

**Department of Political Science  
School of Graduate Studies  
University of Toronto**

**Innovation and Knowledge Transfer in City-Regions  
POL 454H1S/POL 2394S  
Winter, 2018**

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**Time:** Wednesday, 2:00-4:00 pm  
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**Course Description:**

This course surveys two of the key themes related to the process of innovation in a knowledge-based economy: the process by which new knowledge is generated and effectively transferred to those organizations with the potential to commercialize it; and secondly, the paradoxical relationship between knowledge creation and proximity in a modern global economy. Increasingly the global economy is seen as a knowledge-based one, hence the critical importance of understanding how new knowledge is generated and deployed in the form of new products and processes. At the same time, the more global the economy becomes, the greater the value of proximity, hence the fascination with how to foster the growth of new regional concentrations of knowledge and innovation, such as Silicon Valley. This course surveys the current state of knowledge concerning these processes and explores the implications of this understanding for public policies designed to stimulate knowledge transfer and promote the growth of dynamic and innovative city-regions.

**Required Reading:** Course Readings are available online through the Library and the Portal.

**Course Evaluation:**

Evaluation will consist of a research paper of 20-25 pages (70%) for graduates; and an essay proposal (10%) and research paper of 15 to 20 pages (60%) for undergraduates. Seminar participation and presentations will be worth 30% of the grade for all students. Essay proposals are due in class on **February 14** for undergraduates. Essays are due at the end of the term. A penalty of 1% per week day will be deducted for late essays and proposals.

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## COURSE POLICIES

### *Office hours:*

If you have questions about the readings, seminar discussions, or assignments, office hours are best. No appointment is needed. If you cannot make office hours but would like to meet, I can often chat for a few minutes after the class and can sometimes schedule another meeting time on the spot. Otherwise, contact me by emails to schedule a mutually agreeable alternative time.

### *Email:*

Email is an effective way to communicate for short, quick questions, but extended conversations are best conducted face to face during office hours or in a special appointment.

### *Keep copies:*

Students are advised to keep copies of all their draft work and hard copies of their assignments, including drafts of their assignments, until the marked assignments have been returned.

### *Plagiarism:*

Make sure that the information in your essays and on your tests is presented in your own words. PLAGIARISM is a serious academic offence at the University of Toronto and will be treated according to the rules in the university's Code of Behaviour.

For further clarification and information, please see the University of Toronto's policy on Plagiarism at <http://www.utoronto.ca/writing/plagsep.html>.

### *Extensions:*

Under extraordinary circumstances, consideration will be given to granting an extension based on an official medical note from a doctor or from the University specifying extreme family circumstances.

### *Accessibility Needs:*

The University of Toronto is committed to accessibility. If you require accommodations or have any accessibility concerns, please visit <http://studentlife.utoronto.ca/accessibility>.

**Topics:****1. Introduction to the course and discussion of outlines****2. Innovation and Local Economic Development**

\*Rodríguez-Pose, Andrés and Ricardo Crescenzi, 2008, "Mountains in a flat world: why proximity still matters for the location of economic activity," *Cambridge Journal of Regions, Economy and Society* 1: 371-388.

\*Maskell, Peter and Anders Malmberg, 1999, "Localised learning and industrial competitiveness," *Cambridge Journal of Economics* 23: 167-185.

\*Storper, Michael, 1995, "The Resurgence of Regional Economies, Ten Years Later: The Region as a Nexus of Untraded Interdependencies," *European Urban and Regional Studies* 2: 191-221.

\*Morgan, Kevin. 2004. "The exaggerated death of geography: learning, proximity and territorial innovation systems," *Journal of Economic Geography* 4: 3-21.

Pike, Andy, Andrés Rodríguez-Pose and John Tomaney, 2006, *Local and Regional Development*, pp. 96-113.

Simmie, James, "Innovation and Space: A Critical Review of the Literature," *Regional Studies* 39,6: 789-804.

Fagerberg, Jan, 2005, "Innovation: A Guide to the Literature," in *The Oxford Handbook of Innovation*, ed. Jan Fagerberg, David C. Mowery and Richard R. Nelson, pp. 1-26.

Philip Cooke et al. Eds. *Handbook of Regional Innovation and Growth*

**3. Innovation and the Firm**

\*Pavitt, Keith, 2005, "Innovative Processes," in Fagerberg et al, pp. 85-114.

\*Dosi, Giovanni, 1988, "The Nature of the Innovative Process," In *Technical Change and Economic Theory*, ed. G. Dosi et al., pp. 221-238.

\*Cohen, Wesley M., and Daniel A. Levinthal, 1990, "Absorptive Capacity: A New Perspective on Learning and Innovation," *Administrative Science Quarterly* 35, 128-52.

\*Arthur, W. Brian, 1988, "Competing Technologies: An Overview," in *Technical Change and Economic Theory*, ed. G. Dosi et al., pp. 590-607.

Kline, Stephen J., and Nathan Rosenberg, 1986, "An Overview of Innovation," in *The Positive Sum Strategy: Harnessing Technology for Economic Growth*, Ed. Ralph Landau and Nathan Rosenberg, Washington, DC: National Academy Press, 275-305.

Nelson, Richard R, and Sidney G. Winter, 1977, "In Search of Useful Theory of Innovation," *Research Policy* 6, pp. 36-76.

Nelson, Richard R. and Sidney G. Winter, *An Evolutionary Theory of Economic Change*

Rothwell, Roy, 1994. "Industrial Innovation: Success, Strategy, Trends," in M. Dodgson and R. Rothwell, eds, *The Handbook of Industrial Innovation*, pp. 33-53.

Pavitt, Keith, 1991, "What makes basic research economically useful?" *Research Policy*, 20 109-119.

Rosenberg, Nathan, 1990, "Why do Companies do Basic Research With Their own Money," *Research Policy*, 19, 165-170.

#### **4. Tacit Knowledge, Open Innovation and Related Variety**

\*Senker, Jacqueline, 1995, "Tacit Knowledge and Models of Innovation," *Industrial and Corporate Change* 4:2 (pp. 425-447).

\*Gertler, Meric S. 2003. "Tacit knowledge and the economic geography of context, or the undefinable tacitness of being (there)," *Journal of Economic Geography* 3: 75-99.

\*Feldman, Maryann P. 2000. "Location and Innovation: The New Economic Geography of Innovation, Spillovers and Agglomeration," in Gordon L. Clark et al., eds, *The Oxford Handbook of Economic Geography*, pp. 373-94.

\*Boschma, Ron and Koen Franken, 2010. "Technological Relatedness, related variety and economic geography," in Philip Cooke et al. Eds. *Handbook of Regional Innovation and Growth*, pp. 187-197.

\*Boschma, Ron and Gianluca Capone, 2015. "Institutions and Diversification: Related vs unrelated diversification in a varieties of capitalism framework," *Research Policy* 44: 1902-14. (optional required reading)

Cooke, Phil, 2005, "Regionally asymmetric knowledge capabilities and open innovation: Exploring 'Globalisation 2' – A new model of industry organisation," *Research Policy* 34: 1128-1149.

Chesborough, Henry. *Open Innovation: The New Imperative for Creating and Profiting from Technology*, ch. 3, pp. 43-62.

Jacqueline Senker and Wendy Faulkner, "Networks, Tacit Knowledge and Innovation," in Rod Coombs et al., eds, *Technological Collaboration: The Dynamics of Cooperation in Industrial Innovation*

Nonaka, Ikujiro, Ryoko Toyama and Akiya Nagata, 2000, "A Firm as a Knowledge-creating Entity: A New Perspective on the Theory of the Firm," *Industrial and Corporate Change* 9:1, pp. 1-20.

Nonaka, Ikujiro and Hirotaka Takeuchi, *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*

Nonaka, Ikujiro and David J. Teece, eds, 2000, *Managing Industrial Knowledge: Creation, Transfer and Utilization*

Foray, Dominique and Bengt-Åke Lundvall, 1996, "The Knowledge-Based Economy: From the Economics of Knowledge to the Learning Economy," in *Employment and Growth in the Knowledge-Based Economy*, OECD Paris.

## 5. Universities and Regional Economic Development

\*Shiri Breznitz, *The Fountain of Knowledge: The Role of Universities in Economic Development*, pp. 16-40

\*Feldman, Maryann and Ian Stewart, 2008. "Wellsprings of Modern Economic Growth: Higher Education, Innovation and Local Economic Development," in *Annual World Bank Conference on Development Economics 2008*.

\*Feller, Irwin, 1999, "The American University System as a Performer of Basic and Applied Research" in *Industrializing Knowledge*, Ed. Lewis M. Branscomb, Fumio Kodama, and Richard Florida, pp. 65-101.

\*Bramwell, Allison and David A. Wolfe, 2008, "Universities and Regional Economic Development: The Entrepreneurial University of Waterloo," *Research Policy* 37(8): 1175-87.

Martin Kenney and David C. Mowery, eds, *Public Universities and Regional Growth*

Goldstein, H. and Glaser, K. 2012. "Research universities as actors in the governance of local and regional development," *The Journal of Technology Transfer* 37 (2): 158-174

Geiger, Roger and Creso M. Sá, *Tapping the Riches of Science: Universities and the Promise of Economic Growth*

Breznitz, Shiri M. and Feldman, Maryann P., 2012. "The Engaged University," *Journal of Technology Transfer* 37(2): 139-157.

Wolfe, David A. 2009, "Universities and Knowledge Transfer: Powering Local Economic and Cluster Development," in *Research and Innovation Policy: Changing Federal Government-University Relations*, eds G. Bruce Doern and C. Stoney

Helen Thorp and Buck Goldstein, *Engines of Innovation: The Entrepreneurial University in the Twenty-first Century*.

Rosenberg, Nathan, 2003, "America's Entrepreneurial Universities," in *The Emergence of Entrepreneurship Policy*, ed. David M. Hart, pp. 113-37.

David C. Mowery and Bhaven N. Sampat, 2005, "Universities in National Innovation Systems," in Fagerberg et al. *The Oxford Handbook of Innovation*

Nelson, Richard R. 1996, "Capitalism as an Engine of Progress," in *The Sources of Economic Growth*

Roger L. Greiger, 2004, *Knowledge and Money: Research Universities and the Paradox of the Marketplace*.

Crow, Michael M. And Christopher Tucker, 2001, "The American Research University System as America's *de facto* Technology Policy," *Science and Public Policy* 28:1 (February): 2-10.

Florida, Richard, and Wesley M. Cohen, 1999, "Engine or Infrastructure? The University role in Economic Development," in *Industrializing Innovation*, Ed. Lewis M. Branscomb, Fumio Kodama, and Richard Florida, 589-610.

Rosenberg, Nathan and Richard R. Nelson, 1994, "American universities and technical advance in industry," *Research Policy* 23:3 pp.323-348.

Faulkner, Wendy, and Jacqueline Senker, 1995, *Knowledge Frontiers: Public sector research and Industrial Innovation in Biotechnology, Engineering Ceramics, and Parallel Computing*.

## 6. Regional Innovation Systems / Clusters/ Learning Regions

- \* Asheim, Bjørn T., Markus Grillitsch and Michaela Trippel, "Regional Innovation Systems: Past, Present and Future," in Richard Shearmur et al., *Handbook of the Geographies of Innovation*, pp. 45-62.
- \*Cooke, Philip and Kevin Morgan, 1998, *The Associational Economy: Firms, Regions and Innovation*, ch. 3 "The Region as a Nexus of Learning Processes," pp. 60-82.
- \*Asheim, Bjørn, Philip Cooke and Ron Martin, 2006, "The rise of the cluster concept in regional analysis and policy: a critical assessment," in Bjørn Asheim, Philip Cooke and Ron Martin, *Clusters and Regional Development: Critical reflections and explorations*.
- \*Ketels, Christian. 2013. "Recent Research on competitiveness and clusters: what are the implications for regional policy," *Cambridge Journal of Regions, Economy and Society* 6(2): 269-284.
- Sturgeon, Timothy J. 2003. "What really goes on in Silicon Valley? Spatial clustering and dispersal in modular production networks," *Journal of Economic Geography* 3: 199-225.
- Wolfe, David A. and Meric S. Gertler, 2005, "Clusters from the Inside and Out: Local Dynamics and Global Linkages," *Urban Studies* 41, 5/6: 1071-1093.
- Wolfe, David A. 2009, "Introduction: Embedded Clusters in the Global Economy," *European Planning Studies* 17(2): 179-187.
- Cooke, Philip, 2005. "Regional Knowledge Capabilities and Open Innovation: Regional Innovation Systems and Clusters in the Assymmetric Knowledge Economy," in S. Breschi and F. Malerba, eds, *Clusters, Networks and Innovation*, pp. 80-109.
- Cooke, Philip, 2007. "Regional Innovation, Entrepreneurship and Talent Systems," *International Journal of Entrepreneurship and Innovation*
- Iammarino, Simona, 2005, "An evolutionary integrated view of regional systems of innovation: Concepts, measures and historical perspectives," *European Planning Studies* 13, 4: 497-519.
- Cooke, P., M. Heidenreich and H.-J. Braczyk, eds, 2004, *Regional Innovation Systems*, 2<sup>nd</sup> ed., especially introduction by Cooke
- Braunerheljm, Pontus and Maryann Feldman, 2006. *Cluster Genesis: Technology-Based Industrial Development*.

## 7. Path Dependence and Local/Regional Development

- \*Storper, Michael, 1997. "The Evolution of Regional Specificities," in *The Regional World*, pp. 59-82.
- \*Martin, Ron and Peter Sunley, 2010. "The Place of Path Dependence in an Evolutionary Perspective on the Economic Landscape," in Ron Boschma and Ron Martin, eds, *The Handbook of Evolutionary Economic Geography*, pp. 62-92.
- \*Wolfe, David A. 2010. "Strategic management of core cities: Path dependence and economic adjustment in resilient regions," *Cambridge Journal of Regions, Economy & Society* 3: 139-52.
- \*Isaksen, Arne and Michaela Trippel, 2016. "Path Development in Different Regional Innovation Systems: A Conceptual Analysis," in Mario Davide Parilli et al. eds. *Innovation Drivers and Regional Innovation Strategies*, pp. 66-84.
- and
- \*Trippel, Michaela. 2016. "Fostering New Development Paths in Non-Core Regions: The Policy Challenge," presentation to the 11<sup>th</sup> Regional Innovation Policies Conference, Cardiff University, November 3, 2016.
- Martin, Ron and Peter Sunley, 2006. "Path dependence and regional economic evolution," *Journal of Economic Geography* 6: 395-437.
- Martin, Ron, 2011. "Regional Economies as Path Dependent Systems: some issues and implications," in *Handbook of Regional Innovation and Growth*, ed P. Cooke et al., pp.
- Wolfe, David A. and Méric S. Gertler, 2006. "Local Antecedents and Trigger Events: Policy Implications of Path Dependence for Cluster Formation," in P. Braunderhjelm and M. Feldman, eds, *Industrial Genesis: Technology-Based Industrial Development*, pp. 243-263.
- Simmie, James, et al. 2008. *History Matters: Path dependence and innovation in British city-regions*. NESTA Research Report.
- Arthur, W. Brian, 1994. "Urban Systems and Historical Path Dependence," in W. Brian Arthur, *Increasing Returns and Path Dependence in the Economy*, pp. 99-110
- Woodlief, Anthony, 1998. "The Path-Dependent City," *Urban Affairs Review* 33(3): 405-437.



David, Paul A. 2007. "Path-dependence, its critics and the quest for historical economics," in Geoffrey M. Hodgson, ed., *The Evolution of Economic Institutions: A Critical Reader*, pp. 120-142.

Fuchs, Gerhard and Philip Shapira, eds, 2005. *Rethinking Regional Innovation and Change: Path Dependency or Regional Breakthrough?*

## 8. Cities and Innovation

\*Wolfe, David A. 2014. "Introduction," in David A. Wolfe, ed., *Innovating in Urban Economies Economic Transformation in Canadian City-Regions*, Toronto: University of Toronto Press.

\*Scott, Allen J., 2012. "On urbanization and urban theory," in *A World in Emergence: Cities and Regions in the 21<sup>st</sup> Century*, pp. 15-31.

\*Duranton, Gilles and Diego Puga, 2000. "Diversity and Specialisation in Cities: Why, Where and When Does It Matter," *Urban Studies* 37(3): 533-555.

\*Martin, Ron and James Simmie, 2008. "Path Dependence and Local Innovation Systems in City Regions," *Innovation: Management, Policy & Practice* 10(2-3): 183-196.

Audretsch, David, 2002, "The Innovative Advantage of US Cities," *European Planning Studies* 10(2): 165-176.

Simmie, James, 2003. "Innovation and Urban Regions as National and International Nodes for the Transfer and Sharing of Knowledge" *Regional Studies* 37(6 & 7): 607-620.

Wolfe, David A. 2009. *21<sup>st</sup> Century Cities in Canada: The Geography of Innovation*, ch. 1 & 2. Online at: <http://www.conferenceboard.ca/documents.aspx?did=3311>.

Wolfe, David A. and Allison Bramwell, 2008. "Innovation, creativity and governance: Social dynamics of economic performance in city-regions," *Innovation: Management, Policy & Practice* 10(2-3): 170-182.

Storper, Michael, 2013, *Keys to the City*, Part I

Glaeser, Edward, 2011. *Triumph of the City*, esp. ch. 1 and 2.

Enrico Moretti, *The New Geography of Jobs*

Montgomery, John, 2007. *The New Wealth of Cities: City Dynamics and the Fifth Wave*.

Van Winden, Willem, 2006. "Globalisation and Urban Competitiveness: Challenges for Different Types of Urban Regions," in OECD Territorial Reviews, *Competitive Cities in the Global Economy*, pp. 303-316.

Markusen, Ann and Greg Schrock, 2006. "The Distinctive City: Divergent Patterns in Growth, Hierarchy and Specialization," *Urban Studies* 43(8): 1301-1323.

Glaeser, Edward L. et al., 1992, "Growth in Cities," *The Journal of Political Economy* 100(6): 1126-52.

Glaeser, Edward L., 2000, "The New Economics of Urban and Regional Growth," in *The Oxford Handbook of Economic Geography*, eds Gordon L. Clark, Maryann P. Feldman and Meric S. Gertler, pp. 83-98.

Pugh O'Mara, M. 2005. *Cities of Knowledge: Cold War Science and the Search for the Next Silicon Valley*. Princeton: Princeton University Press.

Feldman, Maryann P. and David P. Audretsch, "Innovation in cities: Science-based diversity, specialization and local competition," *European Economic Review* 43: 409-29.

## 9. Creativity and the Economic Geography of Talent

\*Gertler, Meric S., et al. 2014. "Attracting and Retaining Talent: Evidence from Canada's City-Regions," in Jill Grant, ed., *Seeking Talent for Creative Cities: The Social Dynamics of Innovation*, Toronto: University of Toronto Press.

\*Florida, Richard, Charlotta Mellander and Kevin Stolarick, 2008. "Inside the black box of regional development: human capital, the creative class and tolerance," *Journal of Economic Geography* 8: 615-649.

\*Storper, Michael and Allen J. Scott, 2009. "Rethinking human capital, creativity and urban growth," *Journal of Economic Geography* 9: 147-167.

\*Scott, Allen J. 2007. "Capitalism and Urbanization in a New Key? The Cognitive-Cultural Dimension," *Social Forces* 85(4): 1465-1482.

\*Wolfe, David A. 2009. *21<sup>st</sup> Century Cities in Canada: The Geography of Innovation*, ch. 3. Online at: <http://www.conferenceboard.ca/documents.aspx?did=3311>.

- Scott, Allen J. 2008. "The Cognitive-Cultural Economy and the Creative City," in *Social Economy of the Metropolis*, pp. 64-83.
- Storper, Michael and Michael Manville, 2006. "Behaviour, Preferences and Cities: Urban Theory and Urban Resurgence," *Urban Studies* 43(8): 1247-1274.
- Gertler, Meric S. and Tara Vinodrai, 2005, "Anchors of Creativity: How Do Public Universities Create Competitive and Cohesive Communities?" in *Taking Public Universities Seriously*, pp. 293-315. [http://www.utoronto.ca/progris/web\\_files/recentpub.htm](http://www.utoronto.ca/progris/web_files/recentpub.htm).
- Markusen, Ann and Greg Schrock, 2006. "The Artistic Dividend: Urban Artistic Specialisation and Economic Development Implications," *Urban Studies* 43(10): 1661-1686.
- Florida, Richard, 2002, "The Economic Geography of Talent," *Annals of the Association of American Geographers* 94(2): 743-55.
- Florida, Richard, 2002, *The Rise of the Creative Class: And How it's Transforming Work, Leisure, Community and Everyday Life*
- Florida, Richard, 2005. *The Flight of the Creative Class: The New Global Competition for Talent*.

## 10. Urban Governance for the Knowledge Economy

- \*Bradford, Neil and Allison Bramwell, "Governing Urban Economies: Innovation and Inclusion in Canadian City-Regions," in Neil Bradford and Allison Bramwell, eds. *Governing Urban Economies: Innovation and Inclusion in Canadian City-Regions*, Toronto: University of Toronto Press, pp. 3-18.
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- \*Bramwell, Allison, and Neil Bradford, "Civic Infrastructures of Innovation and Inclusion? Reflections on Urban Governance in Canada, in Neil Bradford and Allison Bramwell, eds, *Governing Urban Economies: Innovation and Inclusion in Canadian City-Regions*, Toronto: University of Toronto Press, pp.319-37.
- \*Safford, Sean, 2009. *Why the Garden Club Couldn't Save Youngstown: The Transformation of the Rustbelt*, ch. 6.
- \*Storper, Michael et al. 2015. *The Rise and Fall of Urban Economies: Lessons from San Francisco and Los Angeles*, ch. 8, pp. 169-92.
- Wolfe, David A. 2009. *21<sup>st</sup> Century Cities in Canada: The Geography of Innovation*, ch. 4 & 5. Online at: <http://www.conferenceboard.ca/documents.aspx?did=3311>.

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- Clarke, Susan E. And Gary L. Gaile, 1998. *The Work of Cities*.
- Sellers, Jeffrey M. *Governing from Below: Urban Regions and the Global Economy*.
- Savitch, H.V. and Paul Kantor, *Cities in the International Marketplace*.
- Donald, Betsy, 2005, "The Politics of Local Economic Development in Canada's City Regions," *Space and Polity* 9(3): 261-281.

## 11. Regional Resilience and Economic Development

- \*Christopherson, Susan, Jonathan Michie and Peter Tyler, 2010. "Regional resilience: theoretical and empirical perspectives," *Cambridge Journal of Regions, Economy & Society* 3, 3-10.
- \*Martin, Ron and Peter Sunley, "Competitiveness and regional economic resilience," in Robert Huggins and Piers Thomson, eds, *Handbook of Regions and Competitiveness*, pp. 287-307.
- \*Pike, Andy, Stuart Dawley and John Tomaney, 2010. "Resilience, adaptation and adaptability," *Cambridge Journal of Regions, Economy & Society* 3, 59-70.
- \*Wolfe, David A. 2011. "Regional Resilience, Cross-Sectoral Knowledge Platforms and Prospects for Growth in Canadian City-Regions," in *Reframing Regional Development: Evolution, Innovation and Transition*, ed. Phil Cooke, (London: Routledge).
- Crespon, Joan, Ron Boschma and Pierre- Alexandre Balland, "Resilience, networks and competitiveness: a conceptual framework," in Robert Huggins and Piers Thomson, eds, *Handbook of Regions and Competitiveness*, pp. 271-86

Simmie, James and Ron Martin, 2010. "The economic resilience of regions: towards an evolutionary approach," *Cambridge Journal of Regions, Economy & Society* 3, 27-43.

Hill, Edward et al. 2010. "Economic Shocks and Regional Economic Resilience," Building Resilient Regions/Institute of Governmental Studies, Working Paper 2010-10.

## 12. Policy Implications

\*Wolfe, David A. and Meric S. Gertler, 2016. "Innovation, Creativity and Governance in Canadian City Regions," in *Growing Urban Economies: Innovation, Creativity and Governance in Canadian City-Regions*, pp. 5-47.

\*Taylor, Zack and Neil Bradford. 2015. "The New Localism: Canadian Urban Governance in the Twenty-First Century," in Pierre Filion et al., eds. *Canadian Cities in Transition: Perspectives for an Urban Age*, 5<sup>th</sup> ed., pp. .

\*McCann, Philip and Raquel Ortega-Argiles, 2013. "Modern Regional Innovation Policy," *Cambridge Journal of Regions, Economy and Society* 6(2): 187-216.

\*Ketels, Christian, "Upgrading regional competitiveness: what role for regional governments?" in Robert Huggins and Piers Thomson, eds, *Handbook of Regions and Competitiveness*, pp. 501-17.

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Florida, Richard, *The Great Reset*, Part I

Wolfe, David A. 2011. "Smart Specialization: A New Model for Economic Development," in *The State of the Federation 2010*, ed. Matthew Mendelson, (Kingston and Toronto: Institute of Intergovernmental Affairs, Queen's University).

Collaborative Economics, 2008. *The Innovation Driven Economic Development Model: A Practical Guide for the Regional Innovation Broker*