# Agglomeration, Industrial Districts and Industry Clusters: Trends of the 21st Century Literature

### Other titles in Foundations and Trends<sup>®</sup> in Entrepreneurship

Start-up Actions and Outcomes: What Entrepreneurs Do to Reach

**Profitability** 

Paul D. Revnolds

ISBN: 978-1-68083-228-0

Gender and Entrepreneurship: An Annotated Bibliography

Albert N. Link and Derek R. Strong

ISBN: 978-1-68083-180-1

Business Failure and Entrepreneurship: Emergence, Evolution and

Future Research

Grace S. Walsh and James A. Cunningham

ISBN: 978-1-68083-156-6

Agglomeration, Industrial Districts and Industry Clusters: Foundations

of the 20th Century Literature

Brett Anitra Gilbert

ISBN: 978-1-68083-122-1

Owner-Level Taxes and Business Activity

Magnus Henrekson and Tino Sanandaji

ISBN: 978-1-68083-104-7

## Agglomeration, Industrial Districts and Industry Clusters: Trends of the 21st Century Literature

**Brett Anitra Gilbert** 

Rutgers Business School, Rutgers University, USA



### Foundations and Trends<sup>®</sup> in Entrepreneurship

Published, sold and distributed by:
now Publishers Inc.
PO Box 1024
Hanover, MA 02339
United States
Tel. +1-781-985-4510
www.nowpublishers.com
sales@nowpublishers.com

Outside North America: now Publishers Inc. PO Box 179 2600 AD Delft The Netherlands Tel. +31-6-51115274

The preferred citation for this publication is

B. A. Gilbert. Agglomeration, Industrial Districts and Industry Clusters: Trends of the 21st Century Literature. Foundations and Trends<sup>®</sup> in Entrepreneurship, vol. 13, no. 1, pp. 1–80, 2017.

ISBN: 978-1-68083-267-9 © 2017 B. A. Gilbert

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, mechanical, photocopying, recording or otherwise, without prior written permission of the publishers.

Photocopying. In the USA: This journal is registered at the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923. Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by now Publishers Inc for users registered with the Copyright Clearance Center (CCC). The 'services' for users can be found on the internet at: www.copyright.com

For those organizations that have been granted a photocopy license, a separate system of payment has been arranged. Authorization does not extend to other kinds of copying, such as that for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. In the rest of the world: Permission to photocopy must be obtained from the copyright owner. Please apply to now Publishers Inc., PO Box 1024, Hanover, MA 02339, USA; Tel. +1 781 871 0245; www.nowpublishers.com; sales@nowpublishers.com

now Publishers Inc. has an exclusive license to publish this material worldwide. Permission to use this content must be obtained from the copyright license holder. Please apply to now Publishers, PO Box 179, 2600 AD Delft, The Netherlands, www.nowpublishers.com; e-mail: sales@nowpublishers.com

### Foundations and Trends<sup>®</sup> in Entrepreneurship Volume 13. Issue 1, 2017

### **Editorial Board**

### **Editor-in-Chief**

Albert N. Link

University of North Carolina at Greensboro

United States

David B. Audretsch

Indiana University

United States

Mike Wright

Imperial College London

United Kingdom

### **Editors**

Howard Aldrich

University of North Carolina

Sharon Alvarez

University of Denver

Per Davidsson

Queensland University of Technology

Michael Frese

National University of Singapore

William B. Gartner

Copenhagen Business School

Magnus Henrekson

IFN Stockholm

Michael A. Hitt

Texas A&M University

Joshua Lerner

Harvard University

Jeff McMullen
Indiana University

P.R. Kumar

Texas A&M University

Maria Minniti

Syracuse University

Simon Parker

University of Western Ontario

Holger Patzelt

 $TU\ Munich$ 

Saras Sarasvathy

University of Virginia

Roy Thurik

Erasmus University

### **Editorial Scope**

### **Topics**

Foundations and Trends $^{\textcircled{R}}$  in Entrepreneurship publishes survey and tutorial articles in the following topics:

- Nascent and start-up entrepreneurs
- Opportunity recognition
- New venture creation process
- Business formation
- Firm ownership
- Market value and firm growth
- Franchising
- Managerial characteristics and behavior of entrepreneurs
- Strategic alliances and networks
- Government programs and public policy
- Gender and ethnicity

- New business financing:
  - Business angels
  - Bank financing, debt, and trade credit
  - Venture capital and private equity capital
  - Public equity and IPOs
- Family-owned firms
- Management structure, governance and performance
- Corporate entrepreneurship
- High technology:
  - Technology-based new firms
  - High-tech clusters
- Small business and economic growth

### Information for Librarians

Foundations and Trends<sup>®</sup> in Entrepreneurship, 2017, Volume 13, 4 issues. ISSN paper version 1551-3114. ISSN online version 1551-3122. Also available as a combined paper and online subscription.

### Contents

1	Introduction		
2	The Potential of and for Industry Concentration		
	2.1	The Fit of 20th Century Theories	9
	2.2	Seeds for Growth	12
	2.3	Firm, Industry and Regional Effects	16
	2.4	The Role of Policy	18
	2.5	Implications for Other Regions	22
	2.6	Conclusions and Opportunities for Future Research	23
3	Entrepreneurship and Industry Concentration		
	3.1	Role of Entrepreneurs and New Firms	27
	3.2	New Firm Infrastructure	29
	3.3	New Firm Performance	30
	3.4	Entrepreneurship and Economic Development	31
	3.5	Conclusions and opportunities for future research	32
4	Knowledge and Industry Concentration		
	4.1	Local, Non-Local and Other Types of Knowledge	33
	4.2	Promoting Knowledge Exchange	35
	4.3	Conclusions and Opportunity for Future Research	36

### Full text available at: http://dx.doi.org/10.1561/0300000069

5	Networks, Relationships and Industry Concentration					
	5.1	The Structure of Geographic Relationships	39			
	5.2	The Nature of Relationships	41			
	5.3	Knowledge Flows from Relationships	44			
	5.4	Relationships as Regional Stabilizers and Builders	45			
	5.5	Conclusions and Opportunities for Future Research	46			
6	Creative and High Technology Industries and Industry Con-					
	cent	tration	48			
	6.1	High Technology Regions	49			
	6.2	Information and Communications Technology (ICT) Regions	51			
	6.3	Biotechnology Regions	52			
	6.4	Creative Regions	53			
	6.5	Creative and High Technology Regions and Policy	56			
	6.6	Conclusions and Opportunities for Future Research	57			
7	Advancing Scholarship on Agglomerations, Industrial Districts					
	and	Industry Clusters	59			
	7.1	Data Collection	59			
	7.2	Data Analysis	61			
	7.3	Conclusion	61			
Re	eferer	nces	62			

### Agglomeration, Industrial Districts and Industry Clusters: Trends of the 21st Century Literature

Brett Anitra Gilbert

Rutgers Business School, Rutgers University, USA; bagilbert@business.rutgers.edu

### ABSTRACT

In a previous issue of Foundations and Trends in Entrepreneurship, small firms were commonly acknowledged as an important topic in the 20th century literature on industry concentration. Since the turn of the 21st century, startups have become a topic of significant prominence. Despite this fact, none of the recent literature reviews on industry concentration highlights their importance. Likewise, several other factors that have been identified since Marshall's (1920) work, have received new attention with fresh perspectives in the 21st century literature. These topics have not yet been sufficiently explored in the literature. The purpose of this monograph is to review the early work of scholarship on agglomerations, industrial districts and industry clusters that has been published in the 21st century. This monograph explicates the prominent themes that emerged between 2000–2015, with the specific objective of highlighting the relationships of entrepreneurs, knowledge, networks and creative and high technology industries in industry concentration.

Brett Anitra Gilbert (2017), "Agglomeration, Industrial Districts and Industry Clusters: Trends of the 21st Century Literature", Foundations and Trends in Entrepreneurship: Vol. 13, No. 1, pp 1–80. DOI: 10.1561/0300000069.

### 1

### Introduction

Since Marshall's (1920) seminal work, the literature on agglomerations, industrial districts and industry clustering grew from meager numbers in the 1920s-1950s into a significant body of work in the 1980s and 1990s. This research, which was reviewed in an earlier issue of this volume (see Gilbert, 2016), has informed our understanding of why these regions form (e.g. Wrigley Jr., 1947; Isard and Liossatos, 1972; Pascal and McCall, 1980; Markusen and Park, 1993), the benefits and consequences they offer (e.g. Marcus, 1965; Hansen, 1965; Horvath, 1970; Nakamura, 1985; Straszheim, 1984; Mun and Hutchinson, 1995; Zheng, 1998), and the industry (e.g. Abdel-Rahman and Fujita, 1990; Asheim and Isaksen, 1997), regional (e.g. Bergsman et al., 1972; Rykiel, 1984; Park and Markusen, 1995) and relational structures (e.g. Glasmeier, 1990; Rabellotti and Schmitz, 1999) that yield these benefits.

The research of the 21st century expounds on the eighty years of foundation from the 20th century in significant and exciting ways, and includes several recent review papers that either assess where the literature has been (e.g. Martinez-Fernandez et~al., 2012; Strange, 2009) or where it appears to be heading (Hervas-Oliver et~al., 2015). One of those papers - Martinez-Fernandez et~al. (2012) - offers a review of academic

research on industry concentration from the years of 1997-2006. It concludes that scholarly emphasis has largely been on characterizations of the regions; life cycle considerations; performance, policy and specific realities of the regions. Strange (2009) similarly reviews the literature and highlights the microfoundations, the effects of agglomerations particularly on wages and labor market dynamics, and how these factors differ across geographic space.

Only Hervas-Oliver et al. (2015) - offers an assessesment of the emerging academic discourse around industry concentration. Through bibliometric analysis, they conclude that the literature largely focuses on evolutionary economic geography, global pipelines/external linkages, cluster taxonomies, innovation and firm analysis, interfirm networks and flows of knowledge. While this latter study identifies themes, it does not discuss the context behind these themes, and particularly does not properly position entrepreneurship in this body of literature. Entrepreneurs are commonly the pioneers of new technologies and the creators of many small firms that were commonly discussed in 20th century literature. However, the focus on startups in cluster regions did not gain prominence until publications from the 21st century. And none of the recent reviews highlights their importance.

My read of the literature published since 2000 identified several similar themes as these earlier reviews, but also identified several distinct themes which none of these reviews sufficiently address. One of those areas is with respect to knowledge which is one of the three original factors that Marshall (1920) identified as important for sustaining industry concentration. Knowledge was given little theoretical development in 20th century research, but in the 21st century literature it has taken a more prominent place in the discourse, quite likely because of the role that entrepreneurs play in bringing new knowledge to the market. Oftentimes knowledge is discussed in relation to networks/relationships of firms. The renewed attention may also be due to the strong focus of 21st century research on high technology and creative clusters, which are industries ripe with entrepreneurial activity and for which knowledge is an essential resource. These industries were studied consistently from the late 1990s into the 21st century, and have significant placement in

the economic and academic landscapes. They are important emerging trends in the literature which the prior literature reviews do not reflect.

Similarly, the discussion on buyers-suppliers who occupy regions with industry concentration is an important foundation that dates back to Marshall's (1920) work. Therefore, it is perhaps unsurprising that another observed trend in the 21st century literature has been the plethora of studies devoted to understanding the various aspects of networks and relationships of firms in agglomerations, industrial districts and industry clusters. This research not only emphasizes the network structures of firms in given regions, but also of those between clusters in the same regions, and the relationships between clusters in domestic as well as international cities. Therefore, the purpose of this monograph is to review the early work of 21st century scholarship on agglomerations, industrial districts and industry clusters and to explore the context to the prominent themes that emerged between the years of 2000-2015.

A specific objective of this monograph is to highlight the role of entrepreneurs in the literature. An article search for peer-reviewed scholarship was undertaken using the search engine Ebscohost, with the years 2000-2015 used as endpoints for identifying articles. The search focused on articles that included the word "agglomeration," "industrial district," or "cluster" in the title. Therefore, the articles with more generic titles such as those including the words region or geography are not included in this review. While the review is generally limited to articles from the journals that were available to me online in Ebscohost, and that were part of the search results on the day the articles were identified, to ensure the search was as comprehensive as possible, a second search was run through the Wiley Interscience website to identify articles that included the word "agglomeration," "industrial district," or "cluster" in the title, and the word "entrepreneur" in the article. Due to time constraints, only the most relevant articles published during this time period are included in this monograph. In total, 180 articles serve as the basis for understanding trends in the industry concentration literature during this 15-year period.

By reading each article, I determined the overall theme the scholars addressed in the research, and compared it to the topics discussed in the

Table 1.1

Theme	Foundations of the 20th	Trends of the 21st
	century	century
Geography	U.S. & Europe Centric; less from other regions	Still U.S. & Europe Dominant; Greater emphasis on Asia, Middle East and South America
Industry	Manufacturing & Fashion Centric	Creative and high technology industries
Origins, Implications, Configurations & Performance	How, why, failure, positive/ negative effects, optimality, industry or regional structure, growth evolution	Knowledge, networks
Firms & People	Small & medium firms	Entrepreneurship/ Entrepreneurs/MNCs

20th century literature. Table 1.1 below highlights these foundations and their corresponding themes. Each theme and the directions taken across the scholarship is presented in separate sections in this monograph.

Some topics were given more attention than others during this 15 year time period, however, each topic presented in this monograph has ties to either the foundations of the literature or to other trends evident in the scholarship of this time period as outlined in Gilbert (2016). Therefore, Section 2 of this monograph continues this conversation with respect to the potential of and for industry concentration. One of the factors identified in these articles as important for driving industry concentration is the entrepreneurship that operates in the region. Therefore, Section 3 offers a review of the literature that focuses on entrepreneurship and industry concentration.

The concentration of firms, buyers and suppliers within a region offered opportunity for scholars to examine networks, relationships and

industry concentration. This theme was a dominant one in the literature, and is reviewed in detail in Section 4. As one of the initial reasons Marshall (1920) offered for why firms agglomerate, and a noted benefit to firms that operate in networks, knowledge and industry concentration was another theme that emerged in the 21st century literature. This research is presented in Section 5 of this monograph. Whereas much of the industry focus of empirical studies published in the 20th century focused on manufacturing firms or those in the fashion industry (Gilbert, 2016), in the 21st century there was a noted shift in industry focus, with considerable discussion on creative and knowledge based industries. Therefore, Section 6, focuses on these conversations around creative and high technology industries and industry concentration. Each section concludes with thoughts on the scholarship that is needed to continue advancing the important topics on industry concentration. A summary of these thoughts is provided in Section 7.

- Abdel-Rahman, H. M. and M. Fujita. 1990. "Product variety, Marshallian externalities, and city sizes". *Journal of Regional Science*. 30(2): 165–183.
- Agnoletti, C. 2015. "First and Second- tier cities in regional agglomeration models". European Planning Studies. 23(6): 1146–1168.
- Ahedo, M. 2004. "Cluster policy in the Basque country (1991-2002): Constructing 'industry-government' collaboration through cluster-associations". *European Planning Studies*. 12(3): 1097–1116.
- Akgungor, S. 2006. "Geographic concentrations in Turkey's manufacturing industry: Identifying regional highpoint clusters". *European Planning Studies*. 14(2): 169–198.
- Akgungor, S., N. Kumral, and A. Lenger. 2003. "National industry clusters and regional specializations in Turkey". *European Planning Studies*. 11(6): 647–669.
- Asheim, B. T. and A. Isaksen. 1997. "Location, agglomeration and innovation: Towards regional innovation systems in Norway?" *European Planning Studies*. 5(3): 299–330.
- Avnimelech, G., D. Schwartz, and R. Bar-El. 2007. "Entrepreneurial high-tech cluster development: Israel's experience with venture capital and technological incubators". *European Planning Studies*. 15(9): 1181–1198.

Bas, T. G. and M. H. Kunc. 2009. "National systems of innovations and natural resources clusters: Evidence from copper mining industry patents". *European Planning Studies*. 17(12): 1861–1879.

- Bathelt, H. 2002. "The re-emergence of a media industry cluster in Leipzig". European Planning Studies. 10(5): 583–611.
- Bathelt, H. and J. S. Boggs. 2003. "Toward a reconceptualization of regional development paths: Is Leipzig's Media Cluster a continuation of or a rupture with the past?" *Economic Geography*. 79(3): 265–293.
- Bathelt, H. and M. Taylor. 2002. "Clusters, power and place: Inequality and local growth in time-space". *Geografiska Annaler*. 84(B)(2): 93–109.
- Batten, D. F. 1995. "Network cities: Creative urban agglomerations for the 21st century". *Urban Studies*. 32(2): 313–327.
- Baum, J. A. and H. A. Haveman. 1997. "Love thy neighbor? Differentiation and agglomeration in the Manhattan hotel industry, 1898–1990." *Administrative Science Quarterly*. 42: 304–338.
- Bayliss, D. 2007. "Dublin's digital huris: Lessons from an attempt to develop a creative industrial cluster". *European Planning Studies*. 15(9): 1261–1271.
- Bell, G. G. 2005. "Clusters, networks, and firm innovativeness". *Strategic Management Journal.* 26: 287–295.
- Belussi, F. and L. Pilotti. 2002. "Knowledge creation, learning and innovation in Italian industrial distrcts". *Geography Annual.* 84: 125–139.
- Belussi, F., A. Sammarra, and S. Rita. 2008. "Managing long distance and localized learning in the Emilia Romagna Life Science cluster". *European Planning Studies*. 16(5): 665–682.
- Berg, S.-H. 2015. "Creative cluster evolution: The case of the film and TV industries in Seoul, South Korea". *European Planning Studies*. 23(10): 1993–2008.
- Bergsman, J., P. Greenston, and R. Healy. 1972. The agglomeration process in urban growth. 263–288.
- Birkinshaw, J. 2000. "Upgrading of industry clusters and foreign investment". *International Studies of Management & Organization*. 30(2): 93–113.

Bonnet, N. 2010. "The functional resilience of an innovative cluster in the Montpellier urban area (South of France)". *European Planning Studies*. 18(9): 1345–1363.

- Boschma, R. A. and J. G. Lambooy. 2002. "Knowledge, market structure, and economic coordination: Dynamics of industrial districts". *Growth and Change*. 33: 291–311.
- Branzanti, C. 2015. "Creative clusters and district economies: Towards a taxonomy to interpret the phenomenon". *European Planning Studies*. 23(7): 1401–1418.
- Brenner, T. 2005. "Innovation and cooperation during the emergence of local industrial clusters: An empirical study in Germany". *European Planning Studies*. 13(6): 921–939.
- Brenner, T. and A. Gildner. 2006. "The long-term implications of local industrial clusters". European Planning Studies. 14(9): 1315–1228.
- Buenstorf, G. and S. Klepper. 2009. "Heritage and agglomeration: The Akron tyre cluster revisited". *The Economic Journal*. 119(April): 705–733.
- Burfitt, A., S. MacNeill, and J. Gibney. 2007. "The dilemmas of operationalizing cluster policy: The Medical Technology cluster in the West Midlands". *European Planning Studies*. 15(9): 1273–1291.
- Burger, M. J., E. J. Meijers, M. M. Hoogerbrugge, and J. M. Tresserra. 2015. "Borrowed size, agglomeration shadows and cultural amenities in North-West Europe". *European Planning Studies*. 23(6): 1090–1109.
- Camagni, R., R. Capello, and A. Caragliu. 2015. "The rise of second-rank cities: What role for agglomeration economies". *European Planning Studies*. 23(6): 1069–1089.
- Camison, C. and A. Villar-Lopez. 2012. "On how firms located in an industrial district profit from knowledge spillovers: Adoption of an organic structure and innovation capabilities". *British Journal of Management.* 23: 361–382.
- Carrincazeaux, C., M. Grossetti, and D. Talbot. 2008. "Clusters, proximities and networks". *European Planning Studies*. 16(5): 613–616.
- Casper, S. and A. Karamanos. 2003. "Commercializing science in Europe: The Cambridge Biotechnology cluster". *European Planning Studies*. 11(7): 805–822.

Chen, L.-C. and Z.-X. Lin. 2014. "Examining the role of geographical proximity in a cluster's transformation process: The case of Taiwan's machine tool industry". *European Planning Studies*. 22(1): 1–19.

- Clancy, P., E. O'Malley, L. O'Connell, and C. Van Egeraat. 2001. "Industry clusters in Ireland: An application of Porter's model of national competitive advantage to three sectors". *European Planning Studies*. 9(1): 7–28.
- Coenen, L., J. Moodysson, and B. T. Asheim. 2004. "Nodes, networks and proximities: On the knowledge dynamics of the Medicon Valley Biotech cluster". *European Planning Studies*. 12(7): 1003–1018.
- Cooke, P. 2001. "Regional innovation systems, clusters, and the knowledge economy". *Industrial and Corporate Change*. 10(4): 945–974.
- Cooke, P. 2004. "Editorial: The acceleration evolution of biotechnology clusters". European Planning Studies. 12(7): 915–919.
- Cooke, P. 2012. "From clusters to platform policies in regional development". European Planning Studies. 20(8): 1415–1424.
- Cooke, P. and O. Ehret. 2009. "Proximity and procurement: A study of agglomeration in the Welsh Aerospace industry". *European Planning Studies*. 17(4): 549–567.
- Crespo, J. 2011. "How emergence conditions of technological clusters affect their viability?" *Theoretical perspectives on cluster life cycles*. 19(12): 2025–2046.
- Dana, L. P. and K. E. Winstone. 2008. "Wine cluster formation in New Zealand: Operation, evolution and impact". *International Journal of Food Science & Technology*. 43: 2177–2190.
- Darchen, S. and D.-G. Tremblay. 2015. "Policies for creative clusters: A comparison between the video game industries in Melbourne and Montreal". *European Planning Studies*. 23(2): 311–331.
- Davis, J. C. and J. V. Henderson. 2008. "The agglomeration of head-quarters". Regional Science and Urban Economics. 38: 445–460.
- Dayasindhu, N. 2002. "Embeddedness, knowledge transfer, industry clusters and global competitiveness: A case study of the Indian software industry". *Technovation*. 22: 551–560.
- de Berranger, P. and M. C. R. Meldrum. 2000. "The development of intelligent local clusters to increase global competitiveness and local

- cohesion: The case of small businesses in the creative industries".  $Urban\ Studies.\ 37(10):\ 1827-1835.$
- de Figueiredo, R. J. P., P. Meyer-Doyle, and E. Rawley. 2013. "Inherited agglomeration effects in hedge fund spawns". *Strategic Management Journal*. 34: 843–862.
- De Miguel Molina, B., M. De Miguel Molina, and J. A. Garrigos. 2011. "The innovative regional environment and the dynamics of its clusters". *European Planning Studies*. 19(10): 1713–1733.
- De Miguel Molina, B., J.-L. Hervas-Oliver, R. Boix, and M. De Miguel Molina. 2012. "The importance of creative industry agglomerations in explaining the wealth of European regions". *European Planning Studies*. 20(8): 1263–1280.
- De Propris, L. 2001. "Systemic flexibility, production fragmentation and cluster governance". European Planning Studies. 9(6): 739–753.
- Diaz, M. A. 2001. "The evaluation of regional innovation and cluster policies: Towards a participatory approach". *European Planning Studies*. 9(7): 907–923.
- Diez, J. R. 2003. "Hannover after the world exhibition EXPO 2000 An attempt to establish an ICT-Cluster". *European Planning Studies*. 11(4): 379–394.
- Dilaver, O., M. Bleda, and E. Uyarra. 2014. "Entrepreneurship and the emergence of industrial clusters". *Complexity*. 19(6): 14–29.
- Dohse, D. and R. Soltwedel. 2006. "Recent developments in the research on innovative clusters". *European Planning Studies*. 14(9): 1167–1170.
- Donald, B. 2009. "Conrested notions of quality in a buyer-driven commodity cluster: The case of food and wine in Canada". *European Planning Studies*. 17(2): 263–280.
- Duranton, G. and D. Puga, eds. 2004. Micro-foundations of urban agglomeration economies. *Handbook of regional and urban economics* (4). 2063–2117.
- Ebbekink, M. and A. Lagendijk. 2013. "What's next in researching cluster policy: Place-based governance for effective cluster policy". *European Planning Studies*. 21(5): 735–753.

Edgington, D. and R. Hayter. 2013. "The In situ upgrading of Japanese electronics firms in Malaysian industrial clusters". *Economic Geography*. 89(3): 227–259.

- Elola, A., M. D. Parrilli, and R. Rabellotti. 2013a. "The resilience of clusters in the context of increasing globalization: The Basque wind energy value chain". *European Planning Studies*. 21(7): 989–1006.
- Elola, A., J. M. Valdaliso, and S. M. Lopez. 2013b. "The competitive position of the Basque aerospatial cluster in global value chains: A historical analysis". *European Planning Studies*. 21(7): 1029–1045.
- Elola, A., J. M. Valdaliso, S. M. Lopez, and M. J. Aranguren. 2012. "Cluster life cycles, path dependency and regional economic development: Insights from a meta-study on Basque clusters". *European Planning Studies*. 20(2): 257–279.
- Engel, D., T. Mitze, R. Patuelli, and J. Reinkowski. 2013. "Does cluster policy trigger R&D activity? Evidence from German biotech contexts". *European Planning Studies*. 21(11): 1735–1759.
- Eraydin, A. and B. A. Koroglu. 2007. "Increasing role of services in competitive power and innovativeness of firms and industrial clusters". *European Planning Studies*. 15(7): 905–925.
- Erkus-Ozturk, H. 2011. "Emerging importance of institutional capacity for the growth of tourism clusters: The case of Antalya". *European Planning Studies*. 19(10): 1735–1753.
- Exposito-Langa, M. and F. X. Molina-Morales. 2010. "How relational dimensions affect knowledge redundancy in industrial clusters". European Planning Studies. 18(12): 1975–1992.
- Feldman, M. P. 2001. "The entrepreneurial event revisited: firm formation in a regional context". *Industrial and Corporate Change*. 10(4): 861–891.
- Feldman, M. P. and J. L. Francis. 2003. "Fortune favours the prepared region: The case of entrepreneurship and the Capital Region biotechnology cluster". *European Planning Studies*. 11(7): 765–798.
- Fernhaber, S. A., B. A. Gilbert, and P. P. McDougall. 2008. "International Entrepreneurship and Geographic Location: An Empirical Examination of New Venture Internationalization". *Journal of International Business Studies*. 39: 267–290.

Feser, E. J. and M. I. Luger. 2003. "Cluster analysis as a mode of inquiry: Its use in science and technology policymaking in North Carolina". European Planning Studies. 11: 1.

- Finegold, D., P.-K. Wong, and T.-C. Cheah. 2004. "Adapting a foreign direct investment strategy to the knowledge economy: The case of Singapore's emerging biotechnology cluster". *European Planning Studies*. 12(7): 921–941.
- Florida, R. 2002. The rise of the creative class, and how it is transforming work, leisure, community and everyday life. New York: Basic Books.
- Fontes, M. 2005. "Distant networking: The knowledge acquisition strategies of 'Out-cluster' biotechnology firms". *European Planning Studies*. 13(6): 899–921.
- Fornahl, D., R. Hassink, and M.-P. Menzel. 2015. "Broadening our knowledge on cluster evolution". *European Planning Studies*. DOI: 10.1080/09654313.2015.1016654.
- Fowler, C. S. and R. G. Kleit. 2014. "The effects of industrial clusters on the poverty rate". *Economic Geography*. 90(2): 129–154.
- Gabe, T. 2003. "Local industry agglomeration and new business activity". Growth and Change. 34(1): 17–39.
- Gallie, E.-P., A. Glaser, V. Merindol, and T. Weil. 2013. "How do pre-existing R&D activities in a region influence the performance of cluster initiatives? The case of French competitiveness clusters". *European Planning Studies*. 21(10): 1653–1675.
- Gancarczyk, M. 2015. "Enterprise- and industry-level drivers of cluster evolution and their outcomes for clusters from developed and less-developed countries". *European Planning Studies*. 23(10): 1932–1952.
- Giblin, M. 2011. "Managing the global-local dimensions of Clusters and the Role of "Lead" organizations: The contrasting cases of the software and medical technology clusters in the West of Ireland". European Planning Studies. 19(1): 23–42.
- Giblin, M. and P. Ryan. 2012. "Tight clusters or loose networks?" The critical role of inward foreign direct investment in cluster creation. 46(2): 245–258.

Gilbert, B. A. 2016. "Agglomeration, industrial districts and industry clusters: Foundations of the 20th century literature". Foundations and Trends in Entrepreneurship. 12(2): 95–162.

- Gilbert, B. A., D. B. Audretsch, and P. P. McDougall. 2004. "The Emergence of Entrepreneurship Policy". *Small Business Economics*. 22(3-4): 313–323.
- Gilbert, B. A., P. P. McDougall, and D. B. Audretsch. 2008. "Clusters, knowledge spillovers and new venture performance: An empirical examination". *Journal of Business Venturing*. 23: 405–422.
- Glasmeier, A. 1990. "The role of merchant wholesalers in industrial agglomeration formation". Annals of the Association of American Geographers. 80(3): 394–417.
- Gordon, I. R. and P. McCann. 2000. "Industrial clusters: Complexes, agglomeration and/or social networks?" *Urban Studies*. 37(3): 513–532.
- Granovetter, M. S. 1973. "The strength of weak ties". *American Journal of Sociology*: 1360–1380.
- Guimaraes, P., J. Munn, and D. Woodward. 2015. "Creative clustering: The location of independent inventors". *Papers in Regional Science*. 94(1): 45–65.
- Guo, B. and J.-J. Guo. 2011. "Patterns of technological learning within knowledge systems of industrial clusters in emerging economies: Evidence from China". *Technovation*. 31: 87–104.
- Hallencreutz, D. and P. Lundequist. 2003. "Spatial clustering and the potential for policy practice: Experiences from cluster-building processes in Sweden". European Planning Studies. 11(5): 533–547.
- Halvorsen, T. 2012. "Size, location and agglomeration of inward foreign direct investment (FDI) in the United States". *Regional Studies*. 46(5): 669–682.
- Hansen, N. M. 1965. "Municipal investment requirements in a growing agglomeration". *Land Economics*: 49–56.
- Hassink, R. 2005. "How to unlock regional economies from path dependency? From learning region to learning cluster". *European Planning Studies*. 13(4): 521–535.

He, J.-L. and H. Gebhardt. 2014. "Space of creative industries: A case study of spatial characteristics of creative clusters in Shanghai". *European Planning Studies*. 22(11): 2351–2368.

- He, S., S. MacNeill, and J. Wang. 2013. "Assessing overall network structure in regional innovation policies: A case study of cluster policy in the West Midlands in the U". *European Planning Studies*. 22(9): 1940–1959.
- Heebels, B. and I. van Aalst. 2010. "Creative clusters in Berlin: Entrepreneurship and the quality of place in Prenzlauer Berg and Kreuzberg". *Geografiska Annaler*. 92(4): 347–363.
- Henderson, J. W., T. M. Kelly, and B. A. Taylor. 2000. "The impact of agglomeration economies on estimated demand thresholds: An extension of Wensley and Stabler". *Journal of Regional Science*. 40(4): 719–733.
- Henn, S. 2013. "Transational entrepreneurs and the emergence of clusters in peripheral regions. The case of the diamond cutting cluster in Gujarat". European Planning Studies. 21(11): 1779–1795.
- Hervas-Oliver, J.-L. and R. Boix-Domenech. 2013. "The economic geography of the meso-global spaces: Integrating multinations and clusters at the local-global level". *European Planning Studies*. 21(7): 1064–1080.
- Hervas-Oliver, J.-L., G. Gonzalez, and P. Caja. 2015. "Clusters and industrial districts: Where is the literature going? Identifying emerging sub-fields of research." In: *Ingenio Working Paper Series*. Working Paper No. 2014-09.
- Herzog, J. and W. Henry. 2000. "Plant scale, industry agglomeration and the outlook for regional employment in central European economies". Journal of Regional Science. 40(3): 499–521.
- Hitters, E. and G. Richards. 2002. "The creation and management of cultural clusters". *Creativity and Innovation Management*. 11(4): 234–247.
- Holbrook, J. A., D. Arthurs, and E. Cassidy. 2010. "Understanding the Vancouver Hydrogen and Fuel Cells Cluster: A case study of public laboratories and private research". *European Planning Studies*. 18(2): 317–328.

Holl, A. 2004. "Transport infrastructure, agglomeration economies, and firm birth: Empirical evidence from Portugal". *Journal of Regional Science*. 44(4): 693–712.

- Horvath, R. J. 1970. "The process of urban agglomeration in Ethiopia". Journal of Ethiopian Studies. 8(2): 81–88.
- Hospers, G.-J. and S. Beugelskijk. 2002. "Regional cluster policies: Learning by comparing?" KYKLOS. 55: 381–402.
- Ingstrup, M. B. 2014. "When firms take the lead in facilitating clusters". European Planning Studies. 22(9): 1902–1912.
- Ingstrup, M. B. and T. Damgaard. 2013. "Cluster facilitation from a cluster life cycle perspective". *European Planning Studies*. 21(4): 556–574.
- Isard, W. and P. Liossatos. 1972. "Industrial location: Agglomeration and feedback analysis". *Papers in Regional Science*. 28(1): 5–36.
- Jansson, J. 2008. "Inside the internet industry: The importance of proximity in accessing knowledge in the agglomeration of Internet firms in Stockholm". *European Planning Studies*. 16(2): 211–228.
- Kaiser, R. 2003. "Multi-level science policy and regional innovation: The case of the Munich Cluster for Pharmaceutical Biotechnology". *European Planning Studies*. 11(7): 841–857.
- Karlsen, A. 2011. ""Cluster" creation by reconfiguring communities of practice". European Planning Studies. 19(5): 753–773.
- Karnøe, P. and R. Garud. 2012. "Path creation: Co-creation of heterogeneous resources in the emergence of the Danish wind turbine cluster". *European Planning Studies*. 20(5): 733–752.
- Kasabov, E. 2010. "Why every cluster cannot be a successful community?" *European Planning Studies*. 18(9): 1445–1468.
- Kasabov, E. 2015. "Start-up difficulties in early-stage peripheral clusters: The case of IT in an emerging economy". *Entrepreneurship Theory and Practice*: 727–761.
- Kellerman, A. 2002. "Conditions for the development of high-tech industry: The case of Israel". *Tijdschrift voor Economische en Sociale Geografie*. 93(3): 270–286.
- Ketels, C. and O. Memedovic. 2008. "From clusters to cluster-based economic development". *International Journal of Technological Learning, Innovation and Development*. 1(3): 375–392.

Kiese, M. and M. Wrobel. 2011. "A public choice perspective on regional cluster and network promotion in Germany". *European Planning Studies*. 19(10): 1691–1712.

- Kim, S.-T. 2015. "Regional advantage of cluster development: A case study of the San Diego biotechnology cluster". *European Planning Studies*. 23(2): 238–261.
- Koo, J. and K.-R. Cho. 2011. "New firm formation and industry clusters: A case of the drugs industry in the U.S." *Growth and Change*. 42(2): 179–199.
- Kowalski, A. M. and A. Marcinkowski. 2014. "Clusters versus cluster initiatives, with focus on the ICT sector in Poland". *European Planning Studies*. 22(1): 20–45.
- Kratke, S. 2002. "Network analysis of production clusters: The Potsdam/Babelsberg Film Industry as an example". *European Planning Studies*. 10(1): 27–54.
- Kratke, S. 2007. "Metropolitisation of the European economic territory as a consequence of increasing specialisation of urban agglomeration in the knowledge economy". *European Planning Studies*. 15(1): 1–27.
- Laur, I., M. Klofsten, and D. Bienkowska. 2012. "Catching regional development dreams: A study of cluster initiatives as intermediaries". *European Planning Studies*. 20(11): 1909–1921.
- Lazzeretti, L. 2003. "City of art as a high culture local system and cultural districtualization processes: The cluster of art restoration in Florence". *International Journal of Urban and Regional Research*. 27(3): 635–648.
- Learmonth, D., A. Munro, and J. K. Swales. 2003. "Multi-sectoral cluster modeling: The evaluation of Scottish enterprise cluster policy". European Planning Studies. 11(5): 567–584.
- Lee, K. 2003. "Promoting innovative clusters through the regional research centre policy programme in Korea". *European Planning Studies*. 11(1): 25–39.
- Llobrera, J. T., D. R. Meyer, and G. Nammacher. 2000. "Trajectories of industrial districts: Impact of strategic intervention in medical districts". *Economic Geography*. 76(1): 68–98.

Lombardi, M. and F. Randelli. 2012. "The role of leading firms in the evolution of SMEs clusters: Evidence from the leather products cluster in Florence". In: *Dipartimento di Scienze Economiche*, *Universita degli Studi di Firenze*, *Working Paper N.* 17/2012.

- Lu, R. and T. Reve. 2015. "Relations among clusters". European Planning Studies. 23(4): 828–845.
- Lu, R., R. Zhang, and T. Reve. 2013. "Relations among clusters in six Chinese city regions". *European Planning Studies*. 21(8): 1189–1209.
- Lucas, M., A. Sands, and D. A. Wolfe. 2009. "Regional clusters in a global industry: ICT clusters in Canada". *European Planning Studies*. 17(2): 189–210.
- Lundequist, P. and D. Power. 2002. "Putting Porter into practice? Practices of regional cluster building: Evidence from Sweden". *European Planning Studies*. 10(6): 685–704.
- Malmberg, A. 2009. "Agglomeration". International Encyclopedia of Human Geography: 48–53.
- Malmberg, A., B. Malmberg, and P. Lundequist. 2000. "Agglomeration and firm performance: Economies of scale, localisation, and urbanisation among Swedish export firms". *Environment and Planning*. 32(2): 305–321.
- Marcus, M. 1965. "Agglomeration economies: A suggested approach." Land Economics. 41(3): 279–284.
- Markusen, A. and S. O. Park. 1993. "The state as industrial locator and district builder: The case of Changwon, South Korea". *Economic Geography*. 69(2): 157–181.
- Marshall, A. 1920. Principles of economics: An introductory volume. London: MacMillan.
- Martin, H. and L. Coenen. 2015. "Institutional context and cluster emergence: The biogas industry in southern Sweden". *European Planning Studies*. 23(10): 2009–2027.
- Martinez-Fernandez, M. T., J. Capo-Vicedo, and T. Vallet-Bellmunt. 2012. "The present state of research into industrial clusters and districts. Content analysis of material published in 1997-2006". European Planning Studies. 20(2): 281–204.

- Maskell, P. 2001. "Towards a knowledge-based theory of the geographical cluster". *Industrial and Corporate Change*. 10(4): 921–943.
- Maskell, P., H. Bathelt, and A. Malmberg. 2006. "Building global knowledge pipelines: The role of temporary clusters". *European Planning Studies*. 14(8): 997–1014.
- Mattsson, H. 2009. "Innovating in Cluster/Cluster as innovation: The case of the Biotechvalley Cluster Initiative". *European Planning Studies*. 17(22): 1625–1143.
- Moreno, R., R. Paci, and S. Usai. 2006. "Innovation clusters in the European regions". European Planning Studies. 14(9): 1235–1264.
- Morrison, A. and R. Rabellotti. 2009. "Knowledge and information networks in an Italian wine cluster". *European Planning Studies*. 17(7): 983–1006.
- Mossig, I. 2004. "The networks producing television programmes in the Cologne media cluster: New firm foundation, flexible specialization and efficient decision-making structures". European Planning Studies. 12(2): 155–131.
- Mun, S.-i. and B. G. Hutchinson. 1995. "Empirical analysis of office rent and aggomeration economies: A case study of Toronto". *Journal of Regional Science*. 35(3): 437–455.
- Myint, Y. M., S. Vyakarnam, and M. J. New. 2005. "The effect of social capital in new venture creation: the Cambridge high technology cluster". *Strategic Change*. 14: 165–177.
- Nakamura, R. 1985. "Agglomeration economies in urban manufacturing industries: A case of Japanese cities". *Journal of Urban Economics*. 17: 108–124.
- Newlands, D. 2003. "Competition and cooperation in industrial clusters: The implications for public policy". *European Planning Studies*. 11(5): 521–522.
- Oliver, J. L. H., J. A. Garrigos, and J. I. D. Porta. 2008. "External ties and the reduction of knowledge asymmetries among clusters within global value chains: The case of the ceramic tile district of Castellon". European Planning Studies. 16(4): 507–520.
- Oz, O. and K. Ozkaracalar. 2011. "What accounts for the resilience and vulnerability of clusters? The case of Istanbul's film industry". *European Planning Studies*. 19(3): 361–378.

Park, S. O. and A. Markusen. 1995. "Generalising new industrial distrcts: A theoretical agenda and an application from a non-Western economy". *Environment and Planning A*. 27(1): 81–104.

- Parrilli, M. D. 2004. "A stage and eclectic approach to industrial district development: Two policy keys for 'survival' clusters in developing countries". *European Planning Studies*. 12(8): 1115–1131.
- Parrilli, M. D., M. J. Aranguren, and M. Larrea. 2010. "The role of interactive learning to close the "innovation gap" in SME-based local economies: A furniture cluster in the Basque country and its key policy implications". *European Planning Studies*. 18(3): 351–370.
- Pascal, A. H. and J. J. McCall. 1980. "Agglomeration economies, search costs and industrial location". *Journal of Urban Economics*. 8: 383–388.
- Pe'er, A. and T. Keil. 2013. "Are all startups affected similarly by clusters? Agglomeration, competition, firm heterogeneity, and survival". Journal of Business Venturing. 28: 354–372.
- Perry, M. 2005. "Business clusters in the south: A critical appraisal from Indonesian evidence". Singapore Journal of Tropical Geography. 26(2): 227–243.
- Pieter Van Dijk, M. 2006. "Different effects of globalisation for workers and the poor in China and India, comparing countries, cities and ICT clusters." *Tijdschrift voor Economische en Sociale Geografie*. 97(5): 503–514.
- Pietrobelli, C. and T. O. Barrera. 2002. "Enterprise clusters and industrial districts in Colombia's Fashion Sector". *European Planning Studies*. 10(5): 541–562.
- Pohl, N. and G. Heiduk. 2002. "Silicon Valley's Innovative Millieu: A cultural mix of entrepreneurs/an entrepreneurial mix of cultures? Experiences of European firms". *Erdkunde*. 56(3): 241–252.
- Porter, M. E. 1990. "The competitive advantage of nations". *Harvard business review*. 68(2): 73–93.
- Porter, M. E. 1998. Clusters and competition: new agendas for companies, governments, and institutions. Harvard Business School Press.
- Portnov, B. A. and B. Wellar. 2004. "Development similarity based on proximity: A case study of urban clusters in Canada". *Papers in Regional Science*. 83: 443–465.

- Prevezer, M. 2008. "Technology policies in generating Biotechnology clusters: A comparison of China and the US". *European Planning Studies*. 16(3): 359–374.
- R. L., and 1947. "Organized Industrial Districts: With Special Reference to the Chicago Area". *The Journal of Land & Public Utility Economics*. 23(2): 180–198.
- Rabellotti, R. and H. Schmitz. 1999. "The internal heterogeneity of industrial districts in Italy, Brazil and Mexico". *Regional Studies*. 33(2): 97–108.
- Rama, R., D. Ferguson, and A. Melero. 2003. "Subcontracting networks in industrial districts: The electronics industries of Madrid". *Regional Studies*. 31(1): 71–88.
- Ramirez, M. and X. Li. 2009. "Learning and sharing in a Chinese high-technology cluster: A study of inter-firm and intra-firm knowledge flows between R&D employees". New Technology, Work and Employment. 24(3): 277–296.
- Ramirez-Pasillas, M. 2008. "Resituating proximity and knowledge cross-fertilization in clusters by means of international trade fairs". *European Planning Studies*. 16(5): 643–663.
- Rees, K. 2005. "Interregional collaboration and innovation in Vancouver's emerging high-tech cluster". *Tijdschrift voor Economische en Sociale Geografie*. 96(3): 298–312.
- Roberts, B. H. and M. J. Enright. 2004. "Industry clusters in Australia: Recent trends and prospects". *European Planning Studies*. 12(1): 99–122.
- Rocha, H. 2004. "Entrepreneurship and development: The role of clusters". Small Business Economics Journal. 23(5): 363–400.
- Romanelli, E. and O. M. Khessina. 2005. "Regional industrial identity: Cluster configurations and economic development". *Organization Science*. 16(4): 344–358.
- Rosenfeld, S. A. 2003. "Expanding opportunities: Cluster strategies that reach more people and more places". *European Planning Studies*. 11(4): 359–376.
- Rosenfeld, S. A. 2004. "Art and design as competitive advantage: A creative enterprise cluster in the western United States". *European Planning Studies*. 12(6): 891–903.

Rosenfeld, S. A. 2010. "Sustainable food systems cluster, Vermont style". European Planning Studies. 18(11): 1897–1908.

- Rykiel, Z. 1984. "Intra-metropolitan migration in the Warsaw agglomeration". *Economic Geography*. 60(1): 55–70.
- Saether, B. 2014. "Socio-economic unity in the evolution of an agricultural cluster". *European Planning Studies*. 22(12): 2605–2619.
- Saith, A. 2001. "From village artisans to industrial clusters: Agendas and plicy gaps in Indian rural industrialization". *Journal of Agrarian Change*. 1(1): 81–123.
- Schiele, H. and A. Ebner. 2013. "The role of domestic and international external cluster linkages explored on the example of buyer-supplier relations in learning regions: A cross functional assessment". European Planning Studies. 21(5): 683–699.
- Segarra-Ona, M.-D.-V., L. G. Miret-Pastor, A. Peiro-Signes, and R. Verma. 2012. "The effects of localization on economic performance: Analysis of Spanish tourism clusters". *European Planning Studies*. 20(8): 1319–1334.
- Shaver, J. M. and F. Flyer. 2000. "Agglomeration economies, firm heterogeneity, and foreign direct investment in the United States". Strategic Management Journal. 21: 1175–1193.
- Sinozic, T. and F. Todtling. 2014. "Adaptation and change in creative clusters: Findings from Vienna's new media sector. SRE Discussion Papers, 2014/01". *Tech. rep.* WU Vienna University of Economics and Business. URL: http://epub.wu.ac.at/4091.
- Sjoberg, O. and F. Sjoholm. 2004. "Trade liberalization and the geography of production: Agglomeration, concentration, and dispersal in Indonesia's manufacturing industry". *Economic Geography*. 80(3): 287–310.
- Skalholt, A. and T. Thune. 2014. "Coping with economic crises The role of clusters". European Planning Studies. 22(10): 1993–2010.
- Smith, A. 2003. "Power relations, industrial clusters, and regional transformations: Pan-European integration and outward processing in the Slovak clothing industry". *Economic Geography*. 79(1): 17–40.
- St. John, C. H. and R. W. Pouder. 2006. "Technology clusters versus industry clusters: Resources, networks and regional advantages". *Growth and Change*. 37: 141–171.

Steinle, C., H. Schiele, and K. Mietzner. 2007. "Merging a firm-centered and a regional policy perspective for the assessment of regional clusters: Concept and application of a "dual" approach to a medical technology cluster". *European Planning Studies*. 15(2): 235–251.

- Sternberg, R. and T. Litzenberger. 2004. "Regional clusters in Germany their geography and their relevance for entrepreneurial activities". European Planning Studies. 12(6): 767–791.
- Strange, W. C. 2009. "Viewpoint: Agglomeration research in the age of disaggregation". Canadian Economics Association. 42(1): 1–27.
- Straszheim, M. R. 1984. "Urban agglomeration effects and employment and wage gradients". *Journal of Urban Economics*. 16: 187–207.
- Sydow, J., F. Lerch, and U. Staber. 2010. "Planning for path dependence? The case of a network in thd Berlin-Brandenburg Optics Cluster". *Economic Geography*. 86(2): 173–195.
- Tallman, S., M. Jenkins, N. Henry, and S. Pinch. 2004. "Knowledge, clusters, and competitive advantage". *Academy of Management Review*. 29(2): 258–271.
- Tan, J. 2006. "Growth of industry clusters and innovation: Lessons from Beijing Zhongguancun Science Park". *Journal of Business Venturing*. 21: 827–850.
- Teigland, R. and G. Lindqvist. 2007. "Seeing eye-to-eye: How do public and private sector views of a Biotech cluster and its cluster initiative differ?" *European Planning Studies*. 15(6): 767–786.
- Turok, I. 2003. "Cities, clusters and creative industries: The case of film and television in Scotland". *European Planning Studies*. 11(5): 549–565.
- Valentin, F., R. L. Jensen, and H. Dahlgren. 2008. "How venture capital shapes emerging bio-clusters A cross-country comparison". European Planning Studies. 16(3): 441–463.
- Viljamaa, K. 2007. "Technological and cultural challenges in local innovation support activities emerging knowledge interactions in Charlotte's Motor Sport cluster". European Planning Studies. 15(9): 1215–1232.
- Visser, E.-J. and O. Atzema. 2008. "With or without clusters: Facilitating innovation through a differentiated and combined network approach". *European Planning Studies*. 16(9): 1169–1188.

Vogiatzoglou, K. and T. Tsekeris. 2013. "Spatial agglomeration of manufacturing in Greece: Sectoral patterns and determinants". *European Planning Studies*. 21(12): 1853–1872.

- Wang, L., A. Madhok, and S. X. Li. 2014. "Agglomeration and clustering over the industry life cycle: Toward a dynamic model of geographic concentration". *Strategic Management Journal*. 35: 995–1012.
- Warrian, P. and C. Mulhern. 2009. "From metal bashing to materials science and services: Advanced manufacturing and mining clusters in transition". European Planning Studies. 17(2): 281–301.
- Waxell, A. 2009. "Guilty by Association: A cross industrial approach to sourcing complementary knowledge in the Uppsala Biotechnology cluster". *European Planning Studies*. 17(11): 605–624.
- Wickham, J. and A. Vecchi. 2008. "Local firms and global reach: Business air travel and the Irish Software cluster". *European Planning Studies*. 16(5): 693–710.
- Witte, P., F. Van Oort, B. Wiegmans, and T. Spit. 2003. "European corridors as carriers of dynamic agglomeration externalities?" *European Planning Studies*. 22(11): 2326–2350.
- Wolfe, D. A. 2009. "Introduction: Embedded clusters in the global economy". European Planning Studies. 17(2): 179–187.
- Wrigley Jr., R. L. 1947. "Organized Industrial Districts: With Special Reference to the Chicago Area". *The Journal of Land & Public Utility Economics*. 23(2): 180–198.
- Yu, J. and R. Jackson. 2011. "Regional innovation clusters: A critical review". *Growth and Change*. 42(2): 111–124.
- Zhang, Y. and H. Li. 2010. "Innovation search of new ventures in a technology cluster: The role of ties with service intermediaries". Strategic Management Journal. 31: 88–109.
- Zheng, J. 2010. "The "Entrepreneurial State" in creative industry development in Shanghai". *Journal of Urban Affairs*. 32(2): 143–170.
- Zheng, X.-P. 1998. "Measuring optimal population distribution by agglomeration economies and diseconomies: A case study of Tokyo". *Urban Studies*. 35(1): 95–112.

Zhou, Y. and T. Xin. 2003. "An innovative region in China: Interaction between multinational corporations and local firms in a high-tech cluster in Beijing". *Economic Geography*. 78(2): 129–152.

Zuliani, J.-M. 2008. "The Toulouse cluster of on-board systems: A process of collective innovation and learning". *European Planning Studies*. 16(5): 711–726.