

Contents

Preface

- 1 Innovation, Networks and Localities: An Introduction** 1
Manfred M. Fischer and Luis Suarez-Villa

PART A: KNOWLEDGE, INNOVATION AND TECHNOLOGY NETWORKS

- 2 The Innovation Process and Network Activities of Manufacturing Firms**
Manfred M. Fischer
- 2.1 Introduction 11
 - 2.2 Technology, Knowledge and Innovation 12
 - 2.3 The Interactive Character of the Innovation Process 14
 - 2.4 Technology Diffusion, Absorption Capacity and Knowledge Spillovers 15
 - 2.5 Networks and Network Formation 17
 - 2.6 Innovation and Network Activities in the Metropolitan Region of Vienna 18
 - 2.7 Summary and Conclusions 25
 - References 26
- 3 Are Innovation Networks Bounded by Proximity?**
Elsie L. Echeverri-Carroll and William Brennan
- 3.1 Introduction 28
 - 3.2 Static Externalities as a Source of Knowledge for Innovations 30

3.3	Dynamic Externalities as a Source of Knowledge for Innovations	32
3.4	Data	34
3.5	Statistical Results	37
3.6	Conclusions	46
	References	47
4	Globalisation and Territorial Production Systems <i>Denis Maillat and Nicolas Grosjean</i>	
4.1	Globalisation and Territorialisation	50
4.2	Milieu and Territorial Production Systems	52
4.3	Typology of Territorial Production Systems	53
4.4	Evolution of Territorial Production Systems	56
4.5	The Mittelland (Central Plains) Area: A Case Study	57
4.6	Nature and Evolution of the Territorial Production Systems of the Mittelland Area	60
4.7	Conclusions	63
	References	64
5	Clustering, Innovations and Trust: The Essentials of a Clustering Strategy for Scotland <i>Mike Danson and Geoff Whittam</i>	
5.1	Introduction	66
5.2	Innovation and Learning	67
5.3	The Nature of Trust and Co-Operation	70
5.4	The Development of Clustering within Scotland	75
5.5	Local Economy Regeneration Partnerships	76
5.6	The Clusters Approach at the County Level	78
5.7	Conclusions	81
	References	82
6	Interfirm Co-Operation and Learning within SME-Networks: Two Case Studies from the Styrian Automotive Cluster <i>Michael Steiner and Christian Hartmann</i>	
6.1	Introduction	85
6.2	Clusters, Networks and Organisational Learning	86
6.3	The AC Styria (Automobile Cluster): A Brief Description	91
6.4	Case Study 1: Learning in a Just-in-Time Network	94
6.5	Case Study 2: Learning in a Regional Knowledge Network	98
6.6	Summary and Conclusions	102
	References	104

PART B: LOCATION OF KNOWLEDGE-BASED ACTIVITIES AND SPATIAL PATTERNS OF INNOVATION

7	The Location of Knowledge-Based Activities: The Case of Computer Software <i>Rena Sivitanidou</i>	
	7.1 Introduction	109
	7.2 The Study Area and the Survey Sample	112
	7.3 Analysis Methodology	119
	7.4 Linkages to Professional and Technical Labour	120
	7.5 Linkages to Other High-Technology Companies	124
	7.6 Industry-University Linkages	131
	7.7 Industry-Client Linkages	133
	7.8 Transportation Linkages	137
	7.9 Software Company Location: On the Role of Non Productive/Worker Amenities	140
	7.6 Concluding Remarks	144
	Appendix	146
	References	150
 8	 Localised Knowledge Spillovers and Trade Competitiveness: The Case of Italy <i>Stefano Breschi and Daniela Palma</i>	
	8.1 Introduction	155
	8.2 Data Sources and Methodological Issues	157
	8.3 Spatial Patterns of Trade and Innovative Activities	159
	8.4 Localised Knowledge Spillovers and Trade Performance	167
	8.5 Concluding Remarks	177
	References	179
 9	 Innovation and Performance of SMEs in Italy: The Relevance of Spatial Aspects <i>Roberto Camagni and Roberta Capello</i>	
	9.1 Introduction	181
	9.2 Regional Development Patterns and Firms Size: Small is not always Beautiful	183
	9.3 Innovation and Small Firms: Spatial Patterns in Italy	190
	9.4 Contrasting Regional Patterns of Innovative Behaviour	195
	9.5 The Role of Spatial Elements in the Innovation Process: When Small is Beautiful	200
	9.6 Network and Milieu as Vehicles for Innovative Behaviour	205
	9.7 Conclusions and Further Research Directions	207

Appendix	209
References	212
10 Time-Space Patterns of US Innovation - Stability or Change?	
<i>Attila Varga</i>	
10.1 Introduction	215
10.2 Measurement and Data	217
10.3 Industrial and Regional Patterns of High Technology Patenting in the US	219
10.4 Regional Competitiveness of US Innovation Centres	223
10.5 Summary and Conclusions	230
References	232
11 Where are the World's Top 100 LT. Firms and Why?	
<i>R. D. Norton</i>	
11.1 Introduction	235
11.2 The PC Divide	236
11.3 The Locations of the Top 100	240
11.4 Silicon Valley: A Cluster of Younger Firms	244
11.5 Industrial Evolution: How Texas Became the PC State	249
11.6 Microsoft, Standard-Setting, and Increasing Returns	250
11.7 Europe's Potential	253
References	255
 PART C: INNOVATIVE INFRASTRUCTURES, TECHNOLOGY POLICIES AND REGIONAL DEVELOPMENT	
12 The Adoption of New Communications Technologies by Firms in Rural Areas: A Scottish Case Study	
<i>David Newlands and Melanie Ward</i>	
12.1 Introduction	259
12.2 The Balance of Centralising and Decentralising Forces in Rural Areas	260
12.3 Telecommunications in the Scottish Highlands and Islands	262
12.4 The Use of Telecommunications in the Highlands and Islands: Survey Results	264
12.5 Conclusions and Policy Issues	269
References	270

13	Innovative Forms of Regional Structural Policy in Europe: The Role of Dominant Concepts and Knowledge Flows	
	<i>Arnoud Legendijk</i>	
13.1	Introduction	272
13.2	Knowledge and the Development of Regional Policy	273
13.3	Knowledge and Actor Positioning	277
13.4	Tracing Concepts: The Case of 'Clusters'	280
13.5	The Development of the Cluster Concept in the Academic Domain	282
13.6	The Cluster Concept in the Policy Domain	285
13.7	The Concept of Clusters Shaped in Practice: Clustering in the UK	288
13.8	Clustering in Germany: Nordrhein-Westphalen and Baden-Württemberg	290
13.9	Clustering in Spain: The Basque Country	292
13.10	Concluding Remarks	294
	References	296
14	Regional Technological Distance and Catching Up	
	<i>Maurice J. Oude Wansink and Hans Maks</i>	
14.1	Introduction	300
14.2	Regional Convergence in the Netherlands	301
14.3	Different Types of Catching Up	304
14.4	The Optimal Input Structure and Technological Distance	306
14.5	GDP per Worker and Technological Distance	309
14.6	Regional Industrial Structures	311
14.7	Conclusions	312
	Appendix	314
	References	317
15	Concluding Remarks	
	<i>Manfred M. Fischer, Luis Suarez-Villa and Michael Steiner</i>	318
	Subject Index	323
	Author Index	327
	List of Contributors	335