211
exaptation 185
external knowledge sources 30, 37, 76, 86, 89, 179, 182, 186

Fagerberg, J. 82
Faulkner, W. 186
Finland 203, 204
firm-specific knowledge 172, 174, 179, 181, 182, 184
first-movers 47, 88
Fischer, B. 171
food and beverage sector
Denmark 178
dynamic capabilities 142, 143, 144, 145, 148–9, 150, 152–6
Greece 148
growth and competitiveness 69, 71, 72, 75, 85, 88
patterns of KIE 52, 54, 55
policy measures 222, 225, 229
Portugal 96
product supply chains 168, 169, 175, 176–80, 186
footwear sector 70, 96
foreign direct investment 202, 205
France 26, 74, 145, 203, 204
Frascati Manual 198
Friesen, P.H. 140
Fritsch, M. 230
funding/finance 29, 60–61, 221, 222, 224–6, 229–30
furniture sector see wood and furniture sector

Gauch, S. 96
‘gazelle-firms’ 9, 118, 119, 122–8, 235
competitive advantage 127
cost advantages 127
demand, lack of 132
Ekspert 123
entrepreneurial alertness 122
exponential growth and rapid evolution 128–34
financial resources 132
global financial crisis (2008) 124
import of Western goods 127
inflation 123
infrastructure improvements 128
lines of production 128
management recruitment difficulties 132
modernization 125
motivation 133
network effects 133
number of 124
profits, reinvestment of 132
proprietary R&D departments 127
qualitative improvements 127–8
quality of exponential approximation and non-gazelle revenue dynamics 131
resource constraints 132
sectoral structure of population 125
and structural changes 126
training management personnel 132
Germany 26, 145, 203, 204
Export Council 225
growth and competitiveness of traditional industries 74, 75, 85
patterns of KIE 47, 53, 54, 58, 59
policy measures 224, 225
product supply chains 180–85, 186
dynamic capabilities 142, 143, 144, 148
Russia 124
globalization 70–71, 89, 142, 205
globally available knowledge 220
Godinho, M.M. 106
Greece 26, 145, 203, 204
dynamic capabilities 144, 148–9, 150
growth and competitiveness of traditional industries 74, 75, 85–6
patterns of KIE 47, 51–2, 58
Greenhalgh, C. 96
Griffiths, W.E. 96
growth 8, 43, 69
see also high-growth LMT firms in Russia; impact of KIE on growth and competitiveness of European traditional industries
Grupp, H. 198
Knowledge-intensive entrepreneurship in low-tech industries

Heidemann Lassen, A. 9
Heidenreich, M. 89, 167, 168, 170, 171, 176
Helfat, C.E. 140, 144
Henrekson, M. 118
high-growth LMT firms in Russia 117–35
educational and scientific potential 119
innovativeness 117
National Innovation System (NIS) 119, 120, 122
policy implications 134–5
R&D expenditures 117, 118–19, 135
R&D system, collapse of 120–22
researchers, numbers of and R&D intramural expenditures 121
see also ‘gazelle-firms’
high-tech firms 4–7, 18–22, 24–6, 68, 141
high-tech and low-tech manufacturing sectors: differences and similarities 17–38
data and definitions 25–7
empirical results 27–35
demographic characteristics 27–8
formal collaboration agreements 31–2, 33
formation phase 28–9
innovation performance 32–5
knowledge sources 29–31
networking activities in day-to-day firm operations 31, 32
sources of funding for new firm creation 29
firm distribution per country and sectoral group 26
high-tech manufacturing sector 27
low-tech manufacturing sector 27
medium-high-tech manufacturing sector 27
medium-low-tech manufacturing sector 27
sample sectoral distribution 27
theoretical background 20–25
high-tech and medium-high-tech (HMT) industries 4, 5–6, 18–19, 25–6, 28–31, 33–5
European traditional industries 67, 89
Hirsch-Kreinsen, H. 23, 36, 168–9
Hosmer, D.W. 105
human capital 21, 73
see also educational attainment and expertise; labor-skills
human resource policies 205
Hungary 202, 203, 204, 210–11
imitation 134
impact of KIE on growth and competitiveness of European traditional industries 67–90
absorptive capability 86
capacity competitiveness 82, 87
challenges and transformations 69–73
global financial crisis (2008) 69–70
globalization, process of 70–71
technological transformations 71–3
characteristics of KIE and non-KIE firms, differentiation in 77–8
competence-/capability-building 84
demand competitiveness 82, 87
empirical analysis 73–87
AEGIS survey analysis 73, 74, 75–81
case-study analysis 81–7
export intensity, differentiation in 81
firm level 82, 83–5, 86
firms’ performance, differentiation in 79
formal appropriability methods, differentiation in 78
market and sector expansion 86
meso-level 82
new, innovative products and processes creation 83–4
openness to international markets, differentiation in 81
organizational capability 86
policy implications 87–90
firm level 87–8
sectoral level 88–9
predicted performance, differentiation in 80
price or cost competitiveness 82, 84–5, 87
sector level 85–6
sectoral knowledge base, expansion of 85
structural competitiveness 82
technology or technological competitiveness 82, 87
value chain, diffusion into 85–6
incremental innovation 6, 21, 23–4, 43–4, 54–5, 57, 59–60, 175, 235
India 70
Industrial Marketing and Purchasing Group (IMP) interaction model 167, 171
industry knowledge 30
innovation 18–19, 156, 234–5
activities 22
architectural 9, 24, 45, 52, 221, 235
capabilities 83, 220
chain-linked model 197
dynamic capabilities 142–3
dynamics 96
eco-innovation 230
global 36
informal 118
internal 186
linear model 197, 227
market-pull model 197
modular 9, 24, 45, 57, 221, 235
networking 197, 232–3
opportunities 3–4
organizational 2, 34
performance 32–5
policy 221
Portugal 96
process 24, 33–4, 36, 52
product 24, 36
radical 35, 54–5
Russia 134
strategy 86
systems 2–3
technological 72, 143, 151
type 43
see also incremental innovation; new policy rationale; patterns of KIE; science, technology and innovation (STI) policies
Innovation Union Scoreboard (European Innovation Scoreboard) 194, 198, 199–201, 205
intellectual property protection 35, 76, 102, 106–07, 114
internal knowledge see firm-specific knowledge
international cooperation 89
international exposure 79
internationalization 202
see also globalization
investment 69
promotion policies 205
see also foreign direct investment
Ireland 202, 203, 204, 210–11
Italy 26, 74, 145, 202, 203, 204
Japan 70, 208
Jensen, M.B. 199
Johansson, D. 118
KEINS project 21
Key Enabling Technologies (KETs) 89–90
knowledge bases 7, 172
knowledge flows 172, 182
knowledge management 138
knowledge sources 29–31, 179, 182, 186
knowledge-intensive activities 176–7, 180–81, 185
knowledge-intensive business services (KIBS) 21
Krasnikov, A. 96
labor-skills 21, 73–4, 76, 89, 99, 195
Laestadius, S. 208
Latvia 203
lead users 25
learning culture, established 51
learning, exploitative 73
learning-by-doing 23
learning-by-using 23
leather sector 69, 70
Lemeshow, S. 105
Lisbon Agenda 207
Lisbon Strategy 222
Lithuania 203
lock-in situations 207–08
Logit Regression Model 105
Luxembourg 204
main features of KIE 2–4
mainstream economics 195, 207, 209, 211
Knowledge-intensive entrepreneurship in low-tech industries

Makkonen, H. 144
Malerba, F. 1–2, 9, 20, 150
management methods 231
management sphere 134
Mangani, A. 96
March, J. 73
market failure 195, 207, 309
market knowledge 22, 30, 179
market opportunities 56–7, 88
market-driven pattern 24, 49–52, 61, 62
market-shift recognition 145
marketing sphere 134
McKelvey, M. 2, 9, 20, 150
Mendonça, S. 95–6, 171–2, 185, 231
metal sector 145
growth and competitiveness 69, 70, 75, 85
patterns of KIE 52, 53, 56, 58, 59, 61
policy measures 222, 226
product supply chains 168, 169
Miller, D. 140
Millot, V. 96
Mokyr, J. 17
multi-channel interactive learning model (networked model of innovation) 197
multi-establishment firms 107, 108, 112, 113
multidimensional representations 198

Netherlands 203, 204
networking 2–3, 31, 32, 37
dynamic capabilities 146–7, 150–51, 154–7, 164–5
innovation 232–3
Russia 133, 134
new customer demands 220, 221
new customer preferences 60
new firms 106, 108, 109, 110, 111, 114
new innovative firms 72–3
new innovative products and processes creation 83–4
new market segments 88, 221
new markets knowledge 220
new policy rationale 193–213
Community Innovation Survey 196
composite indicators 198, 210–11
derived from theories 195–7
design indicators 198
economic impact of innovation (index) 203
economics of innovation 194–5
European Union 193–4, 205–06, 208–09
evolutionary economics 195, 196, 206, 208, 209, 211
high-tech industries 204, 205–08
HM and MT contribution to trade balance 203
indicators 197–205
innovation activities 197–8
innovation intensity indicators 198
innovation models 197
innovation systems approach 207
Innovation Union Scoreboard (European Innovation Scoreboard) 194, 198, 199–201, 205
innovation-driven structural change 206–07
internationalization dimension 202
knowledge-intensity of economy 203
mainstream economics 195, 207, 209, 211
market failure 195, 207, 309
networked model of innovation 208
new league table: research and innovation performance in EU and associated countries 202–05
OECD 193–4
R&D activities 196, 197–8, 209
R&D dimension 202
R&D indicators 198
R&D intensity 203, 208–09
R&D-based innovation 199
research and innovation performance in EU 203
science, technology and innovation (STI) policies 193, 197, 205, 208, 209
science and technology (S&T) excellence 203
science-push model 206–07, 208
sectoral specialization dimension 202
skill indicators 198, 202
specialization dimension 202
systemic failures 209–11
<table>
<thead>
<tr>
<th><strong>Index</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>systems of innovation approach</td>
</tr>
<tr>
<td>technological indicators</td>
</tr>
<tr>
<td>new policy regulations</td>
</tr>
<tr>
<td>new product development (NPD)</td>
</tr>
<tr>
<td>new production processes</td>
</tr>
<tr>
<td>niche markets</td>
</tr>
<tr>
<td>OECD countries</td>
</tr>
<tr>
<td>four-tier model</td>
</tr>
<tr>
<td>openness</td>
</tr>
<tr>
<td>opportunities for KIE</td>
</tr>
<tr>
<td>organizational concepts</td>
</tr>
<tr>
<td>organizational process structures</td>
</tr>
<tr>
<td>organizational proximity</td>
</tr>
<tr>
<td>original equipment manufacture (OEM)</td>
</tr>
<tr>
<td>Oslo Manual</td>
</tr>
<tr>
<td>paper and printing sector</td>
</tr>
<tr>
<td>Patel, P.R.</td>
</tr>
<tr>
<td>patents</td>
</tr>
<tr>
<td>path-dependency</td>
</tr>
<tr>
<td>fixed 8</td>
</tr>
<tr>
<td>technological transformations in European Union</td>
</tr>
<tr>
<td>patterns of KIE</td>
</tr>
<tr>
<td>academic spin-off</td>
</tr>
<tr>
<td>analytical framework for empirical analysis</td>
</tr>
<tr>
<td>case studies</td>
</tr>
<tr>
<td>complementary factors</td>
</tr>
<tr>
<td>conceptual framework</td>
</tr>
<tr>
<td>corporate entrepreneurship</td>
</tr>
<tr>
<td>determining factor</td>
</tr>
<tr>
<td>empirical findings</td>
</tr>
<tr>
<td>capability-driven</td>
</tr>
<tr>
<td>competitive/sectoral pressure</td>
</tr>
<tr>
<td>complementary factors</td>
</tr>
<tr>
<td>mainly market opportunities</td>
</tr>
<tr>
<td>profound technological knowledge</td>
</tr>
<tr>
<td>specific incremental innovation culture</td>
</tr>
<tr>
<td>transformative capabilities</td>
</tr>
<tr>
<td>intervening factors</td>
</tr>
<tr>
<td>market-driven</td>
</tr>
<tr>
<td>outcome</td>
</tr>
<tr>
<td>architectural innovations</td>
</tr>
<tr>
<td>far-reaching incremental innovations</td>
</tr>
<tr>
<td>mostly modular incremental innovations</td>
</tr>
<tr>
<td>towards ‘radical’ incremental innovation</td>
</tr>
<tr>
<td>science and technology-driven</td>
</tr>
<tr>
<td>entrepreneurial opportunities</td>
</tr>
<tr>
<td>impact of patterns</td>
</tr>
<tr>
<td>incremental innovation</td>
</tr>
<tr>
<td>industrial start-up</td>
</tr>
<tr>
<td>innovation</td>
</tr>
<tr>
<td>intervening factors</td>
</tr>
<tr>
<td>local level of firm and/or actor</td>
</tr>
<tr>
<td>methodology</td>
</tr>
<tr>
<td>data base</td>
</tr>
<tr>
<td>moderating factors</td>
</tr>
<tr>
<td>sectoral system, level of</td>
</tr>
<tr>
<td>theoretical and policy implications</td>
</tr>
<tr>
<td>Pavitt, K.</td>
</tr>
<tr>
<td>Peneder, M.</td>
</tr>
<tr>
<td>performance measures</td>
</tr>
<tr>
<td>Peteraf, M.A.</td>
</tr>
<tr>
<td>PILOT project</td>
</tr>
<tr>
<td>Poland</td>
</tr>
<tr>
<td>policy measures for promotion of KIEs</td>
</tr>
<tr>
<td>awareness and understanding, increase in</td>
</tr>
<tr>
<td>capabilities</td>
</tr>
<tr>
<td>company-specific knowledge and innovation capabilities</td>
</tr>
<tr>
<td>competitive pressure</td>
</tr>
<tr>
<td>empirical findings: limited support from public measures and policy</td>
</tr>
<tr>
<td>LMT-specific support absent</td>
</tr>
<tr>
<td>selective support from multiple policy levels</td>
</tr>
</tbody>
</table>
Knowledge-intensive entrepreneurship in low-tech industries

general recommendations 226, 227–30
globally available knowledge 220
inclusive policies 228–9
innovation networks 232–3
interrelationships between LMT and high-tech, promotion of 233–4
key drivers 219–21
needs of firms, focus on 229
new knowledge, integration and use of 220
opportunities, identification of 220
path-dependency 219
policy recommendations 226–34
reflective approach 219–20, 221
skills and knowledge base improvement 231–2
specific recommendations 227, 230–34
startup funding 224–6, 229–30
technology push 225
transformative capabilities 220–21, 231
Portugal 26, 145, 203, 204
growth and competitiveness of traditional industries 74, 75, 85
patterns of KIE 47, 56, 59, 61
policy measures 225
see also trademark use in Portugal
power-dependence relation 183, 186–7
practical knowledge 22–3, 179, 220
price or cost antagonism 22
principal component analysis 198
printing sector see paper and printing sector
process knowledge, firm-specific 179
process technologies 37
product differentiation 95, 98, 151
product field-specific knowledge 53, 172, 181
product quality and variety 96
product supply chains 166–87
analytical framework 173
attitude 178
business strategy 184
buyer–supplier interactions 171
case studies 175–85
DanCream: customer organization (Denmark) 176–80, 186
E-Thread: supplier organization (Germany) 180–85, 186
Community Innovation Survey (CIS) 170–71
competences 177
conflicts 182–3
cross-sectoral 172
customer-oriented firms 168–9, 170–71, 174, 176–80, 186
demand 170–71
firm-specific knowledge base 172, 174, 181, 184
impact 179–80, 184
innovation-process specialists 168–9
inter-sectoral relations 170
interaction process and its atmosphere 174
interorganizational relations 170, 172
inventor 177
investment and innovation strategies 186
knowledge bases 172
knowledge flows 172, 182
knowledge flows, disembodied 179, 186
knowledge sources 186
knowledge-intensive activities 176–7, 180–81, 185
LMT firm 177, 181
macro-environment and atmosphere 183–4
main driver 181
motivation 181–2
new market niches 169
organizational factors 174
position of firm 186
power-dependence relation 183, 186–7
process specialists 169
readjustment of perspective 170–75
scale-intensive firms 168–9
sector- or product field-specific knowledge base 172, 181
sources of knowledge 179, 182
supplier-dominated firms 168, 170–71, 176, 178, 180–85, 186
technology 186
trigger 178
widely applicable knowledge base 172
work experience 177
Protogerou, A. 31

qualitative analysis 17
dynamic capabilities 139, 144, 156
growth and competitiveness of European traditional industries 82, 87
patterns of KIE 46, 48
product supply chains 175, 176
see also AEGIS
quality competitiveness 74
quantitative analysis 17, 139, 144, 156, 207

R&D
-based product innovation 24
capabilities 33
collaborations 37
cooperation agreements 31, 32
dynamic capabilities 144, 147, 156, 163
expenditure 227–8
external 29
in-house 22, 29–30, 76
indicators 228
intensity 4–6, 18, 26, 35, 72, 231
investment 21, 222
levels 23
product supply chains 184
Russia 117, 118–19, 120–22, 135
see also under new policy rationale reflective approach 219–20, 221
regional development policies 205
regional embeddedness 61
regional proximity 114, 221
relevance of low-tech industries 4–6
reliability analysis 165
revealed comparative advantage (RCA) 70
Robertson, P.L. 166, 168, 171, 172
Rogers, M. 96
Romania 203
Russia 70
see also high-growth LMT firms in Russia
sales and exports 7, 74, 79–80
scale-intensive firms 23–4, 168–9
Schmoch, U. 96
Schubert, T. 198
Schumpeter, J. 2, 18–19, 55, 117
Schwinge, I. 23, 36
science, technology and innovation (STI) policies 193, 197, 205, 208, 209
science and technology-driven pattern 49, 52–5, 61, 62
science-push model 197, 206–07, 208
scientific knowledge 2, 23, 31, 199, 220
sectoral and firm level, differentiations between 6–7
sector-specific knowledge base 172, 181
sensitivity analyses 198
Slovakia 202, 203
Slovenia 202, 203, 204
SMEs 229, 230, 234
Smith, K. 68, 168, 172
social capital 83
sociological factors 209
Spain 203, 240
spin-offs 47
start-ups 47, 55, 57
strategic alliances 147
supplier-dominated firms 168, 170–71, 176, 178, 180–85, 186
Sweden 26, 74, 145, 203, 204
systemic failures 209–11
systems of innovation 2–3
tacit knowledge 195
technical cooperation agreements 31–3
technical process structures 24
technological change 19
technological collaborations 147, 150, 151–2, 154–5, 156, 165
technological diversification/expansion 24–5
technological innovation 143, 151
technological knowledge 2, 22, 53–4, 199
technological opportunities 57
technological product or process bottlenecks 58–9
technological transfer mechanisms 89
Knowledge-intensive entrepreneurship in low-tech industries

- technological transformations 71–3
- technology fusion 24
- see also science, technology and innovation policies; science and technology-driven pattern
- technology-push 52, 225
- Teece, D.J. 138, 141, 145
- textiles and clothing sector 58
- dynamic capabilities 142, 144, 145, 148–9, 150, 152–6
- Germany 180
- Greece 148
- growth and competitiveness 69, 70, 71, 72, 75, 85, 86, 88
- policy measures 222, 225, 229
- Portugal 96
- product supply chains 169, 180–85, 186
- theoretical knowledge 23
- ‘Think small first’ principle 234
- tobacco sector 70, 75, 145
- trade fairs 37
- trade liberalization 142
- trademark use in Portugal 95–115
- asymmetric distribution 113
- bivariate correlation matrix 110
- co-location 109
- data 97–8
- descriptive statistics for variables in regressions 111
- determinants 105–13
- estimation method 105
- hypotheses 105–08
- regression results 109–13
- variables used in regression 108–09
- employer with university degree/business degree (human capital) 101, 107, 108, 110, 111, 112, 114
- firm age, applying for trademarks by 102, 104
- firm-specific variables 114
- genuine and unique character of products 102
- geographical proximity 114
- industry effect 108, 109, 110, 111, 112
- industry, firms applying for trademarks by 100
- intensity of trademarking 102
- inter-sectoral variation 96
- management structures 101–02
- Ministry of Employment 97
- multi-establishment firms 107, 108, 112, 113
- National Institute of Industrial Property (INPI) 97–8
- new firms 106, 108, 109, 110, 111, 114
- number and percentage of firms applying for trademarks, evolution of 99
- patterns 98–104
- product development and branding 102
- Quadros de Pessoal (QP) database 97–8
- recurrent trademark applicant 99, 102, 107–09, 110, 111, 112, 113, 114
- region, firms applying for trademarks by 103
- regional-industry effect 108, 110, 111, 112
- scale of operations 101–02
- trademarks 35, 95–7
- traditional industries see impact of KIE on growth and competitiveness of European traditional industries
- trans-sectoral knowledge 221
- trans-sectoral opportunities 220
- Turnbull, P.W. 171
- turnover of firm 27–8, 34
- United Kingdom 26, 74, 145, 203, 204
- United States 70, 208–09
- unpredictability (uncertainty) 140
- unweighted averages 198
- Valla, J.P. 171
- value chains 70–71
- von Tunzelmann, N. 139, 166, 168, 170
weights, assigning 198
wood and furniture sector 229
dynamic capabilities 142, 144, 145, 148–9, 150, 152–6
Greece 148
growth and competitiveness 69, 70, 71, 72, 75
Portugal 96