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**Department of Political Science
UNIVERSITY OF TORONTO**

**INNOVATION AND GOVERNANCE
POL 408H 1 F / POL 2338H 1 F
Fall 2011**

Instructor: Harald Bathelt
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Office Hours: Tuesday, 2:30-4:30 PM
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Lecture Hours: Tuesday, 12:00-2:00 PM
Lecture Room: UC 148 (University College)

Course Description:

The course discusses a broad range of topics related to innovation and governance, such as (i) technological change and its social and economic consequences, (ii) the spatial effects which result from this, and (iii) the necessities for economic policies at different territorial levels. As international competitiveness of industrial economies cannot be based on cost advantages alone, future growth in the knowledge-based economy will be increasingly associated with capabilities related to knowledge generation and innovation. As a consequence, questions of performance in innovation and policy support will become decisive at the firm, regional-state and national-state levels.

The seminar is divided into four main parts: The first part deals with conceptual foundations of innovation processes, such as evolutionary and institutional views of innovation. In the second part, national configurations of innovation processes and governance are investigated. The third part will deal with innovation processes at the subnational level, focusing on regional innovation and a knowledge-based conception of clustering. The final part of the course discusses aspects of multilevel governance in regional and global context. The seminar develops a relational perspective of institution-building and territorial governance which helps us to understand cross-national innovation processes.

This course is inter-disciplinary in nature and uses literature from a number of different fields dealing with innovation, governance and its consequences in economic and social life. The course might thus also be of interest for students in Economics, Geography, International Relations, History and Philosophy of Science and Technology, and Sociology.

Course Structure:

This course will be based on a seminar format. Course evaluation will be based on a seminar presentation and a research assignment (including a proposal and a research paper). Active seminar participation will also be considered.

For the research assignment, students are expected to choose a topic which is closely related to the context of the course and, if possible, relate this topic to empirical studies in Canada and/or the US. The *paper proposal* should provide an introduction to the topic, put forward the main question or problem to be addressed and provide a structure of the argument advanced. Students should aim to conduct a comparative study; this could be an investigation of an industry in two countries or two regions; a study of the differences in the organization of regional innovation conditions; or a study comparing specific aspects of two innovation systems. An annotated bibliography should also be attached that gives an overview of the sources to be used. It is expected that the *research paper* will later be developed from this proposal and the comments received on it. Undergraduate students are expected to hand in a 15-20-page paper (double-spaced) and graduate students a 20-25-page paper (double-spaced) in the last week of classes. To conserve paper, please print all assignments double-sided.

Assignments are expected to be handed in on the due date in class. The due dates for the assignments are noted below. For lateness, a penalty of 3% per day will be deducted from the mark for the first 7 days. After this 7-day period, papers will no longer be accepted. Students are strongly advised to keep all rough and draft work as well as hard copies of their research papers and assignments until the marked assignments have been returned.

Students who miss two or more classes without acceptable reasoning and documentation, such as a doctor's or a registrar's note, will receive 0% on their seminar participation mark.

Turnitin.com:

Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site. If, as a student, you object to using Turnitin.com, please see the course instructor to establish appropriate alternative arrangements for submission of your written assignments prior to the submission deadline.

Plagiarism is a serious offence and will be dealt with accordingly. For further clarification and information, please see the University of Toronto's policy on Plagiarism at <http://www.writing.utoronto.ca/advice/using-sources>.

Students are expected register with the course on the Turnitin.com website as soon as they have decided to take on the course. The information required for registration includes Class

ID: 4149491 and Enrollment Password: pol408. The Class Name is “innovation and governance 2011”.

Accessibility Needs:

The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible: accessibility.services@utoronto.ca or <http://www.accessibility.utoronto.ca/>.

Further details regarding the course and suggestions from students will be discussed in class.

Required Reading:

POL 408H / POL 2338H Course Kit (information to be provided by the instructor)

Course Evaluation:

The course evaluation will be based on the following aspects:

10%	2-page proposal with annotated literature list (due class 7: October 25)
20%	presentation and seminar participation
70%	research paper (due class 12: December 6)

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TOPICS: Fall Term 2011

A. Conceptual foundations of innovation processes

1. Introduction to the course: Innovation as an interactive, social process
2. Proximity, innovation and learning
3. Institutions and innovation

B. Innovation and national governance

4. Regulation theory and national innovation systems
5. Varieties of capitalism, and the US and German cases
6. The innovation systems of Canada, Britain and France

C. Innovation and subnational governance

7. Regional or regionalized innovation systems?
8. Toward a knowledge-based conception of clusters
9. High technology clusters in Canada

D. Relational, multilevel governance in global context

10. Multilevel governance and innovation policy
11. Cross-national governance and the role of boundary spanners
12. Regional governance and cluster policy

Readings by Topic: Fall Term 2011

Readings marked by an asterix (*) are core readings on each topic which all students are required to read.

1. Introduction to the course: Innovation as an interactive, social process

*Anderson, P. and Tushman, M. L. (1990): Technological discontinuities and dominant designs: A cyclical model of technological change. Administrative Science Quarterly 35: 604-633.

*Dosi, G. (1988): The nature of the innovative process. In: Dosi, G., Freeman, C., Nelson, R. R., Silverberg, G. and Soete, L. L. G. (Eds.): Technical Change and Economic Theory. London, New York: Pinter, pp. 221-238.

*Rigby, D. K., Gruver, K. and Allen, J. (2009): Innovation in turbulent times. Harvard Business Review 87 (6): 79-86.

Orlikowski, W. J. (2000): Using technology and constituting structures: A practices lens for studying technology in organizations. Organization Science 11: 404-428.

Pavitt, K. (2005): Innovation process. In: Fagerberg, J., Mowery, D. C. and Nelson, R. R. (Eds.): The Oxford Handbook of Innovation. Oxford: Oxford University Press, pp. 86-114.

Powell, W. W. and Grodal, S. (2005): Networks of innovation. In: Fagerberg, J., Mowery, D. C. and Nelson, R. R. (Eds.): The Oxford Handbook of Innovation. Oxford: Oxford University Press, pp. 56-85.

Schumpeter, J. (1950): The process of creative destruction. In: Schumpeter, J. (Ed.): Capitalism, Socialism and Democracy. London: Allen and Unwin.

2. Proximity, innovation and learning

*Nonaka, I., Toyama, R. and Nagata, A. (2000): A firm as a knowledge-creating entity: A new perspective on the theory of the firm. Industrial and Corporate Change 9: 1-20.

*Torre, A. and Rallet, A. (2005): Proximity and localization. Regional Studies 39: 47-59.

Boschma, R. (2005): Proximity and innovation: A critical assessment. Regional Studies 39: 61-74.

Gertler, M. S. (1995): 'Being there': Proximity, organization, and culture in the development and adoption of advanced manufacturing technologies. Economic Geography 71: 1-26.

Lundvall, B.-Å and Johnson, B. (1994): The learning economy. Journal of Industry Studies 1: 23-42.

Rallet, A. and Torre, A. (1999): Is geographical proximity necessary in the innovation networks in the era of the global economy? GeoJournal 49: 373-380.

3. Institutions and innovation

*Barley, S. R. and Tolbert, P. S. (1997): Institutionalization and Structuration: Studying the Links between Action and Institution. Organization Studies 18: 93-117.

*Hargadon, A. B. and Douglas, Y. (2001): When innovations meet institutions: Edison and the design of the electric light. Administrative Science Quarterly 46: 476-501.

*Setterfield, M. (1993): A model of institutional hysteresis. Journal of Economic Issues 27: 755-774.

Denzau, A. T. and North, D. C. (1994): Shared mental models: ideologies and institutions. Kyklos 47: 3-31.

Johnson, B. (1992): Institutional learning. In: Lundvall, B.-Å. (Ed.): National Systems of Innovation. Towards a Theory of Innovation and Interactive Learning. London: Pinter, pp. 23-44.

North, D. C. (1991): Institutions. Journal of Economic Perspectives 5: 97-112.

Von Tunzelmann, N. (2003): Historical coevolution of governance and technology in the industrial revolutions. Structural Change and Economic Dynamics 14: 365-384.

4. Regulation theory and national innovation systems

*Boyer, R. (1988): Technical change and the theory of 'régulation'. In: Dosi, G., Freeman, C., Nelson, R. R., Silverberg, G. and Soete, L. L. G. (Eds.): Technical Change and Economic Theory. London, New York: Pinter, pp. 67-94.

*Lundvall, B.-Å. and Maskell, P. (2000): Nation states and economic development: From national systems of production to national systems of knowledge creation and learning. In: Clark, G. L., Feldman, M. P. and Gertler, M. S. (Eds.): The Oxford Handbook of Economic Geography. Oxford: Oxford University Press, pp. 353-372.

Archibugi, D., Howells, J. and Michie, J. (1999): Innovation systems and policy in a global economy. In: Archibugi, D., Howells, J. and Michie, J. (Eds.): Innovation Policy in a Global Economy. Cambridge: Cambridge University Press, pp. 1-17.

- Boyer, R. (2000): The political in the era of globalization and finance: Focus on some régulation school research. International Journal of Urban and Regional Research 24: 274-322.
- Breschi, S. and Malerba, F. (1997): Sectoral innovation systems: Technological regimes, Schumpeterian dynamics and spatial boundaries. In: Edquist, C. (Ed.): Systems of Innovation. Technologies, Institutions, and Organizations. London, Washington: Pinter, pp. 130-156.
- Lundvall, B.-Å. (1992): Introduction. In: Lundvall, B.-Å. (Ed.): National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning. London: Pinter, pp. 1-19.
- McKelvey, M. (1997): Using evolutionary theory to define systems of innovation. In: Edquist, C. (Ed.): Systems of Innovation: Technologies, Institutions and Organizations. London: Pinter, pp. 200-222.
- 5. Varieties of capitalism, and the US and German cases**
- *Hall, P. A. and Soskice, D. (2001): An introduction to varieties of capitalism. In: Hall, P. A. and Soskice, D. (Eds.): Varieties of Capitalism: The Institutional Foundations of Comparative Advantage. Oxford, New York: Oxford University Press, pp. 1-68.
- Boyer, R. (2005): How and Why Capitalisms Differ. MPIfG Working Paper 05/4. Köln: MPIfG. URL: http://www.mpifg.de/pu/mpifg_dp/dp05-4.pdf.
- Haddow, R. (2008): How can comparative political economy explain variable change? Lessons for, and from, Canada. In: White, L. A., Simeon, R., Vipond, R. and Wallner, J. (Eds.): The Comparative Turn in Canadian Political Science. Vancouver: UBC Press, pp. 221-237.
- Mowery, D. C. (1998): The changing structure of the US national system: Implications for international conflict and cooperation in R&D policy. Research Policy 27: 639-654.
- Mowery, D. C. and Rosenberg, N. (1993): The U.S. national innovation system. In: Nelson, R. R. (Ed.): National Innovation Systems: A Comparative Analysis. Oxford: Oxford University Press, pp. 29-75.
- Whitley, R. D. (2000): The institutional structuring of innovation strategies: Business systems, firm types and patterns of technical change in different market economies. Organization Studies 21: 855-886.

6. The innovation systems of Canada, Britain and France

*Chesnais, F. (1993): The French national innovation system. In: Nelson, R. R. (Ed.): National Innovation Systems: A Comparative Analysis. Oxford: Oxford University Press, pp. 192-229.

*Niosi, J. (2000): Canada's National System of Innovation. Montreal, Kingston: McGill-Queen's University Press. Chapter 2: Canada's R&D System.

*Walker, W. (1993): National innovation systems: Britain. In: Nelson, R. R. (Ed.): National Innovation Systems: A Comparative Analysis. Oxford: Oxford University Press, pp. 158-191.

McFetridge, D. G. (1993): The Canadian system of industrial innovation. In: Nelson, R. R. (Ed.): National Innovation Systems: A Comparative Analysis. Oxford: Oxford University Press, pp. 299-323.

7. Regional or regionalized innovation systems?

*Asheim, B. T. and Isaksen, A. (1997): Location, agglomeration and innovation: Towards regional innovation systems in Norway? European Planning Studies 5: 299-330.

*Bathelt, H. (2003): Geographies of production: Growth regimes in spatial perspective 1 – Innovation, institutions and social systems. Progress in Human Geography 27: 763-778.

Cooke, P. (2004): Introduction: Origins of the concept. In: Braczyk, H.-J., Cooke, P. and Heidenreich, M. (Eds.): Regional Innovation Systems: The Role of Governances in a Globalized World. 2nd Edition. London: UCL Press, pp. 2-25.

Howells, J. (1999): Regional systems of innovation? In: Archibugi, D., Howells, J. and Michie, J. (Eds.): Innovation Policy in a Global Economy. Cambridge: Cambridge University Press, pp. 67-93.

8. Toward a knowledge-based conception of clusters

*Bathelt, H. and Glückler, J. (2011): The Relational Economy: Geographies of Knowing and Learning. Oxford: Oxford University Press. Chapter 7: Local Buzz and Global Pipelines.

*Malmberg, A. and Maskell, P. (2002): The elusive concept of localization economies: Towards a knowledge-based theory of spatial clustering. Environment and Planning A 34: 429-449.

- *Porter, M. E. (1990): The Competitive Advantage of Nations. New York: Free Press. Chapter 3: Determinants of National Competitive Advantage.
- Bathelt, H., Malmberg, A. and Maskell, P. (2004): Clusters and knowledge: Local buzz, global pipelines and the process of knowledge-creation. Progress in Human Geography 28: 31-56.
- Grabher, G. (2001): Ecologies of creativity: The village, the group, and the heterarchic organisation of the British advertising industry. Environment and Planning A 33: 351-374.
- Martin, R. and Sunley, P. (2003): Deconstructing clusters: Chaotic concept or policy panacea? Journal of Economic Geography 3: 5-35.
- Pinch, S., Henry, N., Jenkins, M. and Tallmann, S. (2003): From 'industrial districts' to 'knowledge clusters': A model of knowledge dissemination and competitive advantage in industrial agglomerations. Journal of Economic Geography 3: 373-388.

9. High technology clusters in Canada

- *Bramwell, A., Nelles, J. and Wolfe, D. A. (2008): Knowledge, innovation and institutions: Global and local dimensions of the ICT cluster in Waterloo, Canada. Regional Studies 42: 101-116.
- *Ghent Mallet, J. (2004): Silicon Valley North: The formation of the Ottawa innovation cluster. In: Shavinina, L. V. (Ed.): Silicon Valley North: A High-Tech Cluster of Innovation and Entrepreneurship. St. Louis: Elsevier, pp. 21-31.
- Bathelt, H. and Hecht, A. (1990): Key technology industries in the Waterloo region: Canada's Technology Triangle (CTT). Canadian Geographer 34: 225-234.
- Bathelt, H., Kogler, D. F. and Munro, A. K. (2011): Social foundations of regional innovation and the role of university spin-offs. Industry and Innovation 18: 461-486.
- Madill, J. J., Haines Jr., G. H. and Riding, A. L. (2004): A tale of one city: The Ottawa technology cluster. In: Shavinina, L. V. (Ed.): Silicon Valley North: A High-Tech Cluster of Innovation and Entrepreneurship. St. Louis: Elsevier, pp. 85-118.

10. Multilevel governance and innovation policy

- *Gereffi, G., Humphrey, J. and Sturgeon, T. (2005): The governance of global value chains. Review of International Political Economy 12 (1): 78-104.
- *Hooghe, L. and Marks, G. (2003): Unraveling the central state, but how? Types of multi-level governance. American Political Science Review 97 (2): 233-243.

*Jessop, B. (2011): The state: Government and governance. In: Pike, A., Rodriguez-Pose, A. and Tomaney, J. (Eds.): Handbook of Local and Regional Development. Routledge: London, pp. 239-248.

Boschma, R. A. (2004): Competitiveness of regions from an evolutionary perspective. In: Regional Studies 38: 1001-1014.

Bresnahan, T., Gambardella, A. and Saxenian, A. (2001): 'Old economy' inputs for 'new economy' outcomes: Cluster formation in the new Silicon Valleys. Industrial and Corporate Change 10: 835-860.

Wolfe, D. A. and Gertler, M. S. (2004): Clusters from the inside and out: Local dynamics and global linkages. Urban Studies 41: 1071-1093.

11. Cross-national governance and the role of boundary spanners

*Coe, N. M. and Bunnell, T. G. (2003): 'Spatializing' knowledge communities: Towards a conceptualisation of transnational innovation networks. Global Networks 3: 437-456.

*Hsu, J.-y. and Saxenian, A. (2000): The limits to guanxi capitalism: Transnational collaboration between Taiwan and the US. Environment and Planning A 32: 1991-2005.

Depner, H. and Bathelt, H. (2005): Exporting the German model: The establishment of a new automobile industry cluster in Shanghai. Economic Geography 81: 53-81.

Gereffi, G. and Korzeniewicz M. (1990): Commodity chains and footwear exports in the semiperiphery. In: Martin, W. G. (Ed.): Semiperipheral States in the World-Economy. Westport (CT): Greenwood Press, pp. 45-68.

Humphrey, J. and Schmitz, H. (2002): How does insertion in global value chains affect upgrading in industrial clusters? Regional Studies 36: 1017-1027.

12. Regional governance and cluster policy

*Bathelt, H. and Glückler, J. (2011): The Relational Economy: Geographies of Knowing and Learning. Oxford: Oxford University Press. Chapter 11: Consequences of Relational Policies.

*Lagendijk, A. and Cornford, J. (2000): Regional institutions and knowledge – Tracking new forms of regional development policy. Geoforum 31: 209-218.

Amin, A. (2004): Regions unbound: Towards a new politics of place. Geografiska Annaler 86

B: 33-44.

Enright, M. J. (2003): Regional clusters: What we know and what we should know. In Bröcker, J., Dohse, D. and Soltwedel, R. (Eds.): Innovation Clusters and Interregional Competition. Berlin, Heidelberg: Springer, pp. 99-129.