



Ontario's Regional Economic Development and Innovation Newsletter

Issue #112

August 15, 2005

Studies & Publications: [Announcements](#) | [Editor's Pick](#) | [Innovation Policy](#) | [Clusters and Innovation](#) | [Events](#)

[Search the OREDI Newsletter](#)

[Subscriptions & Comments](#)

This newsletter is published by [ONRIS](#) at the [Centre for International Studies](#), University of Toronto, and sponsored by the [Ministry of Economic Development and Trade](#). The views and ideas expressed in this newsletter do not necessarily reflect the views and policies of the Ontario Government.

ANNOUNCEMENTS

[\[Table of Contents\]](#)

[Study Launched to Understand Why Canadian Business Under-Invests in ICT](#)

The Information Technology Association of Canada (ITAC) says that in 2003 Canadian companies invested only 42 per cent of what US companies invest per worker in information and communications technology. ITAC believes that this dramatic under-investment accounts for a significant part of the growing gap between Canadian and US productivity, and that it is time Canadian businesses and governments understand why this gap exists and undertake measures to address it. ITAC has engaged the Centre for the Study of Living Standards to analyze why the gap exists, and expects to have this project complete by October.

[Government of Canada Invests in Nanotechnology to Develop Cleaner and More Efficient Manufacturing Processes](#)

The Government of Canada recently announced an investment of up to \$3.5 million for the research and development of new nanotechnology-based coatings to be used in the production of olefins - the building blocks of plastics, textiles, consumer goods and other chemicals. This Technology Partnerships Canada (TPC) investment is part of a \$12.2-million research and development initiative being undertaken by a Canadian consortium led by Edmonton-based Quantiam Technologies Inc. Under this initiative, Quantiam Technologies Inc., working with NOVA Chemicals Corporation, a leading olefins producer, will research, develop, and demonstrate the benefits of coatings aimed at reducing energy requirements for manufacturing olefins, and significantly reducing emissions of greenhouse gases. In particular, these coatings will enhance the olefins manufacturing process and protect against carbon deposits that negatively affect process results, equipment performance and plant energy efficiency.

EDITOR'S PICK

[\[Table of Contents\]](#)

[Do Only Big Cities Innovate? Technological Maturity and the Location of Innovation](#)

Michael J Orlando and Michael Verba, Federal Reserve Bank of Kansas City

This report notes that more populous places are, at the aggregate level, "more innovative" because inputs to innovation (e.g. specialized services) are

cheaper. Moreover, because there are more people in these regions, the chances for learning from others are greater. These knowledge spillovers are the real competitive advantage of cities. But, does this doom rural communities or less populated areas? Not at all, contend the authors. They argue that locational advantages become less important as technologies mature and their development paths become more predictable. At this point in the technology life cycle, less populated regions enjoy a competitive advantage as they can combine both innovation and lower operating costs. By tracking the location of patenting, the authors indicate that this pattern does indeed characterize the development of many leading technologies in the US economy.

INNOVATION & RELATED POLICY

[\[Table of Contents\]](#)

The International Dynamics of R&D and Innovation in the Short and in the Long Run

Laura Bottazzi and Giovanni Peri, NBER

This paper estimates the dynamic relationship between employment in R&D and generation of knowledge as measured by patent applications across OECD countries. In several recently developed models, known as 'idea-based' models of growth, the idea-generating process is the engine of productivity growth. Moreover, in real business cycle models technological shocks are an important source of fluctuations. This paper tests whether knowledge spillovers are strong enough to generate sustained endogenous growth and estimate the quantitative impact of international knowledge on technological innovation of a country in the short and in the long run. It finds that a country's stock of knowledge, its R&D resources and the stock of international knowledge move together in the long run. International knowledge has a very significant impact on innovation. As a consequence, a positive shock to R&D in the US (the largest world innovator) has a significant positive effect on the innovation of all other countries. Such a shock produces its largest effect on domestic and international innovation after five to ten years from its occurrence.

From Research to Commerce: Changing Our Priorities About Innovation

Jeffrey Crelinsten, ITAC

This paper argues that current policy discussion of commercialization are overly focused on "technology push" and neglect the most important ingredient for success in the knowledge economy - people who have the required combination of technical and commercial skills to provide value in a traded economy. The paper tries to demonstrate the power of using people as the measure of success in preparing for the knowledge economy. Using a commerce cycle model shows where institutions and programs are helping firms, entrepreneurs and business leaders. The importance of customers and revenue in driving all aspects of a company, including R&D, is clear in this model.

Tapping America's Potential: The Education for Innovation Initiative

Expressing concern over the nation's ability to sustain its scientific and technological superiority throughout the 21st Century, 15 leading business organizations have released this action plan that aims to double the number of science, technology, engineering and mathematics graduates by 2015. The report identifies several troubling indicators that the U.S. is losing its innovative edge. For example, the percentage of students planning to pursue engineering degrees declined by one-third between 1992-2002, and funding for basic research in the physical sciences as a percentage of the gross domestic product has declined by half since 1970. Other indicators reveal measurable declines in patents and scientific articles in the U.S. However, one key statistic - the finding that more than 50 percent of engineering doctoral degrees awarded by U.S. engineering colleges are to foreign nationals - draws particular attention. Recommendations for reversing this trend and boosting the number of graduates in these fields are outlined across five core areas.

CLUSTERS & REGIONS

[\[Table of Contents\]](#)

Creating a State of Innovation: Unleashing the Power of New York's Entrepreneurial Economy

Joseph D Morelle, New York State Assemblyman

According to economic statistics from the past decade, upstate New York has regularly ranked near the bottom in terms of new job creation and economic dynamism, despite the fact that political and business leaders have devoted significant time and resources to jump-starting the region's economy. As part of this effort, many state leaders are looking at how they can support and nurture entrepreneurship in upstate New York. This report recommends a number of changes in New York's current tax rules and regulations so that they become more business-friendly. It also recommends that the state make entrepreneurial development into a core part of its economic development portfolio by improving business-university collaboration and creating new networking opportunities for entrepreneurs. It also suggests that new financing sources, such as angel investor networks, are needed to help grow new ventures in the state.

[The Structure of Cluster Knowledge Networks: Uneven and Selective, Not Pervasive and Collective](#)

Elisa Giuliani, DRUID

This study focuses on the relationship between industrial clustering and innovation. It contributes to this literature by showing two empirical properties of the cluster learning process: first, that the structure of the knowledge network in a cluster is related with the heterogeneous distribution of firm knowledge bases and, second, that business interactions and inter-firm knowledge flows are not highly co-occurring phenomena. In particular, this paper highlights how the heterogeneity of firms' knowledge bases generates uneven distribution of knowledge and selective inter-firm learning. This study is based on empirical evidence collected at firm level in three wine clusters in Italy and Chile. Methods of social network analysis are applied in processing the data.

[Creative Communities](#)

David Hay, CPRN

Creative communities are those that recognize the critical importance of local resources and that strive to bring them together in a way that maximizes their capacity to create innovative answers to local challenges. In this presentation David Hay makes the links between key social indicators and population health and he underlines the critical importance of "place" in the design of responses to community needs and to economic success. He demonstrates how Canadian values frame our choices and priorities. He emphasizes the overriding impact of governance and the necessity for different levels of government to work together in a way that exploits the "comparative advantage" of each, and that transcends vertical and horizontal barriers to collaboration at the community level. Of course, place-based policy demands a pre-eminent role for the community in design and delivery of policy and programs.

EVENTS

[\[Table of Contents\]](#)

[Fourth Canadian Workshop on MEMS and Microfluidics: 'Opportunities and Challenges on the Road to Integration'](#) **NEW!**

Ottawa, 19 August, 2005

The workshop on MEMS and microfluidics will focus on integration opportunities and challenges including: Monolithic and hybrid integration of microsystems and commercialization strategies on the road to integration. This year's event will include four invited presentations on challenges in the development of integrated microsystems, panel discussions, and two poster sessions which include awards. Leading commercial and university-based microsystems organizations will exhibit their products and services while networking with delegates. In conjunction with the workshop, experts from Testforce, Coventor, COMSOL(FEMLAB), and Micralyne Inc. will provide insights on issues that affect the design, make, and test of microsystems.

[Global Aspects of Technology Transfer: Biotechnology](#)

London, UK, 4-9 September, 2005

The 2005 GRC offers opportunities to present and discuss biotechnology impacts on World economy and how it relates to scholarly research on technology transfer between government, industry, and universities/nonprofits. The meeting will have a distinctly global perspective, as the Chair and Vice-Chair believe that challenges in biotechnological technology transfer are increasingly universal in nature, and that addressing these challenges requires this perspective. Research being undertaken, for examples, by MMV, TB Alliance, the Pharmaceutical Industries, the World Bank, World Trade Organization, World Health Organization, London School of Hygiene and Tropical Medicine, the Center for Management of IP in Health R&D, and others are leading to insights on this evolution. By examining in the Gordon Conference format new and innovative ideas emerging from such research, the organizers hope to continue to stimulate thoughtful discussion, engage the participants, and catalyze the dissemination of the fruits of biotechnology to the world community in a sustainable, economically viable and socially responsible manner.

[Innovations and Entrepreneurship in Functional Regions](#)

Uddevalla, Sweden, 15-17 September, 2005

The objectives of the symposium/conference are: i) to provide a unique opportunity for scholars and senior and junior researchers to discuss path-breaking concepts, ideas, frameworks and theory-essentials in plenary key-note sessions and parallel competitive paper sessions, and ii) to facilitate the development and synthesis of important contributions into cohesive and integrated collections for potential publication. The conference will focus on the themes of international entrepreneurship; innovation, entrepreneurship policy and regional development; entrepreneurship in the public and non-profit sector; innovation, academic entrepreneurship and high tech firms in functional regions; and SMEs, immigrant entrepreneurship and local economic

development. Paper submissions will be considered until March 15, 2005.

Creative Places + Spaces 2: Risk Revolution

Toronto, 30 September - 1 October, 2005

This conference is dedicated to unlocking the creative potential of people and places through innovative social, educational, cultural, environmental and economic initiatives. In addition to onstage presentations, the conference will offer a Creativity Marketplace, which will provide organizations an opportunity to display materials and meet with delegates to exchange ideas and share information about their work in a less formal setting. We also invite the submission of feature articles and story ideas for the Creative Places + Spaces News Journal. The conference welcomes submissions of dynamic presentations, demonstration projects and case studies from practitioners in the fields of arts, science, business, government, education and social services suitable for the conference.

Big Lessons from Small Places: A Forum on Governance in Rural North America and the North Atlantic Rim

Twillingate, Newfoundland, 13-15 October, 2005

This conference includes field trips dealing with a number of important themes in rural governance including: economic diversification, fisheries, tourism, heritage and culture and health. Parallel sessions cover governance tools in small jurisdictions, managing urban-rural interaction, fiscal management, devolving power-building capacity, services and infrastructure, natural resource management and regional diversification.

Cities in Multilevel Government Systems: Lessons from Abroad **NEW!**

Toronto, 14 October, 2005

Around the world, new forces are re-shaping the functions of cities and their relations with central and provincial governments. The aim of this one-day conference is to assess international experience, and bring it to bear on Canada. This is particularly relevant in Toronto, for the new status of the City is being negotiated, and it's important across the country as the federal government proceeds with its New Deal for cities and communities. As part of a large research project funded by the Social Sciences and Humanities Research Council, prominent experts have studied nine other systems, all federations except for France. They have examined the new pressures on cities and patterns of change in municipal-federal-provincial relations and institutions. These will be the topics of the first two panels of the conference. Then there is the question of the resources needed by cities and how to secure them. Comparative experience is interesting here, and this is the third session. Finally, the conference will address the issue of what kind of multilevel government system is most conducive to having good public policy in cities.

Building a Brighter Future: Building Tech Based Economies

Atlanta, 19-21 October, 2005

The urgent need to focus public investment on the more distant horizon has been the recurring and underlying theme for all of the national discussion on unbalanced federal R&D budget priorities, the need for a national innovation strategy, and the challenge and opportunity presented by a "flat world" (to borrow a phrase from Thomas Friedman). SSTI's 2005 conference in Atlanta provides a unique and timely forum to advance understanding of the states' and regions' evolving roles as leaders in fostering the continued competitiveness of the U.S. economy.

Creative Clusters

Belfast, UK, 24-26 October, 2005

This is the only annual international conference on policy for the creative industries. The growth of creative industries has been explosive - communities, cities, regions and nations are embracing this shift, leveraging their culture to build valuable assets that can transform their economies. In the UK creative industries are growing twice as fast as any other - at a rate of 8% per year. Creative Clusters are accepting presentation proposals on the following four conference themes: Investing in Creativity, Delivering Skills for Creativity, Inclusion through Creativity, and an open session.

Clusters 2005

Toulouse, France, 27-29 October, 2005

This conference will bring together academic and industrial decision makers and their municipal counterparts with a view to fostering debate and discussion about best practices with respect to the creation, management and development of technology clusters.

Globelics Africa 2005

Pretoria, South Africa, 31 October - 4 November, 2005

Globelics (the Global Network for the Economics of Learning, Innovation and Competence Building Systems) is a framework for scholars who use the concepts of learning, innovation and competence building systems as part of their analytical framework. The network is especially focused on the strengthening of research on learning and innovation systems in developing countries. In the region most in need of human and economic development, Globelics Africa 2005 aims to further examine the links between innovation, development and growth. The conference also aims to build research capacity in Africa by establishing contact between researchers from Africa and from other regions of the world, both from leading academic centres, and from other developing contexts. In addition, the conference aims to rethink and reframe the challenges of the African continent in the light of insights from innovation systems research. Scholars from innovation studies will contribute a range of approaches and perspectives to guide research, policy formulation and action to bring about societal transformation through enhanced learning, innovation and knowledge competencies.

The 8th Annual Conference of the Competitiveness Institute **NEW!**

Hong Kong, China, 8-11 November, 2005

China's emergence onto the world stage has created unprecedented opportunities and challenges to business people and policy makers from all over the world. China has become a market, an investment location, a production platform, and a competitor. But what is China's true underlying competitiveness? In which industries will China lead and in which will it lag? What and where are China's major clusters and how strong will they be? What is China's influence on other economies in the region and the world? How will other economies compete with China? How can companies understand China's different regions and benefit from China's regional development? What programs and policies will be necessary to develop competitive clusters in the new environment? How do my nation or regions' own clusters stack up against the world's best? Several of the world's leading experts on clustering and regional development will address these questions and others at this conference, organized by the Hong Kong Institute of Economics and Business Strategy of The University of Hong Kong.

Innowest 2005

Calgary, 16-17 November, 2005

This conference provides a forum where the innovation community of Western Canada can gather annually to network, review the latest developments, solve problems and take specific industry recommendations forward for action. Among the topics to be discussed are applied research, the culture of innovation, innovation policy and innovation support.

SUBSCRIPTIONS & COMMENTS

[\[Table of Contents\]](#)

Please forward this newsletter to anyone you think will find it of value. We look forward to collaborating with you on this initiative. If you would like to comment on, or contribute to, the content, subscribe or unsubscribe, please contact us at onris.progris@utoronto.ca.

This newsletter is prepared by [Jen Nelles](#).

Project manager is [David A. Wolfe](#).

