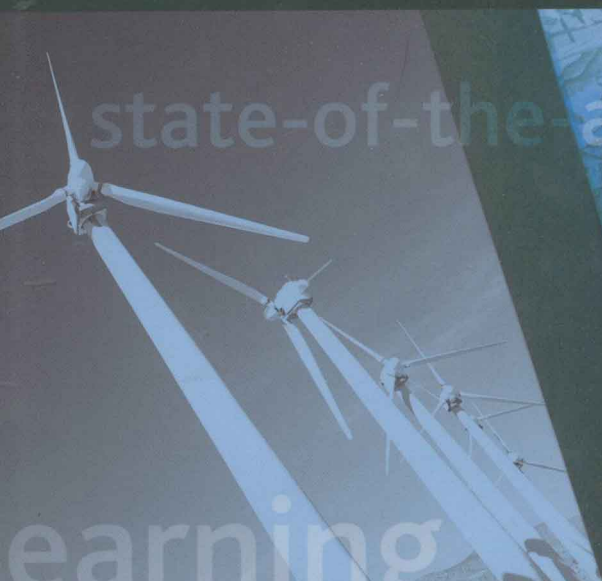


# The Learning Region

Foundations, State of the Art, Future



Edited by

**Roel Rutten**

**Frans Boekema**

innovation

state-of-the-art

innovation

# The Learning Region

Foundations, State of the Art, Future

---

*Edited by*

**Roel Rutten**

*Assistant Professor of Organization Studies, Department of  
Organization Studies, Tilburg University, The Netherlands*

**Frans Boekema**

*Professor of Economic Geography and Extraordinary  
Professor of Euregional Management, Radboud University  
Nijmegen and Associate Professor of Regional Economics,  
Tilburg University, The Netherlands*

**Edward Elgar**

Cheltenham, UK • Northampton, MA, USA

© Roel Rutten and Frans Boekema, 2007

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical or photocopying, recording, or otherwise without the prior permission of the publisher.

Published by  
Edward Elgar Publishing Limited  
Glensanda House  
Montpellier Parade  
Cheltenham  
Glos GL50 1UA  
UK

Edward Elgar Publishing, Inc.  
William Pratt House  
9 Dewey Court  
Northampton  
Massachusetts 01060  
USA

A catalogue record for this book  
is available from the British Library

### **Library of Congress Cataloguing in Publication Data**

The learning region: foundations, state of the art, future/edited by  
Roel Rutten, Frans Boekema.

p. cm.

Includes bibliographical references and index.

1. Regional economics. 2. Learning—Economic aspects.
3. Social capital (Sociology). 4. Space in economics.
5. Technological innovations—Economic aspects. I. Rutten,  
Roel, 1971–. II. Boekema, Frans.  
HT388.L4 2007  
330—dc22

2006102953

ISBN 978 1 84376 938 5

Printed and bound in Great Britain by MPG Books Ltd, Bodmin, Cornwall

# The Learning Region

## About the editors

---

Roel Rutten and Frans Boekema have been working as a team on the learning region for the better part of a decade. In 1998 they organized their first international seminar on the learning region, the results of which were published in an edited volume in 2000. Another conference followed in 2000, and again the outcomes were published in an edited volume in 2003. These two projects laid the groundwork for the present book. Two further seminars followed in 2002 and 2004. Although these seminars did not focus exclusively on the learning region, they dealt with the same questions and concepts that underlie the subject. The outcomes of these seminars were published in two special issues of *European Planning Studies* in 2004 and 2005 respectively. The seminars that Rutten and Boekema organized also served to build a network of international scholars working in the field of regions and innovation. Attending conferences in order to present their work was another element of the same strategy. Most notably, Rutten and Boekema participated in the conferences of the Regional Studies Association (in Europe) and the Western Regional Science Association (in the USA). The work that Rutten and Boekema presented and discussed at these conferences was often published in the form of book chapters.

The networking, the discussions at conferences, and the publications culminated, as if by an inescapable logic, in the present volume. Over the years, Rutten and Boekema have made connections with several of the most renowned scholars in the field of regions and innovation, and have developed their own approach to the learning region. Based on this combination of people and ideas, the present volume aims to make an important contribution to the literature on the learning region.

To date, Rutten and Boekema continue to work on follow-up projects on the learning region.

**Roel Rutten** (b. 1971) is Assistant Professor of Organization Studies in the Department of Organization Studies at Tilburg University, the Netherlands. He began his career as a consultant for ERAC (European Regional Affairs Consultants) in 1994. Among other things, ERAC specialized in European regional innovation policy, and it is in this field that Rutten was working during his ERAC years, from 1994 through 2001. During that same period he wrote a PhD thesis on regional innovation networks. The thesis was based

on an in-depth case study of the innovation network of Océ (a manufacturer of copiers and printers in the Netherlands) and its suppliers. Rutten began his present occupation in 2001. Among other things, he was involved in an evaluation study of approximately 100 temporary product development networks of small and medium-sized enterprises in the Eindhoven region in the Netherlands.

**Frans Boekema** (b. 1949) is Professor of Economic Geography and Extraordinary Professor of Euregional Management at Radboud University Nijmegen, the Netherlands and Associate Professor of Regional Economics at Tilburg University, the Netherlands. He studied regional economics and economic geography at Tilburg University and began his career as Assistant Professor in the department of Regional Economics in 1976. In 1986 he completed his dissertation on local initiatives and regional development. In 1990 he was appointed Associate Professor of Regional Economics and Economic Geography at Tilburg University and became part-time Professor in Economic Geography at the Faculty of Management Sciences of Radboud University in Nijmegen, the Netherlands in 1995. During this time he was also working as manager of the Regional Economic Department of the Economic Institute Tilburg, a research and consultancy institute. In 2006 he was appointed Extraordinary Professor of Euregional Management at Radboud University in Nijmegen. His main fields of research activities are: local and regional development, technological development and regional innovation systems, borders, border regions and border-crossing activities, clusters, networks and learning regions. He has published many articles and books on these subjects in the past decades.

# Contributors

---

**Bjørn T. Asheim** is Professor in Economic Geography at the Institute for Cultural and Economic Geography at Lind University in Sweden. He is also deputy director of the Centre for Innovation, Research and Competence in the Learning Economy (CIRCLE) at the same university.

**Nicola Bellini** is Professor of Business Economics at the Sant' Anna School of Advanced Studies in Pisa, Italy. He is director of a research centre on innovation and territorial systems at the same institute.

**Frans Boekema** is Professor of Economic Geography and Extraordinary Professor of Euregional Management, Radboud University Nijmegen and Associate Professor of Regional Economics, Tilburg University, the Netherlands.

**Philip Cooke** is Professor of Regional Development and Director of the Centre for Advanced Studies at Cardiff University in Wales, UK.

**Richard Florida** is the Hirst Professor at George Mason University's School of Public Policy in Fairfax, VA, USA, and a non-resident senior fellow at the Brookings Institution in Washington, DC, USA.

**Robert Hassink** is Professor of Human Geography in the Department of Sociology and Human Geography at Oslo University, Norway.

**Gert-Jan Hospers** is Assistant Professor of Economics at the School of Public Administration and Technology at the University of Twente, the Netherlands.

**Patrick Kenis** is Professor of Policy and Organization Studies in the Department of Organization Studies at Tilburg University, the Netherlands.

**Mikel Landabaso** is a senior researcher for the European Commission in Brussels at the Department of Regional Innovation Strategies and Technology Transfer, Directorate General Regional Policy.

**Mark Lorenzen** is Associate Professor in the Department of Industrial Economics and Strategy at the Copenhagen Business School. He is also affiliated with Imagine Creative Industries Research and Danish Research Unit on Industrial Dynamics (DRUID).

**Ed Malecki** is Professor of Geography in the Department of Geography at the Ohio State University, Columbus, OH, USA.

**Marius Meeus** is Professor of Innovation and Organization in the Department of Organization Studies at Tilburg University, the Netherlands.

**Kevin Morgan** is Professor of European Regional Development at the School of City and Regional Planning, Cardiff University in Wales, UK. He is also director of the Regeneration Institute at the same university.

**Leon Oerlemans** is Professor of Organizational Dynamics in the Department of Organization Studies at Tilburg University, the Netherlands and Professor of Economics and Innovation at the Faculty of Engineering, Built Environment and Information Technology, University of Pretoria, South Africa.

**Roel Rutten** is Assistant Professor of Organization Studies, Department of Organization Studies, Tilburg University, the Netherlands.

**Michael Storper** is Professor of Economic Sociology at the Centre de Sociologie des Organisations in Paris, France. He is Professor of Economic Geography at the London School of Economics (LSE) in London, UK, and Professor of Regional and International Development at the University of California at Los Angeles (UCLA) in Los Angeles, CA, USA.



# Acknowledgements

---

The publishers wish to thank the following who have kindly given permission for the use of copyright material.

Elsevier Science Ltd for article: Florida, Richard (1995), 'Toward the learning region', *Futures*, **27** (5), 527–36.

Taylor & Francis Ltd for articles: Storper, Michael (1993), 'Regional "worlds" of production', *Regional Studies*, **27**, 433–55, Morgan, Kevin (1997), 'The learning region: institutions, innovation and regional renewal', *Regional Studies*, **31**, 491–503, Asheim, Bjørn T. (1996), 'Industrial districts as learning regions', *European Planning Studies*, **4**, 379–400.

Every effort has been made to trace all the copyright holders, but if any have been inadvertently overlooked the publishers will be pleased to make the necessary arrangements at the first opportunity.

# Contents

---

|                                   |      |
|-----------------------------------|------|
| <i>List of figures and tables</i> | vii  |
| <i>About the editors</i>          | ix   |
| <i>List of contributors</i>       | xi   |
| <i>Acknowledgements</i>           | xiii |

|  |   |
|--|---|
| 1 The learning region: foundations, state of the art, future<br><i>Roel Rutten and Frans Boekema</i> | 1 |
|--|---|

## PART I FOUNDATIONS

|  |     |
|--|-----|
| 2 Regional 'worlds' of production: learning and innovation<br>in the technology districts of France, Italy and the USA<br><i>Michael Storper</i> | 15  |
| 3 Toward the learning region<br><i>Richard Florida</i>   | 58  |
| 4 Industrial districts as 'learning regions': a condition for<br>prosperity<br><i>Bjørn T. Asheim</i>  | 71  |
| 5 The learning region: institutions, innovation and regional<br>renewal<br><i>Kevin Morgan</i>   | 101 |

## PART II STATE OF THE ART

|  |     |
|--|-----|
| 6 The learning region: a conceptual anatomy<br><i>Roel Rutten and Frans Boekema</i>                        | 127 |
| 7 Knowledge and the competitiveness of places<br><i>Ed Malecki and Gert-Jan Hospers</i>                    | 143 |
| 8 Regional innovation networks<br><i>Leon Oerlemans, Marius Meeus and Patrick Kenis</i>                    | 160 |
| 9 Regional innovation systems, asymmetric knowledge and<br>the legacies of learning<br><i>Philip Cooke</i> | 184 |

|                 |  |     |
|-----------------|--|-----|
| 10              | Localized learning and social capital<br><i>Mark Lorenzen</i>                                      | 206 |
| 11              | Learning about innovation in Europe's regional policy<br><i>Nicola Bellini and Mikel Landabaso</i> | 231 |
| 12              | The learning region: a constructive critique<br><i>Robert Hassink</i>                              | 252 |
| PART III FUTURE |  |     |
| 13              | A future for the learning region<br><i>Roel Rutten and Frans Boekema</i>                           | 275 |
|                 | <i>Index</i>   | 293 |

# Figures and tables

---

## FIGURES

|     |  |     |
|-----|--|-----|
| 1.1 | Disciplines contributing to the learning region                                    | 5   |
| 2.1 | Conventions of identity and participation in NEC Italy                             | 22  |
| 6.1 | Conceptual framework   | 140 |
| 9.1 | A regional knowledge capabilities model of<br>'Globalization 2' economic geography | 199 |

## TABLES

|      |   |     |
|------|---|-----|
| 2.1  | Identity, participation and innovation compared   | 47  |
| 3.1  | From mass production to learning regions  | 65  |
| 5.1  | Regional Technology Plan guidelines   | 112 |
| 7.1  | Levels of knowledge-related concepts  | 144 |
| 7.2  | Where to find tacit and explicit knowledge  | 149 |
| 7.3  | Result of interaction between firm personality<br>and regional characteristics for firm performance | 153 |
| 7.4  | Examples of regions combining global trends<br>and local traditions                                 | 156 |
| 8.1  | Views on regional innovation networks   | 175 |
| 9.1  | Forms and stages of knowledge production  | 187 |
| 9.2  | Characterization of successful and potentially<br>successful bioregions                             | 192 |
| 10.1 | Social relations and technological learning effects   | 212 |
| 10.2 | Types of social relations   | 215 |
| 10.3 | Regionalization of social relations   | 218 |
| 13.1 | Relational perspective: levels of embeddedness  | 286 |

# 1. The learning region: foundations, state of the art, future

**Roel Rutten and Frans Boekema**

---

This history of the learning region perhaps began at the 1991 annual meeting of the Association of American Geographers, when Michael Storper, in a session on 'The geography of rationality and collective action', presented a paper about learning regions. Although it is lost to history whether the term 'learning region' was actually coined at that particular session, there is no mistaking that the 'learning-based regional production systems' that Storper discussed in his talk were renamed as learning regions shortly thereafter. From the early 1990s onward, the term learning region begins to surface in the literature on economic geography. In the decade and a half since, a wealth of publications on the learning region has appeared in both journals and books. The thinking about learning regions was triggered by several studies, the above study by Michael Storper and the classic study on the competitive advantage of nations by Michael Porter (1990) among them, that showed trade specialization among advanced economies to be increasing. This specialization followed from the discovery of absolute advantage based on superior localized technological learning. In other words, learning-specialized sectors and industries were found to have a distinct geography of agglomeration in a limited number of sub-national core regions. These regions often developed specific conventions of learning, which led Storper (1993) to call them 'regional worlds of production'. In Storper's words: 'Much of the way a given production complex functions relies on the untraded interdependencies of the actors in that complex . . . The different regional worlds of production that are found in each of these cases also correspond to different product-based worlds . . . They correspond to different regional-sectoral combinations of elements from those worlds . . . Each of these systems is therefore a regional economy of relational assets' (Storper, 1997: 162–3). Contrary to the belief to which many subscribed at the time, globalization of the economy reinforced regional differences; it did not eradicate them. That is the fruit of the early work on the learning region. From then on, the quest was on to explain how and why regions differed in the global economy.

## A TRAIL THROUGH THE LITERATURE

By the early 1990s, the regional level had become a hot topic in scientific discourse. Kenichi Ohmae, in his 1995 book, *The End of the Nation State: The Rise of Regional Economies*, stressed the role of regions as new engines of prosperity, while reshaping global markets. Once efficient engines of wealth creation, nation states, their fates increasingly determined by economic choices made elsewhere, had become inefficient in creating and distributing wealth. The new engines of prosperity, Ohmae argued, were region states. They had emerged in places such as the area between San Diego and Tijuana, in Singapore and in parts of Malaysia and Indonesia, in Silicon Valley, in the Bay Area and in the adjacent portion of the Chinese mainland. Ohmae concluded that the emergence of the nation state changed deeply and forever the global logic of what defines how corporations operate and how governments of nation states understand their proper roles in (regional) economic affairs. Managers and policy makers must remember that people (with their knowledge, know-how, expertise and capacity for learning) came first and borders second.<sup>1</sup>

Many authors have contributed to the growing field of the learning region. Some of them already had a well-established reputation in economic geography; others earned one because of their work on the learning region, such as Phil Cooke, Annalee Saxenian and many others. After Richard Florida made explicit use of the term 'learning region' in his 1995 article in *Futures*, the term became en vogue. By now, the idea had taken root that

Regions are becoming focal points for knowledge creation and learning in the new age of global, knowledge-intensive capitalism, as they in effect become learning regions. These Learning Regions function as collectors and repositories of knowledge and ideas, and provide the underlying environment or infrastructure which facilitates the flow of knowledge, ideas and learning. In fact, despite continued predictions of the end of geography, regions are becoming more important modes of economic and technological organization on a global scale. (Florida, 1995: 527)

A related growing body of literature that is older than the learning region is the systems of innovation approach. Earlier work on systems of innovation was conducted at the national level. The discourse about national systems of innovation, e.g. Lundvall (1988, 1992), was in part a response to the question whether or not globalization was undermining the ability of individual nations to influence their own technological sovereignty. Studies into national (and regional) innovation systems have found that regional communities of firms and supporting networks of institutions that share a

common knowledge base and benefit from their shared access to a unique set of skills and resources are instrumental in furthering innovation. What the innovation systems literature contributed, then, is the insight that innovation is fundamentally a geographical process. In other words, innovation is facilitated, though not necessarily contained by, spatial clustering of the actors involved within the same region. (See also Boekema et al., 2000; Rutten and Boekema, 2004, 2005.)

Another body of literature from which the learning region draws is the industrial districts literature. Bjørn Asheim (1996), for example, argued that collective learning of small and medium-sized enterprises in industrial districts is the key to understanding conditions for prosperity. Asheim's focus was on factors enabling and constraining the formation of sufficient learning capacity. Asheim's publication is also interesting from another point of view, that is, the difference between the American and the European approaches. Florida's (1995) conception of the learning region focuses on the extent and quality of the institutional infrastructure that constitutes a key element of the regional innovation system. So, in the North American context, learning regions are associated with the presence or absence of a dense network of research institutions as well as a broader set of environmental and social amenities that attract highly skilled workers to a locale and keep them there. In the European context, however, the analysis of learning regions focuses much more on the contributions that social capital and trust make to supporting dense networks of inter-firm relationships and the process of interactive learning.

Another groundbreaking article about learning regions is Kevin Morgan's 1997 contribution in *Regional Studies*. It has been quoted many times over the past ten years. A potentially significant theoretical convergence between the two hitherto distinct fields of innovation studies and economic geography seemed to be under way at that time. Through the prism of the learning region, the article examined some of the theoretical and policy implications of this convergence. Drawing on the work of evolutionary political economy, it highlighted the significance for regional development of the interactive model of innovation. At the same time, the policy implications were examined. This was done in two ways: through a new generation of European Union regional policy measures and through a case study of regional innovation in Wales. The main aim of Morgan's paper was to try to connect some of the concepts of the network paradigm (such as interactive innovation and social capital) to the problems of regional development in Europe. Finally, the paper offered a critical assessment of the distributional consequences of such a strategy. This was done by posing the central question: 'Is regional policy enough to address the socio-economic problems of old industrial regions?'

The aforementioned articles of Storper, Florida, Asheim and Morgan on learning regions play an important role in the remainder of this volume. Full reprints of these articles can be found in Part I. Their role will be explained further in the next section. But one other development remains to be discussed before we can move on. Also in the 1990s, key political bodies such as the World Bank, the OECD and the European Union, as well as many national governments, became convinced that the global economy was a knowledge-based economy. As a consequence, they believed competitive success to be dependent on the ability to produce and utilize knowledge effectively. Thus a pressing need arose for firms, communities, regions and nations to invest a greater share of resources in education and training than they had in the past (European Commission, 1995; OECD, 1992; Hague, 1996). Because of the high dependency of innovation on learning within and between regional-based agents and (re)sources, some authors prefer to speak of a learning economy rather than a knowledge-based economy. By stressing the process of learning, they also stress the fact that learning is a social process that works best in a situation of spatial proximity, as this allows frequent interaction between human agents and thus results in richer and thicker flows of knowledge being exchanged among them more efficiently. In other words, innovative capabilities are sustained through regional communities that share a common knowledge base (see Morgan, 2004). In this respect, it may be concluded that the regional level is of critical importance because of the fact that both space (i.e. an actual geographic area) and proximity contribute to producing, distributing and utilizing the very tacit knowledge and the capacity for learning that support innovation (see Rutten, 2003).

From the above it follows that, concerning this topic, several literatures contribute to a better understanding of the phenomenon of the learning region. Put simply, too simply perhaps, the learning region draws from three main literatures: regional learning; clusters and networks; and institutions of innovation. Regional learning highlights the process of learning and the spatial dimensions of this process. Clusters and networks draw attention to how the process of learning can be organized. Institutions of innovation point to tangible and intangible 'infrastructures' that support learning and innovation. These concepts overlap. That is, some clusters and networks have a regional dimension, whereas others have a wider scope. Institutions of innovation may pertain to a region, but also to a nation. Where these three concepts overlap, we argue, is where, conceptually, we will find learning regions. When regional learning takes places in regional networks and is supported by regional institutions of innovation, we can speak of a learning region (see Figure 1.1). This book aims to develop this rough outline into a conceptualization of the learning region.



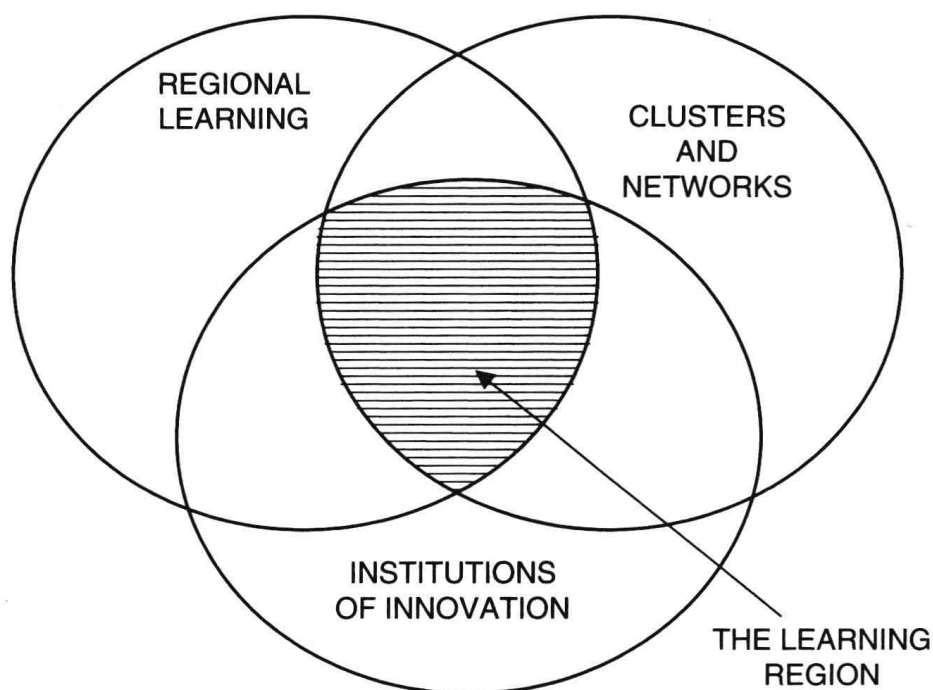


Figure 1.1 Disciplines contributing to the learning region

## AIM AND STRUCTURE OF THE BOOK

The main target of this book, expressed in a single sentence, is to conceptualize the learning region. From the previous sections it becomes clear that, although a wealth of literature has been published about learning regions, we are nowhere nearer to saying what a learning region is than we were 15 years ago. Based on the existing literature, however, we feel that such a conceptualization can be made and we intend to do so in this volume. It is not our intention to produce a checklist as a tool for identifying a 'real' learning region. Instead, we argue that the learning region should be an analytical concept that can help us understand how learning takes place in regions and why regions are important for learning. Nowadays, the importance of learning is hardly contested in the literature. On the contrary, the consensus is that we live in a globalized, knowledge-based economy, which, at the same time, is also a regional learning economy. The spatial dimension of learning, in our view, has two different but equally important aspects. First, it concerns distance, or proximity. That is, it pays to learn in proximate relations because tacit knowledge is most easily exchanged in those kinds of relations. Second, some regions have a milieu of innovation that facilitates