



**Turning Research into Action:
2012 Symposium of the Ontario Research Chairs in Public Policy**

March 5 & 6, 2012
Osgoode Professional Development
1 Dundas Avenue West, Toronto, Ontario

Final Report

Introduction

York University was delighted to have the opportunity to host the 2012 Symposium of the Ontario Research Chairs in Public Policy on behalf of the Council of Ontario Universities. The overarching theme of this year's Symposium was knowledge translation. That is, how does academic research get translated into better public policy and practice? In order to probe the relationship between research and policy development we brought each of the Chairs together in a public conversation with their key collaborators from outside the university: government policy makers, business leaders, think tank researchers, knowledge brokers, funders, journalists, and others. To this mix, we added a range of academic and other thought leaders who spoke to major policy challenges on the horizon for Ontario in the areas of higher education and job creation. A final ingredient was to offer capacity building sessions for Symposium attendees interested in developing stronger skills and infrastructure for research communication and knowledge mobilization. These sessions drew especially on the expertise of York University's Knowledge Mobilization Unit, part of the research service infrastructure within the Office of the Vice-President Research & Innovation.

Highlights of the discussions that took place over the course of a lively and well attended two day event are summarized in the pages that follow. The need for researchers and policy makers alike to participate in robust cross-sectoral networks of knowledge exchange was a key message that surfaced persistently throughout the Symposium. Many speakers underlined the value of such networks in providing researchers with practical context and valuable data for their research, and in speeding the flow of new knowledge and ideas amongst those who are in a position to influence policy decisions and public debate. Audience members amplified this point with many of their questions and comments. It should be noted that the Symposium itself served as an excellent opportunity to enhance academic-policy dialogue, particularly in the mandate areas that inform the work of the eight Chairs: education, health, the economy and the environment.

Additional biographical information of all speakers, power point presentations, and photographs from the event are available at: <http://cou.info.yorku.ca/>.

Day 1: Monday March 5, 2012

Welcome Remarks were provided by Deborah Newman (Deputy Minister, Ontario Ministry of Training, Colleges and Universities), Bonnie Patterson (President, COU) and Mamdouh Shoukri (President and Vice-Chancellor, York University).

The Symposium's first morning focused on policy-relevant research in Education.

Panel 1: Making Evidence-Based Education Policy featured **Dr. Scott Davies, Ontario Research Chair in Educational Achievement and At-Risk Students** (McMaster University).

Dr. Davies presented a summary of his recent research on the “summer slide,” comparing children of different socio-economic status in terms of their relative loss of literacy skills over the summer school break. His work shows how education policy can be informed by research that distinguishes learning, which occurs during school-time versus non-school time. Since opportunities to learn can be particularly unequal during the summer, when some children entertain themselves while others enjoy a menu of enriching activities, summertime can be a major generator of achievement gaps. Dr. Davies reported findings from the first large-scale Canadian study of summer learning in which literacy, demographic, and report card data were collected for 2,156 Ontario children in grades 1-3. He found that literacy gaps widen by children's socioeconomic background over the summer, and that summer literacy programs can reduce those gaps.

While schools tend to equalize learning for kids, children from lower socio-economic status backgrounds lose that learning more rapidly over the summer and this loss compounds over time. In this study, Davies worked with Ontario school boards to develop the first summer learning pilot project Canada. Teachers invited their most “at risk” students in grades 1-3 to participate in a 3-week program. The students were tested in June and then again in September. Dr. Davies emphasized the importance of building relationships with school boards and teachers in order to make this type of project possible. Collaborative research of this kind has the potential to influence policy as findings from a pilot project like this can enable champions within the Literacy and Numeracy Secretariat of the Ministry of Education to request larger amounts of funding.

Following Dr. Davies' opening presentation, moderator **Louise Brown** (Education Reporter, The Toronto Star) invited two commentators to share their perspectives on the study and more generally on how the latest policy research can be brought into the centre of public debates on education.

Carol Campbell (Associate Professor, OISE, University of Toronto) spoke from her experience as a former senior official within the Ministry of Education, including its Literacy and Numeracy Secretariat, about the value of Dr. Davies' research both in terms of its content and in the collaborative approach he has taken to study design and to sharing and communicating results. As Professor Campbell's own published work has discussed, the mobilization of research into policy requires not only a strong supply of high quality research but also a capacity within the policy community to receive and engage with that research, to set research agendas, and to use evidence at all stages of program design and evaluation. Networks and intermediaries that enable sharing and exchange of ideas among those inside and outside government play an essential part in coordinating the supply and demand sides of evidence based policy making.

Veronica Lacey (President and CEO, The Learning Partnership) shared some of what she has learned about the barriers to evidence based policy making in public education, from her past work as a teacher, school board executive, and Ontario Deputy Minister of Education and Training, and her current work with TLP, as well as strategies for overcoming those barriers. Public education policy has multiple stakeholders (including teachers, boards, parental community, and government) all of whom are reluctant to give academics access to the system for research purposes. This reluctance may stem from limited teacher and administrator time, fear or disbelief in the findings of research, or political concerns about misalignment with existing agendas. Overcoming these barriers is possible but requires engagement with and education of teachers, in addition to the development of partnerships, and mobilization of knowledge effective to stakeholder communities.

Panel 2: Mobilizing Knowledge about Higher Education focused on the work of **Dr. Glen Jones, Ontario Research Chair in Postsecondary Education Policy and Measurement** (University of Toronto).

Dr. Jones' presentation built on the themes in Panel 1 and discussed the challenges and opportunities for knowledge mobilization in the higher education sector. He offered a brief tour of his own website which he has developed as a resource base for academics, policy makers, journalists and others to access current information and research about higher education (<http://www.oise.utoronto.ca/hec/index.html> or www.glenjones.ca).

Dr. Jones noted the heterogeneity of higher education research both as an academic field that crosses several disciplines and sub-specialties, and as a broader field that includes government and non-governmental agencies, in addition to specialized media and consulting firms that are playing a growing role in supplying information and analysis to policy makers and the public. Nonetheless, some enduring challenges to effective knowledge mobilization in the sector

include the small number of faculty whose core research expertise is in higher education, the limited policy research capacity within government, limited data, limited infrastructure for sharing and exchanging knowledge, and limited funding to address these deficits. Dr. Jones identified two key needs in the present landscape: to strengthen Ontario's capacity for higher education research, and to mobilize existing knowledge to further evidence-based policy development. He made the case that graduate student internships and co-op placements can make a positive contribution as a means of carrying the latest research into the sector and providing future researchers with practical experience to inform their work. Dr. Jones also proposed the creation of a provincial infrastructure for sharing information on current and completed research projects as a means to enhance the value of existing knowledge by facilitating sharing and collaboration, and avoiding duplication.

Harvey Weingarten (President & CEO, Higher Education Quality Council of Ontario) agreed there is a need for more dialogue between researchers and those who make policy on higher education and underlined that getting higher education policy right is critical to the country's future. He offered a number of insights about how researchers and academic institutions can influence the direction of policy through more effective communication. Dr. Weingarten stressed, for example, the need to articulate evidence in language that governments understand; develop personal relationships rather than simply advocating through the media; maintain a consistent message across institutions; point to solutions that will help government with its agenda over a 2-3 year timeframe; and demonstrate a commitment to those solutions by investing some of the institution's own resources.

Organizers were grateful to **Janet Mason** (ADM Planning and Research, Cabinet Office of Ontario) for moderating the discussion and contributing her own expertise from within the public service on mechanisms for mobilizing knowledge and fostering evidence-based policy making. Ms. Mason observed that often the greatest challenge is not to get research done but to define meaningful research questions that are themselves grounded in evidence about the nature of the problem to be solved. She advised that time spent on problem definition is time well invested.

A roundtable discussion on ***Policy Challenges on the Postsecondary Horizon*** drew a large and attentive audience over lunch. Moderated by **James Bradshaw** (Globe and Mail Higher Education Reporter), the Symposium heard incisive comments from three of the province's most experienced academic leaders. **Mamdouh Shoukri** (President and Vice-Chancellor, York University) discussed the "massification" of higher education in Ontario, noting that participation rates are rising in part through policies that have encouraged access and institutions are growing to raise the revenues needed to finance their operations. He suggested

the tension between size and quality is one of the issues policy makers will need to address going forward. Dr. Shoukri also noted the critical role that universities play in research and development in Canada relative to other countries, and their role in particular as regional drivers of innovation. Universities therefore have a large stake in government policy on research and development, and in getting the balance right between longer-term investments in basic research and knowledge, and those that will generate applications in the shorter term.

Sheldon Levy (President and Vice-Chancellor, Ryerson University) highlighted the need to find the right balance between autonomy and accountability for universities. President Levy also reflected on the tensions between regional development interests of government and the high market demand from students to access educational programs in the GTA.

Bonnie Patterson (President, COU) pointed to a gap that sometimes opens between desirable policy and its implementation, offering the example of strategic mandate agreements and performance evaluation of universities based on a common set of metrics. She raised the question of how strategy and data reporting come together. President Patterson also raised the issue of policy continuity and the need for longer-term capital plans to meet infrastructural needs generated by growth.

Day 1 continued with three afternoon sessions on health-related research and policy. A key thread connecting these panels was that translating research into action requires planning and team work. Researchers and funders cannot just assume that the results of an academic research project will cross the boundary from discovery into application or public awareness. In particular, planning for research to have social and economic impact means first and foremost developing partnerships from early on in the research process.

Panel 3: *Biomarker Discovery: Building Personalized Medicine in Ontario* examined the research program of **Dr. Andrew Emili, Ontario Research Chair in Biomarkers in Disease Management** (University of Toronto).

Dr. Emili pointed out that the creation of an ORC in Biomarkers is a good sign that Ontario wants to be a leader in personalized medicine and is committed to translating research into action. There is a strong consensus that the identification of biomarkers holds tremendous promise to improve the effectiveness of many treatments. There is less agreement on whether it will lead to the containment of the health care cost burden.

As the cost of sequencing a whole human genome falls (it might be only \$12 per person in a few years) this process could become an ordinary lab procedure for everyone. The question is what

will we be able to do with this information? The goal ought to be to use this data to engage in preventive health care by using biomarkers. A gene may provide an increased probability that someone will suffer from an illness, but it usually does not mean the person will in fact contract that illness. Therefore, we need to develop biomarker tests with greater capacity to predict and diagnose actual illness. In an ideal world, every disease would have biomarker tests similar to the way a blood sugar test provides a marker for diabetes. Research on biomarkers is one of the ways in which we make the discoveries of genetic research actionable. Dr. Emili closed with a question for commentators and the audience about how we can ensure that scientific discoveries in the lab move into the clinical setting as practices to fully realize their potential.

Moderator **Robert Haché** (Vice-President Research & Innovation, York University) next invited comments from **Shiva Amiri**, Senior Program Lead with the Ontario Brain Institute. Amiri noted the critical role of partnerships between researchers, practitioners and business firms, arguing that the best results occur when all the partners are involved from as early in the research process as possible. She remarked on how privileged she was to learn this collaborative approach as a student in Dr. Emili's lab and how surprised she was to discover as she moved on in her career that it was not the norm elsewhere in the world of health research. One step that the Ontario Brain Institute has taken to ensure promising research makes it out of the lab has been to introduce management training fellowships so that researchers sponsored by the Institute can better appreciate the issues facing the non-academic research partners.

Klaus Fiebig (Chief Science Officer, Ontario Genomics Institute) next took the podium and tackled the issue of knowledge mobilization from the perspective of a funding agency that has invested in work such as Dr. Emili's. He discussed the role of health economics as an analytical tool informing funding decisions for his agency. When there is a sound health economics rationale to accompany the scientific rationale for a project, there is a good chance that if the project achieves its scientific objectives the results will be acted on (either by commercialization or changes in policy, depending on the project).

Raphael Hofstein (CEO, MaRS Innovation) was the final speaker on the panel. He observed that all of the research institutes of the GTA are members of MaRS Innovation, which sees approximately 300 IP disclosures a year. It is important to note that this is all publicly funded research. One approach MaRS Innovation has adopted to foster greater commercialization of research is "bundling." Bundling combines a number of projects in a similar area into a portfolio and asks firms to look at the entire package, not just individual projects. It was noted that beyond marketing, bundling also fosters collaboration among researchers, which has potential to further enhance and speed up each project.

During the question and answer session, panelists pointed out that social research (not just business and economics) is a vital necessity to moving into practice any research involving genetics, such as personalized medicine, as the social implications and potential problems need to be understood and addressed. The panelists were somewhat split on whether the researcher working on scientific research should also be the person charged with supervising the translation of the research into viable medical products and/or policy decisions. Some panelists saw the two tasks as different sides of the same coin, others saw the need for specialists in knowledge transfer and translation.

Panel 4: Navigating the Media as a Researcher: The Report of the Royal Society of Canada (RSC) Expert Panel on End-of-Life Decision Making focused on the recent work of **Dr. Udo Schüklenk, Ontario Research Chair in Bioethics** (Queen’s University).

Dr. Schüklenk’s experience as Chair of the Royal Society of Canada (RSC) Expert Panel served as a compelling case study of the challenges researchers can face in working with the popular media to mobilize knowledge. The panel’s report of approximately 65,000 words clearly was not suitable for media consumption. Instead media focused on a five point summary of the panel’s key findings and recommendations. The release of the report coincided with two well-known court decisions involving end-of-life decision-making, and this heightened media interest in the Panel’s report. These factors, along with the Royal Society’s sophisticated communications strategy, resulted in over a hundred print stories as well as television and radio coverage. Professor Schüklenk noted that the report also went “viral” once published on the RSC website.

The case highlighted that it is possible to reach mainstream audiences with policy relevant scientific news. However, it also highlighted how difficult this is to do, both in terms of planning and in terms of how researchers can meet the demand for interviews by several media outlets at once. Further, when the issue is controversial, researchers cannot assume all their critics will be playing by the rules of the academy. Some critics may respond aggressively to recommendations before they even read the full report with all its nuances.

Moderator **Shari Graydon** (founder and Catalyst, Informed Opinions) invited two commentators to explain the role they played at the interface between Expert Panel members and the media.

Erika Kujawski (Senior Officer of Communications and Marketing, Royal Society of Canada), discussed the careful planning that the RSC undertakes to maximize media coverage and public awareness of its expert panel reports. In addition to its in-house expertise the RSC has developed a strong partnership with the Science Media Centre of Canada for this purpose.

Penny Park (Executive Director of the Science Media Centre of Canada) worked to ensure that the Report's release would be noticed by journalists specializing in health and science reporting, by providing advance notice and inviting journalists to a webinar with the researchers, so they could educate themselves about this complex issue before writing stories. Science Media Centre of Canada (SMCC) also worked with the researchers to prepare them for handling interviews. The release itself took place at a press conference. Ms. Park explained that this degree of preparation is necessary because journalists, even specialized ones, cannot have the expert knowledge to comprehend a wide range of research findings. She noted that if scientists do not step up to answer the media's questions and provide stories, others with alternate views will do so. While earlier in the day a panelist questioned the worth of dealing with the media when one wishes to reach decision-makers, Park took the opposite view, observing that in many cases decision-makers will not act if public opinion poses a barrier and that it is through the media that public opinion can be influenced.

Panel 5: Health System Reform: Bringing Public Values into Health Care Policy featured **Dr. Tony Culyer, Ontario Research Chair in Health Policy and System Design** (University of Toronto).

Dr. Culyer opened by noting that health technology assessment requires that many hard-nosed questions be asked before a decision is made to provide public funding. These questions include: Is it safe? Does it work? For whom does it work? At what cost does it work? Is the expected health gain (if any) worth the extra cost? What's the evidence bearing on these questions? Once the question of evidence is raised it is necessary to remember that evidence never speaks for itself. It needs to be contextualized (does it apply here?). It must be evaluated (is it reliable, is it complete, is it contested?). It must be integrated with other knowledge, and it is always suffused with values. At this point it becomes apparent that health technology assessment cannot be done by health researchers alone as it involves profound questions about the sort of society we want to live in. For example, should an additional year of life count the same for everyone, regardless of their age or health? If it turns out to be more costly to deliver care to some subgroups than others, could that justify denying the more costly care to its potential beneficiaries? Should we support measures that widen health disparities in

the community (such as anti-smoking campaigns, which we know have reached high socio-economic status groups but have less impact on the poor)? Answering these questions and integrating them into policy requires broad based consultation and participation of stakeholders (including non-experts) in deliberations about these complex topics.

Moderator **Jaime Watt** (Executive Chairman, Navigator Ltd.) introduced two other panelists who have encountered these issues in the policy process. **Alison Paprica** (Director, Planning, Research and Analysis Branch, Ontario Ministry of Health and Long-Term Care), reinforced the idea that some of the most fundamental questions about health policy are beyond the field of science, as they have to do with values. Having written several hundred research papers in response to policy-maker questions, she has concluded that health policy-making is not (and cannot be) done exclusively on the basis of scientific evidence. People in different jurisdictions make different choices based on the values they want to express in their public policies. Examples of values and ethical objectives that the public might want its policy-makers to maximize and that will lead to different (though not superior) decisions include efficiency, justice/fairness, quality of life, and maximizing medical impact. She suggested it may be better to speak of evidence *informed* policy-making rather than evidence *based* policy-making. Scientific evidence is important but is never the only concern, nor should it be.

Finally, **Gerri Gershon** (Chair, Ontario Citizens' Council of the Ontario Public Drugs Program of the Ontario Ministry of Health and Long-Term Care) provided a real-world example of how non-expert citizens can be involved in providing meaningful advice to policy-makers so as to ensure policy is reflective of the concerns (including value choices) of non-experts. The Ontario Citizens' Council is an advisory council to the Executive Director of the Ontario Public Drugs Program. The Executive Director provides questions that he/she wishes to be advised on, the Council receives public briefings from experts and then deliberates in private to write its report. Sixty days after receiving the report the Executive Director must respond and explain how the advice will be used or the rationale for not using it.. At first the Council had a tough time focusing on morals and ethics, rather than the technical issues. However, bureaucrats and government wanted feedback on the ethics that should be considered when making difficult decisions. She also noted that the Council has developed strong relationships with the scientists within the ministry, who feel the Council's deliberations are enhancing their own work.

Day 1 also included **Capacity Building Sessions on Working with the Media and Using Social Media to Disseminate Research.**

Day 2: Tuesday March 6, 2012

The second day of the Symposium was devoted to current research and ideas on Economic and Environmental Policy.

Panel 6: Job Creation: What's Research Got To Do With It?

For this session, a group of five economic policy thought-leaders were assembled to exchange views on the role of research in a job creation strategy for Ontario. **Wendy Cukier** (Vice-President, Research and Innovation, Ryerson University), **Greg Van Alstyne** (Director of Research, Strategic Innovation Lab, OCAD University), **Pat Horgan** (Vice-President, Manufacturing, Development and Operations, IBM Canada), **Iain Klugman** (CEO, Communitech), and **Suresh Narine** (Director, Trent Centre for Biomaterials Research) engaged in a lively conversation facilitated by journalist **Paul Wells** (Macleans magazine). Discussion centered around issues such as the way that economic insecurity spurs innovation as workers and firms strive to stay ahead of global competition; the relatively low levels of business spending on research and development (R&D) in Canada as a barrier to success; whether R&D spending can produce innovation in a linear fashion without a culture of risk taking among researchers and financiers alike; the value of industry-academic collaborations; the need for stronger communication of why research is important to our economic future; the need to identify intermediaries who can help academics translate research for a broader audience; and the role of design principles and artistic creation as a “secret sauce” for innovation.

Panel 7: The Border and the Ontario Economy launched a new report by **Dr. William Anderson, Ontario Research Chair in Cross-Border Transportation** (University of Windsor).

Dr. Anderson introduced his [report](#) by explaining the reasons why everyone in Ontario should care about the border: Our heavy reliance on trade with the U.S., most of which still depends on trucks that must pass through a small number of border crossings. This goes far beyond the exchange of finished goods to the integration of production systems, producing intricate webs of interdependency among industries, firms and regulatory agencies, all of which can break down at many points where there is lack of coordination or unilateral changes in policy and practice. Border costs due to delay and disruption make Ontario less competitive. Dr. Anderson described policy options falling into three categories: 1. Increasing border efficiency through the acquisition of new infrastructure, personnel and technology; 2. Moving certain functions away from the border; and 3. Effectively eliminating the border through

harmonization. Privacy and human rights issues should be central in developing economic and security policies vis-à-vis the Canada-U.S. border.

Moderator **Allan Gotlieb** (Senior Business Advisor, Bennett Jones LLP, and former Canadian Ambassador to the U.S.) acknowledged that the issues surrounding the border and the economy are staggeringly complex. He advised that there is a growing consensus in Canada about the need to make the border as accessible and efficient as possible. However, very little progress has been made since 9/11, despite extensive efforts to address this issue. Mr. Gotlieb expressed some skepticism about whether an incremental strategy can succeed in light of the recent history of rolling back freedoms at the border, suggesting that a more ambitious proposal may be needed to get the attention of people in Washington.

Federica Nazzani (President & CEO, Windsor International Airport) highlighted the significance of Dr. Anderson's research and the issues it addresses with regards to the future of the Windsor Essex Region. The leadership of the region has worked hard to leverage its proximity to the border as a strategic asset. In 2007, the city of Windsor took control of lands surrounding Windsor airport and undertook planning to develop these for inter-modal transportation that can enhance the city's role as a global business gateway. However, these planning efforts can be undone by border delays and costs if they are not resolved. Ms. Nazzani described the ways she has worked with Dr. Anderson as Ontario Research Chair to gain insight into the issues and potential solutions, and to involve him directly in discussions with political, civic and business leaders.

Leo Panitch (Canada Research Chair at York University) brought a broader lens to the debate by examining the context of each country and the relationship between them. The U.S. is the centre of global capitalism and Canada is dependent upon it. The movement toward freer trade and more open borders attempts to preserve our access to the U.S. economy in the face of concerns about growing protectionism. At the same time, it may be increasing our exposure to intimidation, and eroding our capacity to maintain an economy based on higher wage employment. Embracing an ideology of competitiveness and efficient trade has costs as it limits our maneuvering room in domestic policy matters.

Panel 8: Energy Transitions and Energy Plans: Pathways to a Smarter System focused on the collaborative research program of **Dr. Jatin Nathwani, Ontario Research Chair in Public Policy for Sustainable Energy** (University of Waterloo).

In his opening remarks Dr. Nathwani explained the nature and scale of the global challenge to transition to non-carbon forms of energy over the coming decades, as we anticipate the total demand for energy will almost double by 2050. In order to meet global emissions targets, the new demand will have to be met by non-carbon sources. In considering the best strategy, planners have to consider not only the energy source itself but many other factors such as its impact on land uses. Non-carbon sources are often land-intensive. Dr. Nathwani highlighted geo-thermal power as an area of potential where Canada can take a leadership role in advancing this technology to the terrawatt scale. This leadership should include the promotion of a global collaborative effort including business and government leaders, to fund trial projects and geologic mapping, and to establish the regulatory environment for project development. He made the case for a continuing role for nuclear power and the need to challenge common beliefs about nuclear capabilities In order to reveal its potential to be part of the solution.

Dr. Nathwani's research program also examines how to bring electricity more effectively to the global energy-poor through alternative delivery systems, with the goal of promoting universal electricity access. Low cost innovations that can be adapted flexibly to remote environments are essential to promote development for the world's poor. His presentation also addressed the need for smart energy use in urban centres, particularly in the design of buildings and transportation infrastructure. Given the scale and complexity and the many different dimensions of the challenge, Dr. Nathwani submitted that a balanced mix of energy resources is the key to sustainable prosperity. The recent release of the *Equinox Blueprint* report as a major cross-sectoral project of leaders from around the world shows the potential for progress through collaboration.

In addition to his role as Ontario Research Chair, Dr. Nathwani is the Executive Director of the Waterloo Institute of Sustainable Energy (WISE) at the University of Waterloo. WISE involves more than 95 faculty members working in cross-disciplinary teams across the sciences, engineering and the arts, on a full spectrum of basic and applied research, training and education programs, research partnerships and commercialization efforts. They work through public and media engagement, scholarly publications, and collaboration with government, civic and business leaders toward the technological and policy breakthroughs that will be needed to achieve a more sustainable world.

The session also heard from two industry experts who have been important collaborators of Dr. Nathwani and WISE. **Edward Arlitt** (Business Strategy & Management Analyst, Independent Electricity System Operator) spoke from his experience in planning and implementing initiatives

such as the province's Smart Metering System. He noted that Ontario is in the process of a massive restructuring of its energy supply with the shift away from coal and the effort being made to advance renewable sources through to implementation. Mr. Arlitt participates in the Ontario Smart Grid Forum, which has become a key meeting point for different players in the industry. He also discussed the rising interest in smart home technologies that integrate appliances for communication, entertainment and security.

Joe Toneguzzo (Director, Transmission Integration Power System Planning, Ontario Power Authority) brought an additional perspective from his long experience with the planning and regulatory frameworks for the province's electricity system. He observed that Ontario's decision to phase out coal has made it an excellent site for research and innovation that can be an example worldwide. He too stressed the need for academics, regulators, policy makers, and industry to work hand in hand to champion new ideas in their various domains and to allow new technologies to be tested in the field to see if they are implementable.

The panel was moderated by **Patrick Oosthuizen**, Professor in the Department of Mechanical and Materials Engineering, Queen's University, and COU Colleague.

Panel 9: Policy Approaches to Entrepreneurship and Venture Capital examined the latest research by **Dr. Douglas Cumming, Ontario Research Chair in Economics and Cross Cultural Studies** (York University).

Dr. Cumming presented some of his recent work comparing the effectiveness of different policies to promote access to entrepreneurial risk capital. The context for his work is that Ontario has dramatically less capital investment than U.S. states such as Massachusetts to which it is economically comparable in other ways. Moreover, Canada as a whole ranks 24th in the world in terms of access to capital. Dr. Cumming's research therefore seeks to improve understanding of how governments can most effectively intervene to foster improved access to capital for entrepreneurs and small firms.

Dr. Cumming grouped policy responses into three broad categories. The first focuses on the overall legal framework for business activity including enforcement of contracts, general tax rates, transparency rules and bankruptcy laws. The second involves government more actively sponsoring venture capital funds through special tax incentives. Dr. Cumming's studies have found this approach has some unintended consequences. In particular, he found that Labour Sponsored Venture Capital program in Ontario led to a reduction of private venture capital investment. This suggests the province was right to phase out the program in 2011. More promising, in his view, is the third category of policy approach, which focuses on establishing Innovation Centres to provide commercialization services including access to mentoring and

investor networks. Further research is needed into the design of these services and what works best.

Moderator **Barbara Crow** (Associate Dean Research, Faculty of Liberal Arts & Professional Studies, York University) invited comments from three experts working in different areas outside the academy.

Bogdan Buduru (Senior Economist, Research & Analysis, Small Business Branch, Small Business and Marketplace Services, Industry Canada) provided his perspective as a policy researcher working at the federal level. He noted a common misconception that small firms are the main site of entrepreneurship, when in fact most innovation occurs in large firms. Encouraging growth through entrepreneurship is a key to future job creation and poverty reduction. Mr. Buduru identified a need for further research to better understand the determinants of entrepreneurship, which are multiple including regulatory frameworks, market conditions, individual education and skill sets, access to finance, knowledge diffusion through networks of collaboration, and cultural attitudes. His own work focuses on trying to understand which of these is more important and why.

Maxx-Phillippe Hollott (Manager, Access to Capital Secretariat, Ontario Ministry of Economic Development and Innovation) spoke from his experience at the provincial level developing risk capital policy. With the wind down of the Labour Sponsored Venture Capital program, the focus has been on supporting development of the private venture capital community. These firms and pension funds must recover sufficient returns to entice them to reinvest in the Ontario economy. Government efforts have included seed funding as well as assisting portfolio managers to network and form partnerships to help their businesses grow.

Jim Pullen (Partner, Concert Partners; Mentor, VentureLab; Senior Advisor, Tequity Inc.), spoke about his work mentoring Information and Communication Technology entrepreneurs who face tremendous challenges finding capital and often rely heavily on family and friends. Without these personal networks, early stage capital is extremely hard to access. Many promising ICT start-ups are sold due to a lack of capital to fund the next stage of growth. This represents a loss to the Canadian economy, usually to the advantage of the U.S. Mr. Pullen is encouraged by the development of new venture capital funds in Ontario but significant progress is still needed.

Day 2 also offered **Capacity Building Sessions on Developing Your Knowledge Mobilization Plan and Building Successful Community-University Partnerships**, featuring Michael Johnny, Manager of York University's Knowledge Mobilization Unit, and Jane Wedlock, Knowledge Mobilization Officer with United Way York Region.

Concluding Remarks were offered by **Barbara Hauser** of the Council of Ontario Universities, who noted that it was extremely gratifying to learn about the outcomes of research done by all eight of the Chairs across different areas of policy expertise. The findings presented at the Symposium leave us with confidence in the power of university research. **Alexandre Brassard**, Research Director at Glendon College of York University, added that the Symposium demonstrated the value of research in addressing some of the province's greatest challenges, and the magic that occurs when different sectors are brought together to collaborate in creating and testing new knowledge.