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Bridging Policy and Research:
Exploring Emerging Opportunities

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Bridging Policy and Research: Exploring Emerging Opportunities

A Renewed Partnership

The *Dialogue on Emerging Policy Research Issues* is part of efforts to enhance the linkages between the Canadian federal policy and academic communities. The dialogue is intended to foster mutual understanding of respective research interests and priorities over the medium to longer term (5 – 10 years). The exercise started in fall 2010 through an on-line dialogue, in which federal officials from a range of departments and Vice-Presidents of research from a number of Canadian universities were invited to participate. This resulted in the identification of a range of emerging issues, which together with other sources formed a short list of emerging research themes. These documents formed the basis for a face-to-face meeting between senior federal officials and academics in December 2010. The following paper is a synthesis of the emerging issues and potential policy research opportunities identified and discussed during this process.

Opportunities for Policy Research

This paper outlines a range of complex policy issues and research opportunities with implications for Canada over the medium to longer term. The themes are presented to stimulate thinking and discussion between the policy and academic communities and enhance the possibility of academic researchers to contribute public policy. There are obvious inter-linkages between the individual topics, some of which are explored at the end of the paper. The policy research questions identified are an attempt to understand where potential gaps may lie or where there are opportunities to draw upon existing knowledge as building blocks for further research.

The Changing demographic structure

Canada will experience significant demographic shifts in the coming years. Recent trends point to an aging population, increasing rate of immigration and growing Aboriginal population. This shifting demographic make-up brings with it challenges and opportunities and has implications for Canada in terms of managing diversity, facilitating sustainable growth, and addressing issues related to gender, income inequality and social cohesion

An increasingly aging population – What will be the implications for Canadian society and the economy?

Many of the changes in Canada's future demographic and policy environment will hinge on the issue of population aging, resulting in wide-ranging implications for Canadian society. An aging population will likely cause a tightening of labour supply, impacting Canada's economic growth.

Conflicting demands on the prime age population to both provide for elder care and participate in the labour market will be a challenge, with consequences for work-life balance and productivity. The consequent family pressures may be compounded by the rising incidence of chronic diseases and disability, health care system reforms that emphasize early discharge and community-based support, the implications of low fertility, the increased labour market participation of women, and more geographically dispersed families. Increasing health, home care and pension costs of an aging population will likely have implications on public finances, with implications for social programs and intergenerational equity. Investments in infrastructure and supports that promote the self-reliance of seniors will be required.

Possible policy research opportunities

- What are some effective interventions and alternative care models to address aging population implications?
- How might Canada be best placed to stimulate innovation and investment within an aging society?
- What is the depth and complexity of challenges facing Canadian families of the future, especially pertaining to balancing work, elderly and child care responsibilities?
- What impacts will these have on family stability and well-being?
- What is the potential for marginalized population groups, including Aboriginals, immigrants and people with disabilities, to be a significant source of employment, care giving, and other forms of societal participation in light of the aging society and perceived labour market shortages?
- What could be the potential regional implications of population aging?

Managing diversity – How will worldwide demographic shifts alter Canadian identity and institutions?

Increasing global pressures from international migration efforts are resulting in greater population diversity in developed countries. These have wide-ranging effects including increased linguistic diversity, brain circulation (“the brain chain”), and urbanization and regionalization of immigration. Demonstrating

success in integrating newcomers will be important to sustaining economic growth. Canada’s multiculturalism experience stands to be a model or a test as other pluralist nations struggle with this challenge.

Canada’s international connections are not limited to the immigrants we receive, but also an estimated 2.8 million Canadians who live and work overseas, some of whom hold multiple citizenships. This calls into question the role of and opportunity for both immigrants and the Canadian Diaspora in advancing Canada’s policy objectives, attracting skilled workers to Canada, and creating linkages with other countries. Beyond the consequences of immigration, increasing diversity arises through a growing young Aboriginal population, changing family structures, variations in work patterns, the complex and shifting nature of the sources, types and needs of disability, and changing and converging gender roles (as a result of recent trends such as job losses in male-dominated sectors, boys’ faltering progress in school, reduced fertility and delayed childbearing). These sources all pose institutional challenges and concerns for social cohesion, but also bring opportunities.

A better understanding of the changing dynamics and key economic and social indicators in both a globalizing and Canadian context is important in order to get a better grasp in identifying the social, economic and cultural policies and programs that may weaken or reinforce social cohesion.

Possible policy research opportunities

- What does enhanced diversity mean for the Canadian identity?
- Will public institutions and service delivery be affected by a diverse population?
- Could technology be used to address diversity issues?
- Could Canada’s diversity contribute to its resilience, attractiveness and global standing?
- What will be the role of the Canadian Diaspora in creating opportunities for Canada abroad?
- Given the source countries of Canada’s immigrants, what sorts of human, cultural and other capital could Canada have access to?
- What effects will global trends, new technologies, economic restructuring and demographic diversity bring to the social cohesiveness of Canadian society?
- Will emerging shifts in gender roles affect productivity, competitiveness, resilience, literacy, and a host of other issues?

Integrating Canada's Aboriginal communities more effectively into Canada's economy – What is required?

Canada's Aboriginal population represents a growing share of the Canadian population; it is younger, increasingly urban, and regionally concentrated. The assumption that a growing prime-age Aboriginal population will help address Canada's future labour market challenges in a highly skilled knowledge-based economy is tamed by the reality that a majority of the Aboriginal population still live in dismal conditions – over-crowding, abuse, lack of running water, poor health conditions, etc. The population itself is diverse, mobile, transient and young, with some living in areas that are resource rich while others are struggling. At the same time, increased urbanization is occurring without adequate resources, support systems, skills and housing. Urban and on-reserve Aboriginals face different realities, as do different age cohorts. All these issues add to the complexity regarding appropriate policy levers and jurisdictional interventions. While there is much information available regarding Aboriginal people, there still remains mistrust on behalf of the Aboriginal population towards the research, statistics and data.

Possible policy research opportunities

- What mechanisms need to be put in place to facilitate access to opportunities for Aboriginal youth in participating in and contributing to all aspects of Canadian society?
- What are the new and emerging issues facing the Aboriginal youth population (e.g. changing conditions, new aspects of vulnerability) and how should they be examined alongside public policy implications?
- What type of environment needs to be created where Aboriginal peoples have the capacity and opportunity to take control of research and initiatives that impact their lives?

Recent rises in income inequality – What are the implications for social cohesion and intergenerational tensions?

Income inequality has increased over the last 20 years. Some researchers correlate income inequality with negative outputs such as increased criminality, reduced life expectancy, negative health outcomes, reduced trust, reduced social mobility (in both intra- and inter-generations), and so on. While there is a need to understand why income inequality is increasing in Canada, there is a further need to study the impact that changing demographic trends and behaviours have on income inequality, and, in turn, the implications of income inequality on social cohesion.

Possible policy research opportunities

- What impacts will the changing demographics of Canada have on income inequality?
- What policies could be put in place to alleviate impacts for the future?
- What is the impact of income inequalities at the global scale on Canada?

Fiscal constraints – What are the possibilities of managing with slow growth?

The demographic shift along with tight fiscal situations of both governments and private firms will have implications on GDP growth over the medium to longer term. International fiscal pressures and the precarious state of global finance will also likely impact global trade, deficits and debt during this period, and will thus have fiscal and social implications for Canada's economy that will be felt by individuals, households, communities, and all levels of government.

Possible policy research opportunities

- What is the role of government in facilitating sustainable growth in the face of demographic change?
- What are the implications on federal programs and services?
- Could other actors become engaged in the management and delivery of services and programs that are currently being provided by governments?

Transition towards environmental sustainability

Reconciling the environment and the economy will have future implications for Canada, as it attempts to address climate change and energy security in the transition towards sustainable prosperity.

Climate change and energy security – What are the cultural, economic, political and social implications? What types of adaptations are required?

The correlation between increasing rates of greenhouse gas emissions and changing temperature is clear. There is also a general understanding that climate change is a driver of our environmental and energy strategy, and ultimately impacts our economic strategy. However, there is a need to better understand the importance of time scales, the intersection of national and international energy issues, environmental, social and economic strategies, and how to develop a conservation culture and related behaviours, including among the general public and those who hold vested interests. Addressing Canada's roles and responsibilities regarding its large per capita ecological footprint and stewardship of its considerable absorptive biological resources will be required. The transition to a low-carbon economy, carbon pricing and clean energy technologies may result in many challenges for Canada, but also provide opportunities to develop new competitive competencies in a number of areas. In addition, the impacts of a changing climate on people, their livelihoods and eco-systems will vary by region and context, across the country and around the world, calling for different kinds of adaptation measures. For example, the potential link between climate change and global drought issues could have significant impacts on food production and supply resulting in significant shocks to food prices.

Possible policy research opportunities

- What are the socio-economic and environmental implications of climate change on various regions within Canada and what strategies and policies need to be put in place to address them?
- How will these strategies relate to international initiatives?
- What will be the impact of climate change on migration (e.g. “environmentally displaced people”)?
- What impacts of climate change on public health issues (e.g. shifts in the global distribution of pandemics) are likely to prompt changes in policy development?
- What will be the implications of droughts, flooding, and increased energy prices on food production, prices and access?

Sustainable prosperity and long-term sustainability – What does green growth really mean for Canada?

Due to the environmental costs of traditional economic activity, there is a push to transition towards alternative energy sources and environmentally preferable goods and services. Sustainable prosperity involves being innovative and taking advantage of economic opportunities such as capturing emerging markets for green technology, green energy and environmentally preferable products. The international community is moving along this dimension and there is growing global convergence between what is good for the environment and economic goals (linking competitiveness, trade, innovation, creativity and infrastructure investment to the transition towards a sustainable society). There are at the same time concerns that incrementally reducing the ecological impact per unit of economic activity in a growth-based model is fundamentally unsustainable as absolute environmental impacts increase. Canada needs to keep pace if it is to be considered a leader in clean technologies which will be increasingly in demand in a carbon constrained future. This must also be balanced with natural resource development, which also has the potential to be a significant economic driver in Canada, but has long-term sustainability implications. Furthermore, policy instruments such as product level life-cycle assessment, ecosystem services valuation, sustainable consumption and production mechanisms and carbon pricing have the potential to be important tools on the road to economic, environmental and social sustainability. The implications of climate change and economic and geopolitical shifts will also come into play as Canada tries to find its feet in the green economy.

Possible policy research opportunities

- What will be the economic, environmental and social implications of developing non-conventional energy sources?
- What are possible cumulative effects of biomass recovery?
- What will be the implications of the green economy on rural economic development?
- What will be the implications of the transition of the existing industrial base to an energy system of the future (e.g. role of electric cars and alternative energy sources)?
- How can environmentally preferable goods and services be developed and marketed? What is the public's tipping point in accepting environmental impacts for economic benefit and what will be the long-term cost-benefits on both the environment and economy?
- How could natural resource development be encompassed within a clean energy strategy?

Geopolitical shifts and the global commons

The shifting geopolitical structure has great implications on how Canada will operate in a changing world, how global issues will be addressed, and to what extent Canada's voice will be heard at the global table.

Ongoing geopolitical shifts – Where will Canada fit?

The rising influence of the G20 and emerging economies such as the BRIC will have tremendous impact on the way Canada operates in the changing world order. Emerging powers are creating their own global architecture, with different countries playing new and varying roles. Canada must rethink its own role in this emerging global dynamic and develop a global engagement strategy in order to be able to shape and influence the global agenda to ensure its prosperity and well-being. Although emerging economies provide fertile ground for Canada's trade diversification, Canada may also be increasingly competing with them in its traditional markets. This will have implications for the US-Canadian relationship as well as Canadian industries and regions that are dependent in different ways for their prosperity upon US and international markets.

Possible policy research opportunities

- What do Canadians think about the emerging changes within the global governance architecture and Canada's potential responses?
- How are other middle-power countries reacting to these global shifts?
- What could Canadian diversity bring to global engagement?
- How could Canada make strategic choices and build strategic partnerships amidst the shifting global dynamic?
- What are the possible implications for the Canadian federation?
- What are the trade-offs between developing strategies to address global shifts and the status quo?

Increasing challenges in the “global commons” – land, water, air, space, and cyberspace.

Increasingly unpredictable changes in geopolitics, global governance, global security, global/cyber terrorism, climate, natural disasters, and global health risks all demand international attention. Water, food and resource security are additional challenges that must be managed both locally and globally. Effective management of the global commons is crucial to ensuring economic prosperity, security, health and environmental sustainability. There is an understanding that many different global institutions and countries are key players in addressing global challenges, although few possess comprehensive understanding of the issues. New global governance mechanisms may be needed to deal with these issues.

Possible policy research opportunities

- What global issues will be of great importance to Canada’s interests in the longer term?
- What could Canada’s contributions be in developing and/or transforming international mechanisms and structures to address global issues?
- To what extent could emerging global commons issues in cyberspace (such as piracy, digital distribution of content, regulation of the Internet) be managed and what would be the implications of potential restrictions on Canadian innovation and the economy?

Shifting governance dynamic

In addition to the point above on the need for new governance mechanisms to address global issues, opportunities in addressing a range of complex problems through collaborative governance models are also being developed at the national and local levels. These emerging governance structures bring in a variety of actors in the deliberation and decision-making process.

Collaborative governance – How are governance roles changing? What can we learn from emerging practices?

Collective efforts and synergies among the public and private sectors and civil society are required to address a range of “wicked” problems. The growing involvement of non-state actors and the rising role of informal networks and channels in the governance of complex issues at varying levels are creating new opportunities for people and organizations to work together in innovative and value-adding ways. These emerging governance structures will likely have a great impact on traditional institutions, the legitimacy of which are increasingly being called into question due to the gap between expectations and results. Challenges include policy processes poorly adapted for public engagement and participation (both in addressing and fostering an understanding of issues), and gaps in evidence-informed decision-making. Internationally, democratic governments are advancing open government agendas that engage citizens through instruments such as single publicly-available data platforms, proactive disclosure of information, and enabling and encouraging the use and creation of public data by citizens. The increased engagement provided by these measures gives citizens unmediated access to contribute to policy debates and interpret data. New collaborative tools, processes and mechanisms such as social media, open government, and place-based approaches may provide opportunities that allow all Canadians to participate more fully in political and economic systems and will require behavioural and cultural shifts in conventional governance structures. For collaborative actions to work, a nimble and flexible system is required, the rules of engagement need to be defined (i.e. a common understanding to better “negotiate” solutions and consensus), parameters and partnership must be developed up front, and collaborative methodologies and technologies must be explored.

Possible policy research opportunities

- What kinds of structures will be required for effective citizen engagement and participation?
- What is the balance between citizen engagement, direct decision-making and representative democracy?
- How will legitimacy be determined?
- Which notions of shared ownership and accountability can be put in place in order to overcome barriers to effective collaboration and commitment in finding solutions?
- What are the different expectations and measures of achievement and success (e.g. profits and the public good) in building collaborative governance partnerships?

Rapid changes in information technology

The pace of technological change has significant implications on local and global economies, societies and institutions. The convergence of technology with industry and the sciences will raise tough questions on the future of our society.

Impacts of the acceleration and magnitude of global technological changes on the economy, society and government – Are we moving towards an open knowledge society?

The success of a knowledge economy depends in large part on the ability to adapt, transmit and share information. Advances in information communications technologies are causing a global information tsunami that enhances these abilities. Data, methods and technologies are rebuilding societies, workplaces and value chains, and enshrining a digital-based economy with the potential for innovative and transformative applications, global interconnectedness, and the emergence of trade in tasks through increased networking and engagement. This is permitting greater globalization of work and production, and the fragmentation of economic activities among many nations through outsourcing. These emerging technologies also have the potential to break down command and control structures and silos that traditionally define public institutions. As indicated in the section on collaborative governance above, there is an increasing call for enhanced participation in decision making to help solve complex, horizontal policy issues through the interaction and convening of diverse perspectives and interests. There will be a need to pursue synergies and eliminate duplication, while at the same time opening up the knowledge commons in ways that facilitate and encourage innovation. Accessibility through capitalizing on new enabling technologies provides an opportunity for citizens to add value to public policy and services. There will be trade-offs between openness and privacy, and protection and propriety of information, which will need to be addressed, although there is increased understanding that the potential benefits of opening up government outweigh the costs. A need to develop trust and determine how best to sustain an open system that permits flow will also be crucial, as the extent of problems requiring attention that cross borders increases. Challenges in addressing the digital divide within varying locations and populations will need to be addressed.

Possible policy research opportunities

- In what ways will global technological changes continue to impact national and international economies? Will emerging technologies reshape public institutions?
- Could social media be an enabling tool for enhanced engagement within the policy development process?
- What will be the opportunities (e.g. broader in-take of ideas, enhanced buy-in towards policies, improved service design and delivery) and challenges (e.g. access barriers (linguistic, cultural or health-related), possible emergence of the “e-marginalized”) within an open governance society?

The convergence of industries and technology – What will this mean for society and the economy?

The ability to use open source tools to reduce costs that sustain established industries has profoundly altered journalism and the recording industry. Technology has changed value networks within these industries while also allowing audiences to have more of a say in how the arts and culture are consumed and experienced. Challenges include piracy issues, intellectual property rights, mass copying of ideas, quality of content, changing business models, the sustainability of industries and individual companies, etc. Regulatory and legislative frameworks are widely recognized as being outdated with respect to the convergence of industries, the adoption of digital technologies and changing consumption patterns. As personal fabrication technologies move into the material realm, new sectors will be exposed to a system where many things could be available for free. This could pose specific challenges to the labour market as well as firms, individuals and nations as they attempt to evolve, compete and survive in the “post-scarcity” economy.

Possible policy research opportunities

- What does the convergence of industries and technology mean for creative and other industries?
- Can economic contributors be encouraged if products and services are available for free? Where will people obtain their income?
- How will we address issues related to: identifying indicators; tracking trends; accessing data as rapid changes are occurring; understanding shifting value chain networks; monitoring consumption patterns, especially of younger generations and impacts vis-à-vis demographic shifts; and strategies for remuneration?

The convergence of life sciences, neurosciences and technology – What does this mean for society and our institutions?

In the past decade alone, there have been major advances in life science research leading to the development of complex biotechnologies and neurotechnologies. Biotechnologies encompass a wide range of research procedures that are at the intersection of applied biology, genetics, engineering, cell research, and medicine. Examples of recent developments include human genome research, stem cell research and cloning. The exponentially reducing cost in genome sequencing, combined with the greatly increased benefits of having thousands of genomes for genome-wide association studies suggests a revolution in personal health. While advances in bio-, nano- and cognitive technologies will likely open new exciting possibilities in the sphere of health services, the environment, energy, agriculture and other areas, they could also raise legal and moral issues in terms of application and limits for use.

Possible policy research opportunities

- What will be the legal, moral, social and political questions that arise as the study of living things, including human beings, increases in complexity?
- What impacts will advances in bio-, nano- and cognitive technologies have on Canadian society in social, economic, environment and health domains?
- How will we delineate the role of life science technologies in society?
- What are/will be the new and emerging national and international paradigms in bio-product development and commercialization toward improved health and environmental solutions?

The role of resilience in addressing challenges

Dealing with shocks requires a certain degree of resiliency on behalf of individuals and the communities in which they live. Understanding how resilience comes into play when dealing with a range of issues at the individual and community levels will be important in order to adequately address the challenges that arise.

Rural and remote community sustainability and resilience – What is required? How will it shape rural identities?

Rural and remote communities are primarily resource-based economies, which form a large portion of Canada's GDP. However, these regions are facing imminent population declines triggered by an aging population, lack of job opportunities and out-migration of youth.

These challenges adversely affect labour market performance, delivery of services, local governance and other aspects of community social and economic well-being. There are of course regional differences that need to be taken into account. For example, Canadian sovereignty in the North poses its own challenges. It is well known that different kinds of capital (financial, human, social) are required for community success. However, challenges with respect to the need for leadership and volunteer burnout are exacerbated by the downloading of government functions. All these issues may affect the vibrant sense of pride and Canadian identity in these areas. Place-based approaches may be useful in addressing varying sets of issues, but have implications for the roles and responsibilities of a range of actors, including governments.

Possible policy research opportunities

- What will be required in order to make communities sustainable?
- Where will the next generation of community leaders come from and how can they be fostered?
- What positive and negative impacts will technology have on social capital within rural and remote regions?
- What is the feasibility of place-based solutions in the Canadian political structure?

Resilience of the individual and society in the face of shocks both man-made and physical – What are the factors involved?

There is a perception that shocks are becoming more frequent and that they are felt with greater impact. Resilience is therefore an important characteristic in addressing these challenges. Furthermore, the profound complexity and reach of risks require responses to be coordinated and systemic if they are to be meaningful. Understanding risk resilience, including the knowledge of how to cope with risk and the degree of responsibility of and coordination between the individual and government are important. An adaptive system is required in order to be tolerant and accepting of risks and innovative in preparing and responding to them. The different dimensions of vulnerability and the importance of adaptability as a determinant of success are relatively well understood. However, there is a lack of data especially with regard to Canadians' understanding of risk and relative responsibilities and the tools and processes for improving resilience. Moving forward involves planning to avoid a range of shocks, building more diverse pathways, and collecting data on how resilience is understood.

Possible policy research opportunities

- What are the specific man-made and physical shocks that are becoming more frequent?
- How could they be anticipated and addressed at the individual and community levels?
- What are the relative roles and responsibilities of governments, communities, networks and individuals in fostering resilience and dealing with specific shocks?
- What are the tools and processes for improving resilience?

Broadening conventional measures

A holistic approach to assessing well-being involves the integration of non-traditional determinants into measurements of productivity, as well as ensuring that decision-making is based on broader notions of GDP.

Well-being and growth – What should matter for sustainability?

In public policy discourse, well-being is commonly identified as a principal impact or outcome of a policy or program. However, orienting a performance story or vision of the impacts of public policies around a clear and commonly accepted understanding of well-being can be challenging. At one level, what determines well-being can be very subjective and unique to each individual. At a societal level, it is often difficult to assign quantitative measures to social and environmental benefits. While well-being related data is being collected in a number of countries, including Canada, such data has not been central in the application, evaluation and decision-making regarding public policies. There seems to be momentum to move in this direction, with the UK, France, the UN and the OECD, as well as a number of private sector movements such as Corporate Social Responsibility, undertaking recent initiatives on measuring and investigating how to use social and environmental well-being indicators as a complement to economic ones.

Possible policy research opportunities

- Can social and environmental indicators be incorporated into decision-making efforts to a similar extent as economic ones?
- What can Canada learn from other countries and organizations' efforts to link well-being and growth?

The non-traditional determinants of productivity – What are they? Does it matter?

The current definition and measures of productivity are limited. For example, traditional measurements of GDP do not take into account unpaid labour such as childcare or elder care, cultural implications, or negative externalities such as pollution. As a result, it is not a holistic measure of productivity in a society. More needs to be understood in terms of the relationship between standards of living and productivity, as well as the full cost accounting of non-traditional elements of productivity. These include such things as the role of institutions, the costs of extracting natural resources over time, the economic contribution of biodiversity

Possible policy research opportunities

- How are various components of individual well-being related to productivity?
- What are the implications of investments in early childhood development on productivity?
- What are the costs of inadequate responses to issues such as mental health and work-place bullying on productivity?
- Will the ability and willingness of young and future generations to embrace a path of lifelong learning impact productivity?

and ecosystem services, the importance of early childhood development (i.e. prevention vs. mitigation, role of family), the effectiveness of continuous learning, the economic impacts of remedial vs. preventative measures of illiteracy, accessibility to healthy and safe food (i.e. quality of diet, nutrition, exposure to unsafe food), and the costs of work-place bullying and effects on mental health.

cont... Possible policy research opportunities

- What are the implications of factors such as delayed entry into the workforce, non-standard work arrangements, later-in-life couple unions and fertility issues on productivity?
- How can economic contributions of biodiversity and ecosystem services be taken into account in productivity measures?
- What types of approaches will be required to understand how much illiteracy is costing Canadian society and what are the implications on productivity (including specific sectors being affected)?
- What are the impacts of unhealthy food choices (such as obesity, escalating health care costs, etc) on productivity and well-being?

The Competitiveness Challenge

Canada is considered competitive in certain sectors, while it is lagging in others. As the world continues to change and global competition increases, Canada needs to find innovative ways to keep pace in order to enhance competitiveness and promote prosperity.

Canada's competitiveness – What's involved? Where are the opportunities?

There are many factors that impact competitiveness - being innovative, having skills and literacy necessary for competing in a knowledge-based world, taking advantage of opportunities to participate in global value chains, and developing new markets, to name a few. Canada's natural resource endowment may be one of a range of strategic assets that could be employed in creating partnerships with BRIC and other emerging economies. Tapping into the potential of its diverse population may provide Canada unique opportunities to enhance competitiveness through accessing global markets.

Possible policy research opportunities

- What are the strategic assets Canada possesses that will be important in the future global economy?
- Could these be harnessed to enhance Canada's competitiveness?
- What impact does cultural diversity have on the Canadian economy?
- What are the existing and emerging opportunities and challenges of tapping into Canada's diverse population (i.e. development of creative capital, accessing global markets, under-utilization of skilled immigrants, language barriers and opportunities, etc)?
- Do Canadians need to develop more management and entrepreneurial skills in order to make a stronger contribution to enhancing competitiveness?

The Missing Link – Interconnections and Integration

The emerging issues above pose some food for thought on potential policy directions for Canada in the medium to longer term. The challenge lies in asking the right questions and identifying the right teams to explore the intersections between these emerging themes.

- What implications will an aging population have on Canada's competitiveness and productivity, as well as the resilience of rural communities?
- Will an aging population affect the labour supply, providing increased employment opportunities for traditionally marginalized demographic groups, such as Aboriginal populations, immigrants and people with disabilities? Will these opportunities be tempered by the convergence of technology and industry?
- Will the resilience and innovation of Canadians overcome the convergence of slow growth and an aging population to ensure continued provision of services?
- Will the convergence of technology and industry and/or the sciences create new opportunities to overcome environmental challenges through innovation that will affect competitiveness (e.g. clean-technology)?
- What impacts will the emerging geopolitical shifts in power among nations and actors have on governance structures and global cooperation agreements? This will be important in order to examine how Canada can strategically position itself in addressing a range of global issues, including those pertaining to climate change, water and food security, health, space and cyber-space.
- Will the acceleration and magnitude of global technological changes impact public institutions through the emergence of collaborative governance tools and mechanisms? What will be the implications for Canada's productivity? Will it drive major advances in life sciences research and environmental sustainability approaches?
- Could economic growth play out differently from the status quo if new metrics that incorporate social and environmental well-being along with traditional economic measures such as GDP are taken into account in decision making?

There are many other possibilities to these linkages and interconnections. The challenge will be to examine the overlapping impacts and determine how horizontal policies can be developed that ensures these emerging issues are addressed not in isolation but through an integrated lens. The integration of other default lenses will invariably come into play, such as gender-based and place-based analysis, when examining future policy considerations, as will developing scenarios for potential futures and possible policy responses for the medium to longer term.

Moving Forward Collectively

The *Dialogue on Emerging Policy Research Issues* is the beginning of a process that complements existing collaborations between the federal policy and academic communities, as well as other whole-of-government horizontal policy and research exercises. Moving forward, Policy Horizons Canada will facilitate further discussions between academics and federal policy officers to deepen understanding of some of these issues by drawing on existing research, sharpening the policy questions that need to be explored, and identifying further research needs. This may involve striking partnerships with one or more universities interested in further exploring some of the emerging issues highlighted in this paper. Further, an identification of specific researchers already working on some of the questions would be useful in terms of building partnerships and connections. Policy Horizons Canada plans to hold another face-to-face meeting between a broader range of academics and senior federal officials in December 2011 to assess results of the first cycle of this work and partnership.

Collectively, we have an opportunity to strengthen the dialogue between our respective communities and create a forum of exchange that will enable us to address some of the tough policy challenges that face Canada in the years to come.