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Implications of Global Peak Population for Canada's Future

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Implications of Global Peak Population for Canada's Future

Cover Page Footnote

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IMPLICATIONS OF GLOBAL PEAK POPULATION FOR CANADA'S FUTURE

**A Report Prepared for the
Social Sciences and Humanities Research Council
30 November 2013**

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FOREWORD

Through its forward-looking exercise entitled “Imagining Canada’s Future” the Social Science and Humanities Research Council (SSHRC) engaged various stakeholders to help establish what became six Future Challenge Areas. Possibly because I had participated in the 18-19 September 2012 workshop, I was asked in July 2013 to elaborate on the capacity of the Canadian research community with regard to the Future Challenge Area on “What might the implications of global peak population be for Canada?” The sub-questions associated with this theme were defined as follows:

1. What do we need to understand in order to effectively nurture the next generations?
2. What might Canadian families look like in five, 10, and 20 years, and how might they measure their well-being?
3. Life cycle issues are challenging society, in Canada and around the world. What are the future implications of state regulation from cradle to grave?
4. What effect will global migration have on our cities of the future?
5. How could changing demographics and migration affect rural and remote communities—such as in the North, including the Arctic?
6. What are the potential impacts of global peak population with respect to Canada’s energy and resource consumption and climate change?

Having solicited the collaboration of Barry Edmonston and Alain Bélanger, we then brought in Martin Cooke, Don Kerr, Benoît Laplante, Sharon M. Lee and Kevin McQuillan as section authors. While we have struggled with the overall concept of “peak population,” we found the sub-themes to be very well chosen. Several of these sub-themes are strongly represented in the thematic areas established by the Strategic Knowledge Cluster on Population Change and Lifecourse. The link to “peak global population” can also provide new perspectives on given sub-themes. Among SSHRC’s six Future Challenge Areas, the concept of “peak population” has the advantage of drawing attention to population questions writ large, including at the macro level.

As the Cluster on Population Change and Lifecourse comes to an end, I am delighted to see this important continuation.

SSHRC’s Future Challenge Areas and Subquestions can be accessed at:

http://www.sshrc-crsh.gc.ca/society-societe/community-communite/Future_Challenge_Areas-domaines_des_defis_de_demain-eng.aspx

Roderic Beaujot
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8 September 2014

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INTRODUCTION

The last century witnessed the fastest population growth in human history, but this is now ending.¹ Recent United Nations' population projections assume that current fertility levels of 2.53 children per woman will decrease to 2.24 in 2050 and to a below-replacement level of 1.99 in 2100. Estimated at 7.2 billion in 2013, the world's population is expected to continue to grow but at a much slower pace. It will eventually peak at between 10 and 11 billion in the 22nd century, and thereafter slowly decrease for the first time in several centuries. Under the United Nations' low-fertility assumption, world population would peak even sooner, at 8.1 billion in about 2050 and decrease to 6.2 billion by 2100.

National population growth varies greatly. There will still be major growth in a small number of countries, such as Nigeria and India. But there are currently 75 countries with below-replacement fertility – including Canada – and all will eventually decrease without counterbalancing net immigration. More than a dozen countries in Eastern Europe and Russia will experience large population declines in coming decades due to very low fertility levels and emigration. Global trends will affect the role of migration on population, with declines in the pool of potential immigrants from many source countries.

For several decades following World War II, Canada's demographic growth was strong. Canadians had many babies and welcomed many immigrants. But fertility fell to below-replacement in the 1970s. Natural increase, the difference between the number of births and the number of deaths, is still positive due to population momentum, but is declining and could turn negative in the future. Net immigration thus represents an increasing share of population change. The demographic opportunity window is closing for Canada as baby boomers retire from the labour market. Because of an assumption of continuing immigration, Statistics Canada's recent population projections indicate that the population will continue to increase, reaching between 43.0 and 63.7 million in 2061. But immigration has small effects on population aging and the proportion 65 years and older could increase from 15 percent now to between 24 and 28 percent in 2061.² Under Canada's low-growth population projections, population growth will drop from 1.1 percent annual growth at present to 0.3 percent in 2061.

Six Key Questions

In this context of global population peaking, Canada faces several challenges. This report describes implications of global peak population for six key questions.

Following this Introduction, the next sections address the six key questions listed below. Each of the six sections in this report addresses emerging issues, future challenges, and expanding our knowledge base.

1. Effectively *nurturing the next generation* is a critical topic for social policy. Nurturing the next generation involves establishing policies and programs for strengthening and training a new generation with the necessary knowledge and skills to be productive and contribute to changes to Canada's economy and society. This process depends greatly, however, on understanding the career aspirations and needs of youth and, at the same time, the employment demands for the future labour force.

2. What might *Canadian families* look like in the next 20 years, and how will they measure their well-being? The "traditional" two-parent, male-breadwinner, two-child family is already uncommon.

¹ We prepared this report in response to a request from the Social Sciences and Humanities Research Council (SSHRC) for a brief examination of the implications of global peak population on Canada's future. SSHRC initially discussed the idea of this report with Professor Roderic Beaujot, Director of the Strategic Knowledge Cluster on Population Change and Lifecourse at Western University. He conferred with Alain Bélanger and Barry Edmonston, who agreed to serve as editors of the report. Authors were then asked to write sections of the report dealing with six key questions. Bélanger and Edmonston thank Rod Beaujot and Sharon Lee for reading previous drafts and providing thoughtful and helpful comments.

² Statistics Canada, *Population projections for Canada, Provinces and Territories, 2009 to 2036*. Cat. No. 91-520-X, 2010:50.

Canadian family types have diversified in recent decades. Moreover, although some may yearn for a return to the “traditional” family, Canadian society does not appear to be worse off for evolving family trends.

3. *Life cycle changes* are challenging society, in Canada and the world. Demographic processes influence lifecourse and family cycles through their effects on longevity, parenting, and numbers and availability of spouses, children, parents, grandparents, and other relatives. Variations in lifecourse and family cycle – influenced as well by the number and composition of immigration – are key features in the frequency, direction, and timing of transitions such as entry into the labour force and retirement.

4. *Global migration* is an urban phenomenon, with major effects on *cities of the future*, including Canadian cities. In 2010, about 214 million international migrants resided primarily in the large metropolises of a dozen immigrant-receiving countries. Over 63 percent of Canada’s immigrants live in Toronto, Vancouver, or Montréal, and immigrants will continue to gravitate to Canada’s cities.³ While immigration fuels Canadian cities’ population and economic growth, cities have little control over national immigration policies or internal migration flows. In the future, Canadian cities will have more diverse and aging immigrants, and will be challenged to provide housing, jobs, education, and other social services, and promote the integration and inclusion of immigrants and their children.

5. Changing demographics and migration affect *rural and remote communities*, particularly in the North and the Arctic. With generally higher birth rates, Arctic populations are younger and growing. These populations are often also influenced by migration that dominates short-term changes for smaller population groups. For these rural and remote communities, population changes have implications for education, housing, healthcare, employment, and increased demand for resources such as water, electricity, and energy. Climate and ecological changes also have significant implications for these communities.

6. There are large potential effects of global peak population on *Canada’s energy, resource consumption and climate change*. Canada’s foreseeable climate change is likely to include hotter summers and milder winters. Climate change will have direct and indirect effects on the environment, energy and resource demands, and public health across Canada. Canadians will find, for example, that greenhouse gases magnify the effects of air pollution in hotter summers and, in turn, increase human health risks.

Global Peak Population: Emerging Issues and Future Challenges

Several overarching issues and challenges arise in the six sections below. We do not summarize the six sub-sections because each section is already brief. Rather, we highlight several broad issues that are discussed in several sections.

- *Labour force*. There will be important future challenges for Canada’s labour force. While the Canadian population is aging with shortage of labour in some remote communities and in some occupations, there are likely to be increasing challenges relating to youth and long-term unemployment. The growth in service sector employment and the related decline in manufacturing employment, as well as the effect of increased education levels on the workforce will continue to affect the Canadian labour force. The nature of work has changed significantly over the last three decades resulting in new issues, including the “hollowing-out” of middle-income employment, and the associated “hour-glass” economy. Higher-paid jobs are increasingly dependent on good education with skills, knowledge, and experience in selected occupations.

Even in these difficult economic times, some skilled workers – ranging from pipe fitters to chemical engineers – are in short supply and the world’s leading companies compete fiercely for them. Unfilled vacancies continue in recent years despite higher unemployment. Employers report that they have trouble filling some jobs, with technicians, salespeople, skilled trades, and engineers the hardest to find. Northern and remote communities especially report the shortage of professionals and experienced technicians.

³ Statistics Canada. *Immigration and Ethnocultural Diversity in Canada. National Household Survey, 2011*. Catalogue no. 99-010-X2011001. Accessed online at www.statcan.gc.ca, 2013.

Policymakers and educators face a key challenge to anticipate future changes in the demand for labour and to design policies that help Canadian workers to respond.

Canada's higher education system has expanded greatly during the past fifty years, with the training of a large number of students who have done relatively well. New challenges are emerging with the need for a more diverse group of workers in a period of slower labour force growth. Moreover, these challenges will require more than simply expanding higher education. Attention will be needed to better design programs for early childhood education, changes in higher education that maintain broad participation while offering closer training for new employment opportunities, and expansion and improvement in life-long learning programs, especially for older workers and recent immigrants.

- *Immigration.* Immigration will remain a major issue. Although difficult to predict and dependent on a number of factors, the number, characteristics and integration of immigrants will be a key issue for policies and programs in coming decades. Besides labour force aspects mentioned above, there are several important emerging issues related to immigration. The large numbers of immigrants who arrived in recent decades are, like other Canadians, becoming older. These immigrants will soon begin to retire and will shortly become a larger proportion of the elderly population. During the next twenty years, for example, the fastest growing elderly ethnic groups will be Chinese, South Asians, and persons from the Middle East. This will diversify our elderly population with implications for the type of elderly services needed.

Social and economic conditions for immigrants in Canada have changed in recent years with slower economic growth and poorer employment opportunities. We need to improve our understanding of these changing conditions for immigrants and how immigrants have progressed in recent years. Because the success of the children of immigrants (the second immigrant generation) is so important for the future of Canadian society, it would be especially useful to know more about how immigrant and second-generation youth do after leaving school and entering the labour force.

- *Life cycle changes.* The study of life cycle changes was originally developed by demographers to examine key transitions in individual lives, such as childhood education, becoming married or a parent, and retirement. Marshall and Mueller identified five policy domains where life cycle changes need to be considered:⁴ (1) education, the transition to employment, and life-long learning, (2) family and the relationship between work and family, (3) work-to-retirement transitions, (4) income security in the later years, and (5) intergenerational relations and social cohesion.⁵ In relation with the issue of global population peak, items 1, 3 and 5 are the most likely to be affected, as discussed in the specific section on life cycle changes.

- *Families.* Several interrelated issues deserve emphasis. First, early childhood education is important for overcoming difficulties faced by disadvantaged children and in order to support parental involvement in paid employment. Yet, we lack a good understanding of the role of different types of childhood education, including the costs and features of these programs, on lifetime development for children. Nor do we fully understand the relationship of childhood education and parental employment.

It is clear that societies that promote more family flexibility – as indicated by gender roles, family types, and type of sexual unions – encourage more young people to form longer-term relationships and partnerships, and to create families. This is an area where we need a better understanding of the role of family flexibility and such other factors as housing and urban geography on family formation. For example, it seems that housing and urban geography are important for accommodating the needs of families who have children and parents who have employment.

As the costs of children have increased, there are pressures on low and middle-income families, with the potential for delayed or reduced childbearing. This is a topic that requires further study from demographers.

⁴ Victor W. Marshall and Margaret M. Mueller, "Theoretical Roots of the Life Course Perspective," Chapter 1 in Walter R. Heinz and Victor W. Marshall (editors). *Social Dynamics of the Life Course: Transitions, Institutions, and Interrelations*. New York: Walter de Gruyter, 2003.

Immigrant families provide a challenge for our understanding of several family-related issues. Foreign-born families in Canada have lower fertility than foreign-born families in other countries, such as the United States. While the reasons are not clear, factors such as Canada's selective immigration policy and origin countries of immigrants are likely implicated. Children of immigrants generally do well in schooling although whether this educational success translates into commensurate occupational achievement and income remains an open question. In addition, immigrant families are aging, along with other Canadian families, yet current knowledge of aging immigrant families is quite sparse.

- *Labour and migration in Arctic, rural, and remote communities.* Many professionals are becoming older and are likely to move after retirement. Recruitment and retention of replacement workers with technical and professional skills, especially in health care, will be a critical challenge in future years.
- *Population and the environment.* The effect of population on the environment is perhaps the single issue most apparent to the public. Canada's success in reducing its share of greenhouse gases is more dependent than other countries on resource and energy extraction. A fundamental debate involves biologists and environmentalists who view *resource limits* as critical to dealing with environmental problems while economists and other social scientists are more likely to stress that *innovation and new technology* offers the chance to deal with current and future environmental problems. Our understanding of population and the environment requires improved collaboration between natural and social scientists. As global population peaks and population growth slackens, the pressure of population numbers on the environment weakens. But, economic growth and new technology will continue, and will present environmental challenges in spite of slower population growth.

Global Peak Population: Expanding Our Knowledge Base

Meeting future challenges requires improving our knowledge base.

- At the moment, we lack knowledge about a variety of important trends and processes in Canada's labour market. It is peculiar, for example, that we debate whether there are labour shortages or not; new studies are needed to understand better whether perceived labour shortages are due to a general shortage of workers, a lack of workers with specific skills and experience, or other factors. We especially need knowledge about employment over the lifetime for university graduates and recent immigrants, including a better understanding of the duration and intensity of employment, and the link between university studies and employment requirements. Such information would inform public discussion about employment by type of education, about the level of short-term unemployment, underemployment related to undesired over-qualification, and part-time employment, and the adaptation of immigrants based on their credentials and previous job experience.
- Some important data sources, such as national data on marriages and divorces, have been lost in recent years. In addition, we need to improve or start new data sources on a number of topics, such as family dynamics and interrelationships with childbearing, employment, and early childhood education; elderly immigrants and their living arrangements, retirement income, and family support; lifetime data on taxes, health care, pensions, and social welfare benefits; and better data on northern populations.
- Collaborative research on population and the environment is needed to better understand the interrelationships of local and national population growth and its environmental effects. In particular, social scientists need to become more involved with the study of the energetics of Canadian society.

NURTURING THE NEXT GENERATION

As the planet moves towards its peak population, Canada continues to experience decreasing population growth. Canada's growth however, increasingly fueled by immigration, remains slightly higher than other industrialized countries. Canada's aging labour force will grow more slowly in the years ahead. While it is true that future labour force growth depends on maintaining a relatively high level of immigration, it is important to note that about 80 percent of new labour force entrants in the two decades

ahead will be graduates of the Canadian education system.⁶ Preparing the next generation for successful working lives, assisting immigrant workers to find their place in the Canadian labour market, and meeting the shifting needs of employers will be among the most important challenges Canadian society will face.

Canada has experienced below-replacement fertility for four decades now. Evolutionary biologists argue that low-fertility species typically follow a “K strategy” of heavy investment in a small number of offspring as opposed to an “r strategy” characteristic of high-fertility populations where parents invest limited resources in the face of high rates of mortality.⁷ Similarly, economic demographers speak of the need for significant investment in the “quality” rather than the quantity of children.⁸ As Canada faces what is likely to be a long period of slower population growth and possible decline in natural increase, boosting investment in the development of our children will be critical to protect and improve our standard of living.

Emerging Issues

- *Labour shortage or labour surplus.* Despite the evident importance of balancing supply and demand in the labour market for both workers and employers, there is a wide gulf between the perceptions of many employers and some labour market analysts who perceive a growing shortage of labour, and those of most labour unions and many other analysts who see some mismatch between the skills of unemployed workers and the needs of employers but no evidence of general shortages now or in the foreseeable future. There is general agreement that the growth rate of the labour force is slowing and the retirement of the Baby Boom cohorts will lead to higher exit rates from the labour force in the near future. At the same time, Canada continues to see relatively high rates of unemployment in many regions of the country and new labour market entrants, both Canadian-born and foreign-born, face significant challenges to find work that matches their credentials. Moreover, despite continued low fertility and the imminent departure from the labour market of the Baby Boomers, some analysts argue that increasing labour force participation rates among older workers, women and immigrants will ensure continued growth of the labour force.⁹ Of course, adequate numbers of new entrants is only part of the issue; meeting the needs of the labour market for a range of skills will be the greatest challenge. Understanding the evolution of labour force supply and demand is emerging as a critical problem for Canada’s economy.

- *Expansion of higher education and shifting needs of the labour market.* Canada has been remarkably successful in boosting access to post-secondary education. The 2011 National Household Survey found that 21 percent of Canadian adults have a university education compared to only 8 percent in 1981. More than 30 percent of young Canadians aged 25-34 now possess at least a bachelor’s degree and Canada ranks third among OECD countries in the proportion of people in this age group with some form of tertiary education. Yet there is growing concern about the adequacy of the preparation students are receiving for entry into the labour market. Several concerns are now being expressed: graduates lack key skills needed in the world of work; there is an excess of graduates in some areas and shortages in others; and students lack the skills to drive innovation and new business development.

Future Challenges

- *Responding to rapid changes in the demand for labour.* In his prescient 1973 book, *The Coming of Post-Industrial Society*, Daniel Bell foresaw the shift in advanced societies from an economy based around the production of goods to one anchored in the production of services. With this change came a

⁶ Stan Kustec, “The role of migrant labour supply in the Canadian labour market,” Citizenship and Immigration Canada, June 2012, <http://www.cic.gc.ca/english/resources/research/2012-migrant/documents/pdf/migrant2012-eng.pdf>, p. 10.

⁷ Eric R. Pianka, “On r- and K- Selection,” *The American Naturalist* (104, 1970):592-597.

⁸ Gary S. Becker and Nigel Tomes. “Child Endowments, and the Quantity of Children.” *Journal of Political Economy*, Vol. 84, No. 4, part 2, (August 1976), pp. S143-S162.

⁹ Alain Bélanger and Nicolas Bastien, “The Future Composition of the Canadian labor force: A Microsimulation Projection.” *Population and Development Review* (39, 2013):509-525.

growing need for a highly-educated population prepared to tackle problems requiring mental rather than manual skills. Canada has experienced this shift with significant declines in the proportion of workers in farming and manufacturing and huge growth in service industries. But perhaps we were wrong in assuming this trend would continue indefinitely. The last decade has seen growing demand in many of the trades in response to the growth of the resource sector and in construction. With this has come a narrowing of employment and income differentials between university-educated and non-university-educated workers. Is this a blip linked to rapid growth in the energy and mining industries or a sign of a more complicated future? Anticipating shifts in the demand for labour and designing policies that help Canadian workers to respond will be a key challenge for the country in the years ahead.

- *Reforming education to prepare for a changing economy.* The extraordinary expansion of higher education in Canada since the 1960s has allowed Canada to compete successfully in the new economy and has sustained our high standard of living. But rapid changes in our economy, the potential for slower economic growth, and the departure of the Baby Boom generation will pose new challenges for our education system. Meeting the needs for workers with the right skills in an era of slower labour force growth will require changes at all levels of the school system.

Three areas demand special attention:

(1) Expanding and improving early childhood education. Canada currently has a patchwork system for providing education to youngsters prior to entry into elementary schools. Although there is an on-going debate on the contribution of pre-school programs to later academic success, it seems clear that in a properly designed system, earlier schooling can help build skills, especially among children from disadvantaged backgrounds, which will increase achievement at school. Moreover, better provision of early childhood education will allow for increases in labour force participation rates, especially among young mothers, that can help offset slower labour force growth. Designing and funding the best systems for early childhood learning is a key challenge for the future.

(2) Reforming the post-secondary system. When less than 10 percent of each generation attended university, a degree was a guarantee of employment. With more than one in three young people now graduating from university, that is no longer the case.¹⁰ Canada has built a university system that has succeeded in broadening access while maintaining high standards of learning. It has been a largely undifferentiated system, however, and the challenge for the future will be maintaining broad participation while developing new programs and principles of instruction that better prepare graduates for success in the labour market.

(3) Improving access to life-long learning. Slower labour force growth demands better utilization of the existing workforce. This is best accomplished by increasing participation rates among under-represented groups such as recent immigrants and older workers. But doing this will require improving training programs to allow immigrants taught under different systems to succeed in the Canadian labour market and to help older workers update their skills that will help them extend their careers.

Expanding Our Knowledge Base

- *Improving our knowledge of the labour market.* It is surprising that our knowledge of the labour market is so limited. The debate over the existence of a labour shortage is eloquent testimony to the limits of current knowledge. Why do businesses perceive such difficulty in finding the right workers while job-seekers complain of limited opportunity? Moreover, we have remarkably little knowledge of the fate of the graduates of our post-secondary institutions. What percent are underemployed? How does this vary by type of education? Is underemployment a short-term experience? Good research can answer these questions. Bringing together government and academic analysts with human resource specialists would be a good first step to improving our understanding of this critical issue for Canada's future.

¹⁰ Doug Norris, "A Half-Century of Change in Canada's Labour Force," Environics Analytics, June 26, 2011. <http://www.environicsanalytics.ca/environics-analytics/blog/doug-norris/doug-norris-blog/2013/06/26/a-half-century-of-change-in-canada-s-labour-force>

WELL-BEING OF FAMILIES

Making predictions about the family is a risky business. Predicting 20 years ago that most young couples in Quebec would live together and have their first child without being married would not have been too chancy because both trends were already apparent. However, predicting that courts of law and the Parliament would extend marriage to same-sex couples would have seemed farfetched. The next section reviews current trends before discussing emerging issues and future challenges, and expanding our knowledge base.

Current Trends

Unless current trends alter dramatically, several existing key trends will influence future families. The proportion of families that are two married people living with their common children will decrease. The proportion of couples living in common-law union is likely to increase as will the proportion of children born to unmarried parents. Couples will probably spend part of their lives with interrupted marriages or in common-law unions. A large fraction of Canadian children will experience the separation or divorce of their parents. A large proportion of these children will spend a portion of their childhood in some form of shared custody, moving between homes. More children will live with step-parents and step-siblings. More children will live in families headed by a same-sex couple. Whether or not the proportion of children living with one parent will increase or remain stable is more difficult to guess. The proportion of mothers who work full-time will increase. There will be greater pressure on men to share equally child-rearing and domestic chores. Families will demand conditions that favour a better balance between work and family life. In addition, unless there is a reversal of current trends, more people will live a large fraction of their adult lives without a spouse or partner, not only in their old age because of separation or death of a spouse, but also at younger ages that are usually considered ideal for family formation. The proportion of adults who never have children is also likely to increase.

This broad picture basically projects current trends into the future. It is simple approach, but the processes that govern these trends are too fundamental to expect the near future to be sharply different. This picture of the future and of the processes that produce it serves as a starting point for looking for the “weak signals” of emerging issues.

Emerging Issues and Future Challenges

- *Family flexibility and family formation.* About 20 years ago, cross-national comparative research showed that the association between having children and women’s participation in the labour force had reversed. Fertility rates now tend to be higher in those countries where women are more likely to work. And now people are more likely to have children without being married.¹¹ Currently, there is also a positive effect of family flexibility on childbearing.

Why is there a positive effect? One reason is increasing out-of-wedlock births in several countries, where contraception and abortion are not readily available to poor young women. But the positive effect is mainly seen in Sweden, Norway, Denmark, France, New Zealand and the United Kingdom, where women who have children without being married typically live in a stable relationship similar to common-law union and typically have their children in their late 20s. These countries differ in their family policies, but they share two things. First, they tend to offer the same support to families whether parents are married or not. Second, their private law does not equate marriage and common-law union to the point of imposing the sharing of assets and providing support payment to the former partner after separation. These developments have occurred by design in Sweden and from legislative inattention in France, where opposite-sex couples are often in “PACS” (in French, a *pacte civil de solidarité*, a very light form of registered partnership originally designed to accommodate same-sex couples). Increasingly,

¹¹ F.Héran. “Fertility and family-support policies: what can we learn from the European experience?” Keynote speech, Opening ceremony, IUSSP, Busan (Republic of Korea), 26 August 2013.

young couples seem more prone to have children in a legal context that allows them to do so while avoiding the judicial control and long-term obligations that marriage imposes. In other words, young couples seem more likely to have children in countries where their family will receive the same support regardless of their marital status, and where they are left to manage their own relationship, including its economic aspects, with little interference from the government.

In Canada, governments offer the same support to families whether the parents are married or not. However, the evolution of legislation and case law has “rigidified” the new forms of family by equating marriage and common-law union. Most provinces have enacted statute law that imposes or promotes sharing of assets and spousal support to the former partner of a common-law union, similar to a marriage. Such provisions were originally devised to relieve hardship arising from the breakdown of common-law unions and, in most provinces, have been extended to aid the ex-partner who has accumulated less wealth during the union because of greater parental duties. The intention is generous but perhaps anachronistic. Today’s young people might envision their relationship as a couple from a different perspective. Young adults – knowing that their relationship as a couple is likely to end at some point, and living in conditions in which both work intensity and wage differences between partners are on average much smaller than they used to be – might prefer a contractual relationship in which they keep control of their own future and avoid the risk of having to pay for someone else after the relationship ends. They might also worry about the risk of becoming dependent on someone else after the relationship ends, while sharing chores, child rearing and contributions to family expenses as equally as possible as long as they live together. These are important emerging trends that require new knowledge and understanding. At present, family flexibility is a key aspect for Canada’s changing families, with consequences for living arrangements and childbearing.

- *The new social geography of family housing.* Families with young children typically want larger accommodations. They want one bedroom for each child, some inside space for kids to play, and some outside space for family activities. In metropolitan areas, they typically choose to settle in the suburbs, where land is cheaper and homes more affordable. This solution makes sense as long as land remains available for new housing, and transportation costs between home and work remains inexpensive. Several factors may make this more unlikely in the future.

Some factors are obvious. Land availability is constrained by geography and current use. This availability decreases as population grows. Prices increase and affordable suburbs become further from the centre. Moving away from the centre increases the cost and duration of transport, eventually to the point that moving further is not a practical solution. For contemporary families, the difficulty of finding the right place is compounded by having to commute from home to two different places of work.

For a variety of reasons that are not limited to environmental issues, current urban planning policies favour the building of new suburbs – within which there are short walking or bicycling distances – as well as increased density of city centres and areas close to main public transit lines. People who live in these newer suburbs, however, do not use public transportation more than those who live in older suburbs, which suggests that newer suburbs have little effect on commuting.¹² More importantly, other research shows that older higher-density areas in the inner city is closely associated with gentrification.¹³ Housing stock in neighborhoods that are walkable, dense and close to transit—basically, former working-class neighbourhoods—have become more suitable to dual-earners in higher-level occupations than households in sales, service, and manual occupations.

Family housing is not only an issue of affordability. Housing is a conundrum for low and middle-income families because moving away from the centre is no longer a simple solution. Increasingly, the cost and duration of commuting increases because of congestion and policies that deter the use of private

¹² Canada Mortgage and Housing Corporation (2013) “Comparing Canadian New Urbanist and Conventional Suburban Neighbourhoods (Updated)”, *Research Highlight, Socio-economic Series 13-002*. Ottawa, Canada Mortgage and Housing Corporation, 2013.

¹³ Noah Quastel, Markus Moos and Nicholas Lynch. “Sustainability-as-density and the return of the social: The case of Vancouver, British Columbia”, *Urban Geography* 33(7, 2012): 1055–1084.

automobiles, while public transit is limited or not time-effective, and housing close to the centre has become too expensive.

For young couples, housing is a key factor in the timing for the birth of the first child.¹⁴ If the prospect of finding reasonable housing for a family becomes too difficult, couples may postpone or forego family formation. One wonders if this process, as much as or maybe more than affordability *per se*, explains British Columbia currently having the lowest fertility of all Canadian provinces.

- *The increasing cost of children and the new intergenerational transmission of social status.* Over recent decades, the federal and provincial governments have devised policies to reduce the proportion of children living in poverty. While this is a laudable achievement, it is not likely to provide equal opportunities for children from different social backgrounds. Parents usually wish their children to do well. Recent research shows that over the last decades, achieving this goal increasingly depends on family wealth and non-economic resources.¹⁵ The most obvious consequence of this trend is to increase the reproduction of social inequality. However, another consequence may be a deterrence to family formation. As people become aware that getting jobs with good wages and good conditions increasingly depends on higher education, and that higher education depends on previous parental investments that are greater than low- and middle income families can afford, ordinary Canadians may come to the conclusion that properly raising children is beyond their means. This potential problem should not be underestimated. The comparatively high fertility in the United States should not be interpreted as evidence that the increasing cost of children does not deter people from having them because a significant proportion of U.S. children are born to young women who have restricted access to contraception and abortion, or to women who belong to ethnic group with relatively high fertility norms. In Canada, young women have access to contraception and abortion, and they use them: their fertility is significantly below that of their American counterparts. Moreover, recent research shows that in Canada, on average, immigrant women do not have more children than the Canadian born.¹⁶

There are serious reasons to be concerned because policies that alleviate children poverty rather than increase the well-being of low- and middle-class families may discourage young Canadians from starting a family.

Expanding Our Knowledge Base

- *Family flexibility and childbearing.* Further research is needed on the relationship between family flexibility and fertility. Much of the philosophy that guided the evolution of family law in Canada over the last 20 years could be at odds with what today's young people expect, and family law could actually offset the effects of family policies. Canada may have turned common-law union into a long-term liability that young people wish to avoid. By turning common-law union into something too similar to marriage, Canadian family law may deter young people from having children and Canada may have inadvertently developed an anti-natalism policy. At present, both fertility and the proportion of children born to unmarried parents are relatively low in Canada compared to northern Europe. This is a trend that should be carefully watched and studied.

- *Improving data sources.* The base for expanding knowledge on the Canadian family has shrunk during recent years. About 20 years ago, Statistics Canada and SSHRC reached an informal agreement. Statistics Canada would be responsible for collecting data on the Canadian society and making it

¹⁴ The relationship of housing costs, migration, and fertility is described more in the section of this report dealing with the life cycle.

¹⁵ Miles Corak. "Income inequality, equality of opportunity, and intergenerational mobility", *Journal of Economic Perspectives* 27(3, 2013): 79-102.

¹⁶ Alicia Adserà, Ana M. Ferrer, Wendy Sigle-Rushton, and Ben Wilson. "Fertility Patterns of Child Migrants: Age at Migration and Ancestry in Comparative Perspective", *Annals of the American Academy of Political Science and Social Science* (643, 2012):160-239; María Constanza Street and Benoît Laplante. "Pas plus, mais après! L'immigration, le calendrier de la constitution de la famille et les méthodes d'estimation de la fécondité", *Cahiers québécois de démographie*, forthcoming.

available to researchers, and SSHRC would concentrate its resources on funding researchers to analyze these data. As part of this endeavour, Statistics Canada developed a large collection of longitudinal surveys, with access to survey and census data through the Research Data Centres. Several universities embarked on an unprecedented effort to train professors, researchers and graduate students in advanced statistical methods to make use of these data. The problem Canada does *not* face in the coming years is making the intellectual labour force more productive by increasing its skills—in fact, skill levels are better than before and training is ongoing. Rather, the problem is the dearth of data on Canada.

Adequate data sources have dwindled and new sources have not been developed. Statistics Canada has discontinued the production of some relevant aggregate data and considerably reduced the publication of basic analyses. Statistics Canada has terminated the production of aggregate data on marriages and divorces, with no national source for the number of marriages and divorces. On other topics, although aggregate data are now more freely available than ever before through CANSIM and other sources, researchers need to do the basic analytical work. For instance, basic comparative tables on critical demographic trends such as marriages or divorces require the compilation of original data from individual surveys. The collection of longitudinal surveys initiated in the mid-1990s provided data similar to other advanced countries in order to monitor and compare changes at work in Canadian society. Many of these surveys have ceased however. Converting the sample portion of the 2011 Census into a voluntary survey has increased costs and raised questions about the quality and comparability of important census data. SSHRC is unlikely to receive funding to support data gathering initiatives led by researchers that would compensate for these losses. Canadian foundations have a tradition of helping charities, not social science research, which is considered a government responsibility. Finding a solution to this data dearth is the first and foremost step needed to improve and expand our knowledge base on the Canadian family.

LIFE CYCLE CHANGES

With industrialisation and the expansion of the welfare state, the concept of life cycle has been traditionally defined as three phases: childhood involving education; adulthood involving work; and old age involving work incapacity and chronic health problems. In formalising the phases of the life cycle, it is possible to categorize them in terms of their productivity. School-age children are net beneficiaries of time and cash transfers, but much of these transfers occur within the family. Elderly adults are also net beneficiaries, but in their case, public transfers (especially health care and pensions) represent the largest share of the net flow. During adulthood, labour force participation rates peak, as well as the amount of time devoted to unpaid productive activities such as housework, childcare and caring for older parents. While women's labour force participation rates have converged towards the higher male rates, females continue to supply most of the unpaid activities, resulting in a net transfer of unpaid production in favor of males.

With the institutionalisation of retirement along with unprecedented life expectancy increases of the 20th century, a new third phase – the golden age – has emerged.¹⁷ It falls between adulthood and old age and it is characterized by a period of greater leisure.

During the new third age, retired individuals are generally healthy, wealthy, and have more time for non-work activities and personal development. Finally, the new fourth phase corresponds to oldest-old people characterized by more frailty and dependency. While production is highly concentrated during adulthood, consumption is much more evenly distributed among the four phases, although it tends to drastically increase in the last years of life due to health care costs and intensive caring time. In consequence, although there are some productive activities during all stages of life, the net transfers are negative during adulthood and positive at other stages.

In the past, the age at transitions between the different stages of life was clear and fairly stable. Transitions from one stage to the other corresponded to normalized and institutionalized age of leaving school, entering the labour force and retiring. Much of Canadian public policies relate to this normative view of the working life course. As an example, administrative rules of pension entitlements define the

¹⁷ Peter Laslett, *A Fresh Map of Life: The Emergence of the Third Age*. London: Weidenfelt and Nicholson, 1989.

normal age for retirement. But the boundaries of these phases are evolving and are becoming increasingly blurred.

Emerging Issues

Two trends are changing life cycle patterns in Canada and other countries. First, there is a general elongation of the life cycle and of its components partly because of the major gains in life expectancy of the last century. Educational attainment is also increasing from one cohort to the next, increasing the mean age of entry into the labour force. Leaving home, entering into marriage or common-law union, or having a first child are occurring at older ages, consequently delaying the age of entry into adulthood. It might be thought that late entry into the labour force would later translate into late entry into retirement, particularly at a time when life expectancy increase is more and more due to decrease in old age mortality rates. While age at retirement decreased from the 1970's to the mid-1990's, partly due to use of early retirement incentive programs used as a tool to manage downsizing, people are now delaying retirement and age at retirement has been increasing since 2000.¹⁸ Labour force participation rates at 50 years and over are now clearly moving up and this trend is expected to continue in the future partly due to extended education and postponed labour force entry. Recent working life tables show an increase in retirement age that compensates for the increasing life expectancy at older age and thus resulting in stable length of retirement. Trends in life expectancy are expected to increase, albeit at perhaps a slower rate. Changes in healthy life expectancies, however, are less clear. Although the number of healthy years is increasing, it is not clear that it is increasing faster, at the same rate, or slower than total life expectancy. In any case, the number of years of life lived in poor health or in dependency is also increasing.

Second, globalisation, economic restructuring, rapid technological changes and downsizing firms all tend to modify the traditional single career path. Over the life course, individuals now have more numerous jobs, often separated by spells of unemployment and underemployment. The transition to full retirement is also often preceded by a spell of bridge jobs or part-time jobs. Adult education is not only necessary to increase the skills of workers in their career job, but also for those who are searching for new jobs after layoff.

- *Recruitment of future immigrants.* These life cycle changes need to be linked with the emerging issue of global population peaking. In this context, the first issue is the effect of global population change on recruitment of future immigrants. Several source countries of current Canadian immigration show declining fertility rates and often even faster population aging than Canada. In coming decades, China, South Korea, the Philippines, and eventually India will see their labour force population reach a plateau. Similar to southern European countries such as Spain, Italy or Greece, which went from emigration to immigration countries, current source countries for Canadian immigration may well become additional competitors in the global market for labour force and skills. Not only immigrants will become more difficult to recruit, but the source countries will likely shift to other regions such as northern and central Africa where the demographic transition is lagging and population growth will continue. This will increase the ethnic diversity of immigrants, and might test social cohesion as well as increase the risk of fractionalisation. In addition, since the global demand for skilled immigrants will increase when there are more alternative destinations, Canada may need to reduce its selection criteria in order to maintain high immigration numbers.

- *The aging of immigrants.* Immigrants are aging. More than 1.6 million immigrants (about one third of the total) admitted since 1990 are baby-boomers (born between 1946 and 1966). They expanded the already large cohort of Canadians who are progressively retiring from the labour market and receiving pension transfers and health care services. The immigrant population growth component might therefore increase, rather than decrease, the pressure on the pension and health care systems, and perhaps add arguments supporting Ponzi-scheme approaches to ever higher immigration as a solution to the aging challenge. While past immigration was largely European, more recent immigrants originate from Asia

¹⁸ Y. Carrière and D. Galarneau, Delayed Retirement: A New Trend? *Perspective on Labour and Income*. Catalogue No. 75-001-X. Winter 2011:4-16.

and other countries and are therefore more diverse than in the past and more culturally different from the resident population. Adequate knowledge of official language and literacy,¹⁹ quality of foreign education²⁰ and training and discrimination²¹ from potential employers, oversupply of labour during economic downturns are all possible reasons explaining the increasing difficulties of recent immigrants to fully integrate into the Canadian economy. Despite their high level of educational attainment, the economic integration of recent immigrants is more difficult and it appears that economic performances of immigrants admitted since 1990 will not reach the level of Canadian-born.²²

Future Challenges

Marshall and Mueller identified five policy domains where life cycle changes need to be considered:²³ (1) education, the transition to employment, and life-long learning, (2) family and the relationship between work and family, (3) work-to-retirement transitions, (4) income security in the later years, and (5) intergenerational relations and social cohesion. In relation with the issue of global population peak, items 1, 3 and 5 are the most likely to be affected, as discussed next.

- *Education and employment.* Literacy levels of immigrants in English and French are on average lower than Canadian-born, despite higher educational attainment. This difference in English and French literacy explains about two-thirds of the immigrant/Canadian-born earnings gap.²⁴ Immigrants also face difficulties integrating into the labour market because of language barriers, educational recognition, or discrimination. These factors are correlated with their overall earnings through the life cycle. Therefore, over their lifetime immigrants contribute less than Canadian-born through the tax system.²⁵ Changes in the welfare state regulations can modify the level of the net transfers over the life cycle and have implications on intergenerational equity. A recent study attempts to create an index of intergenerational justice between older and younger generations for 29 OECD countries.²⁶ Canada is ranked fifth from the bottom on intergenerational justice. Given the persistence of intergenerational inequity there may be more tolerance for inequality in intergenerational transfers when the generations who benefit are the parents or the children of those who overpay. Social cohesion can therefore be in jeopardy when a high proportion of population growth is driven by net immigration rather than natural increase.

¹⁹ A. Bonikowska, et al. (editors), *Literacy and the Labour Market: Cognitive Skills and Immigrant Earnings*. Ottawa: Statistics Canada, 2008.

²⁰ S.Sweetman. "Immigrant Source Country Educational Quality and Canadian Labour Market Outcomes", *Analytical Studies Branch Research Paper Series*. 2004.

²¹ P.Oreopoulos, "Why Do Skilled Immigrants Struggle in the Labour Market," *Metropolis British Columbia Working Paper Series* (08-03), 2009.

²² G.Picot, "Immigrant Economic and Social Outcomes in Canada: Research and Data Development at Statistics Canada. *Analytical Studies Branch Research Paper Series*. 2008.

²³ Victor W. Marshall and Margaret M. Mueller, "Theoretical Roots of the Life Course Perspective," Chapter 1 in Walter R. Heinz and Victor W. Marshall (editors). *Social Dynamics of the Life Course: Transitions, Institutions, and Interrelations*. New York: Walter de Gruyter, 2003.

²⁴ A.Ferrer, et al., "The Effect of Literacy on Immigrant Earnings," *Journal of Human Resources* 41(2, 2006):380-410.

²⁵ In the most recent study of the fiscal effects of immigration, Canadian-born households had a net positive balance of \$11,000 for the 2007-09 period, compared to a net positive balance of \$7,000 for immigrant households, according to OECD, *International Migration Outlook 2013*. Paris, France: OECD, 2013. Both Canadian-born and immigrant households have net positive taxes minus social transfers, although the net balance is \$3,000 higher for Canadian-born households. Overall, the OECD study shows that there is a negligible fiscal effect of immigrants in Canada, but this is a cross-sectional analysis.

²⁶ P.VanJuysee. "Measuring Intergenerational Justice: Toward a Synthetic Index for OECD Countries", in *Intergenerational Justice in Aging Society: A Comparison of 29 OECD Countries*. Bertelsmann Stiftung, 2013. http://news.sgi-network.org/uploads/tx_amsgistudies/Intergenerational_Justice_OEDC.pdf. The intergenerational justice index is calculated from indicators such as national debt per child, child and elderly poverty, and size of the ecological footprint. Canada does poorly on each of the three measures.

- *Aging and health care.* Even if they benefit from the healthy immigrant effect, aging immigrants will eventually need health care and social support like older Canadian-born residents. Continuing changes in the source countries in the context of increasing diversity will increase the language barrier and cultural differences, forcing health care providers to continuously adapt to an ever changing population. Furthermore, if immigrants live longer than Canadian-born, can we expect lifetime costs for health care and pensions to be higher?

- *Labour demands and labour supplies.* Increases in the education level of the Canadian-born and arrival of highly educated immigrants is changing the labour supply composition in terms of broad skills.²⁷ In the context of a knowledge society, there will be greater demand for higher skills than lower skills. Nevertheless, demand for lower skill jobs will continue to be positive, although at a lower rate. Comparing projections of supply and demand by broad skill levels show an increasing imbalance in the future with large oversupply of highly skilled workers and labour shortages among lower skilled workers. These forecasts imply an increasing over-qualification rate within the labour force, with workers that have higher level of education than job requirements. The Canadian over-qualification rate is already among the highest of all OECD countries.²⁸ What are the advantages and disadvantages of increasing over-qualification on productivity or individual satisfaction? Moreover, oversupply of highly educated labour force and shortage in lower-skilled jobs can influence the relative wages by education. Recent studies show that the return to higher education is decreasing at the same time as college and university education costs are increasing.²⁹ In this situation, will future Canadian generations reduce their investment in human capital? If immigration continues to be highly selective of university graduates, will we increasingly replace the highly skilled labour force with immigrants, while lower skill jobs are increasingly occupied by Canadian-born?

Expanding Our Knowledge Base

- *Rethinking policies with the life course perspective.* Despite variations in life course, policy measures continue to be based on a stereotypical life course pattern of education-work-retirement. More thought is needed to define how social policies can better suit the evolving life course. More research is needed on healthy life expectancy in general and to determine whether we are facing expansion or compression of morbidity. More research is also needed to understand the full consequences of the changes in life transitions and the multiplication of life course patterns. Taking a life course perspective, and knowing that disadvantages tend to cumulate to create larger differences by the end of life, the disadvantages that recent immigrants have over their life course are likely to affect their economic well-being and health at older ages. In particular, in the context of high immigration, it is critical to understand how aging affects health care use and costs.

- *Relation of immigration and fertility levels.* Immigration levels were increased in part to assure continued labour force growth. Is there a relationship between immigration levels and fertility rates? Entry level Canadian-born and immigrants compete in the labour market, particularly when unemployment rates are high. Increasing the labour force through immigration can create pressure on unemployment rates, particularly among the entry level age groups. Large immigration intakes also put pressures on the housing market costs. Increasing housing costs and unemployment rates may reduce the capacity of young families to have the number of children they desire, reducing further the country's natural increase and consequently increasing its dependency on international immigration. This is a topic for further study.

²⁷ A.Bélanger and N. Bastien, "The Future Composition of the Canadian Labour Force: A Microsimulation Projection," *Population and Development Review* 39(2013):509-525.

²⁸ National Center for Education Statistics. *Adult Literacy in OECD Countries: Technical Report on the First Adult Literacy Survey*. Washington, D.C., 1997.

²⁹ R.Morissette, et al., "Wage Growth over the Past 30 Years: Changing Wages by Age and Education," *Economic Insights* 11-626-X (008, 2012):1-4.

- *Data gaps.* We need another longitudinal survey of immigrant in Canada to assess the progress made since the early 2000s. Surveys similar to the Gender and Generation project conducted in several OECD countries would be useful to have in Canada. We also need to increase our knowledge on the demographic and economic impact of increasing or lowering immigration levels, on the economic integration of youths and immigrants into the labour force, and on the public finance, in general, and health care and pension costs and income taxes paid over the life time, in particular. We lack up-to-date information on intergenerational transfers over the life course.

GLOBAL MIGRATION AND CITIES OF THE FUTURE

Global migration is an urban phenomenon. By 2010, there were about 214 million international migrants³⁰ who mainly live in the large metropolises of a dozen immigrant-receiving countries, contributing to the general urbanization trend of the world's population.³¹ Of Canada's almost 6.8 million foreign-born residents, 91.1 percent live in one of Canada's 33 census metropolitan areas (CMAs), compared with 63.3 percent of the Canadian-born population. The three largest CMAs -- Toronto, Vancouver, and Montreal -- account for 63.4 percent of the immigrant population, whereas only 35.2 percent of the total population live in these three CMAs.³² Global migration, therefore, has an intrinsically urban character with important implications for cities of the future.

Two recent publications by the United Nations and OECD provide useful contexts for the study of immigrants and Canadian cities. First, the United Nations *International Migration Report* suggests that Canada will continue to be a major destination for future international migrants.³³ At 20.6 percent, Canada's foreign-born population is already the highest among G8 countries, compared with 13.5 percent for the United States. Australia, a non-G8 country, has a higher foreign-born proportion, at 26.8 percent.³⁴ In the most recent 2005-2010 period, Canada had a net immigration rate of 6.5 per 1,000, one-third higher than Australia's, and almost twice that of the United States. While the world's population is projected to peak at around 10 to 11 billion in the 22nd century, it is fair to say that given past and current trends, global migration is likely to continue even after the world's population has peaked. Indeed, as transportation has become cheaper and technology such as the internet has facilitated the flow of information, it is quite possible that the rate of global migration may even increase. Additionally, global migration is not limited to south-north movements, but increasingly south-south flows, adding further complexity to the dynamics of global migration and cities of the future.³⁵

Second, according to OECD's *2013 International Migration Outlook*, recent financial crises and currently high and persistent unemployment in many industrialized countries have intensified debates over immigration and immigration policies.³⁶ While Canada's employment and fiscal situation is not as dire as some OECD countries, Canada faces similar demographic challenges related to an aging population and workforce, and the role of immigration in mitigating some of these challenges. In addition, Canadian residents share concerns with Europeans about immigration. Public opinion surveys cited in the OECD report show that about 50 percent of European and Canadian respondents believe that immigrants are a drain on the public purse, contributing less in taxes than they receive in health, welfare, and other

³⁰ United Nations. *International Migration Report 2009: A Global Assessment*. New York: United Nations, Department of Economic and Social Affairs, Population Division, 2011.

³¹ United Nations. *World Urbanization Prospects: The 2011 Revisions*. New York: United Nations, Department of Economic and Social Affairs, Population Division, 2012.

³² Statistics Canada. *Immigration and Ethnocultural Diversity in Canada. National Household Survey, 2011*. Catalogue no. 99-010-X2011001. Accessed online at www.statcan.gc.ca, 2013.

³³ U.N. Population Division. *International Migration Report 2009: A Global Assessment*. New York, New York: United Nations, 2011.

³⁴ Statistics Canada. *Immigration and Ethnocultural Diversity in Canada. National Household Survey, 2011*. Catalogue no. 99-010-X2011001. Accessed online at www.statcan.gc.ca, 2013.

³⁵ U.N. Population Division. *International Migration Report 2009: A Global Assessment*. New York, New York: United Nations, 2011.

³⁶ OECD. *International Migration Outlook 2013*. Paris, France: OECD, 2013.

social services. However, such beliefs are not supported by studies in Canada, Europe, and the United States, most of which conclude that the fiscal effect of immigration is negligible, and is only negative where there is a large share of older immigrants receiving public pensions. In fact, while they are in the labour force ages, younger immigrants contribute positively to public finances.³⁷

Emerging Issues

Although immigrants flock to urban areas, cities and metropolitan areas have little control over national immigration policies or over internal migration flows. Yet metropolitan areas are the frontline for the consequences of immigration, for example, for housing immigrants, for providing jobs, and for other essential services such as education and healthcare. Because metropolitan areas receive most immigrants, their populations are growing fastest and cities will become even more important for future economic growth in Canada. The three major metropolitan areas of Toronto, Montreal, and Vancouver alone account for more than one-third of the national economy. Canada's economy is increasing based on a network of metropolitan economies.³⁸ Given this background, we identify four emerging issues (or, more accurately, issues that will emerge from the rapid acceleration of current trends) for immigration and Canada's cities.

- *Immigrants, population growth, and population aging.* Canada's population is aging, and immigration has been the main source for population growth since the mid-1990s.³⁹ However, this also means that immigrants will be a growing proportion of Canada's aging population through two demographic processes: aging-in-place of earlier immigrant cohorts, and immigration of older immigrants. A majority of aging immigrants reside in Canada's cities, with broad implications for how cities cope with not just immigrants, but aging immigrants with distinctive needs, for example, in housing, living arrangements, social support, healthcare, and transportation.
- *Changing sources of immigrants.* Several major sources of international migrants, such as China and India, are developing rapidly and are less likely to remain major sources of immigrants in the future. As with Italy and South Korea, and a diverse group of other countries, economic growth and improvements in employment and income are associated with countries changing from sources to destinations of migration. This suggests that as the 21st century unfolds, global migrants will increasingly come from regions where economic growth remains stunted, for example, Africa and parts of the Middle East. Future immigration will therefore further increase the already rich ethnocultural diversity of Canadian cities, with its attendant benefits and challenges.
- *Effect of immigrants on settlement areas.* Although most immigrants settle in Canada's largest metropolitan areas, our current understanding of migration in urban areas needs to be greatly improved. Censuses, surveys, and administrative data can be more effectively used to expand our understanding of immigrants' adaptation and integration, and their effects on local labour markets and social services. For example, comparative studies of immigrants and their families in different cities on housing, economic, educational, and social integration would be particularly informative, as some cities appear more successful than others in absorbing large numbers of immigrants from diverse backgrounds.
- *Devolution and resource deficit.* Devolution has shifted responsibilities and funding to local governments at the same time that globalization has increased international ties and the movement of commodities, services, people, and capital. In most cases, however, the shift in responsibilities to local areas has not been matched by an increase in resources from the federal government, further stretching the capacity of cities to respond to new inflows of immigrants.

³⁷ OECD. *International Migration Outlook 2013*. Paris, France: OECD, 2013.

³⁸Florida, Richard, Charlotte Mellander, and Tim Gulden. "Global Metropolis: The Role of Cities and Metropolitan Areas in the Global Economy." *Working Paper Series, Martin Prosperity Research*. Toronto: Martin Prosperity Institute, University of Toronto, March, 2009.

³⁹ Statistics Canada. *The Daily*, Canada's Population Estimates: Age and Sex, July 1, 2012. Accessed online at www.statcan.gc.ca, 2012.

Future Challenges

We identify five major challenges related to the above emerging and other issues that global migration presents for Canada's cities.

- *Housing.* New immigrants' first prerogative is to find affordable and adequate housing. Immigrants' housing challenges are compounded because most settle in more expensive metropolitan areas. In addition, many immigrant families tend to be larger because of extended family living arrangements with multi-generation households, which can lead to overcrowded housing. Finding rental housing can be more challenging for immigrants as landlords may view immigrants as less preferable tenants because of unfamiliarity with immigrants from different ethnocultural backgrounds or because of concerns with renting to people without a previous rental record.

- *Employment.* Employment poses several interrelated problems. It is difficult for immigrants to find suitable full-time employment, and many immigrants are often either unemployed or forced to accept part-time employment. Another form of under-employment is when immigrants find employment but at skill levels below their qualifications and skills. This can happen when Canadian employers do not recognize their credentials or experience, or when there is little demand for their specific credentials. At the same time that immigrants experience difficulties finding suitable employment, some employers report difficulties finding qualified applicants for positions in skilled occupations and trades. Employers in remote, rural, or other areas with few immigrants also report difficulties in finding employees. These situations indicate an important challenge to better match immigrants with employers (skills, qualifications and job match), and to match qualified immigrants to labour markets with jobs (qualifications and location match).

- *Social inclusion, integration, and cohesion.* Social inclusion, integration, and cohesion present special challenges. Cities such as London, New York, Los Angeles, Toronto, and Vancouver would be poorer in many ways without immigrants. However, immigration can also cause anxiety and concern for local residents, particularly when local residents feel overwhelmed by immigrants from different ethnocultural backgrounds. The successful social inclusion and integration of immigrants in cities is essential to maintain social cohesion and sense of belonging for all residents. Social cohesion, in turn, is needed for a community's successful future through ensuring continued economic growth and adequate investments in education, healthcare, social services, and urban infrastructure.

Social inclusion has been sufficiently recognized as an important goal for a successful immigrant policy. Social inclusion has several aspects, including (a) access to security in housing, health, educational, and social services, (b) access to public decision-making, and (c) development of new collective identities that counter mutual suspicions and distrust. As previously noted, it is worrisome that many Canadians mistakenly believe that immigrants are a net fiscal burden to Canadian society. Setting the record straight would greatly improve efforts to bring about the social inclusion and integration of immigrants, and greater social cohesion for Canada's cities and communities.

- *Population aging and aging immigrants.* Senior immigrants are a growing segment of Canada's aging population. Will their housing, healthcare, and other needs resemble or differ from that of Canadian-born seniors? Currently, the majority of elderly immigrants are of European origin but this will change as more recent immigrant cohorts of various ethnocultural origins age. Are current housing options and healthcare providers for seniors ready for the impending changes to the aging population? Aging immigrants' social and family networks may be thinner than for Canadian-born seniors, and they may be more dependent on social services.

- *Constrained financial resources, population growth, and the environment:* Cities will be challenged to find the financial resources to sustain and grow their economic base while responding to changing demographics and changing needs of residents. As future immigrants continue to gravitate to Canada's cities, population growth also increases pressures on urban infrastructure and desire to conserve green spaces and the natural environment. How different cities respond will affect residents' quality of life as well as the appeal of different cities for businesses and new residents.

Expanding Our Knowledge Base

We have highlighted several key emerging issues and challenges from immigration for Canada's cities and Canadian society. This is a first step towards identifying areas to broaden our knowledge base about this topic. Much work is needed and we briefly describe three key areas for expanding our current knowledge base.

- *Changing demographics and changing needs/contributions of immigrants.* Future research on Canada's immigrant population has to account for changing demographic characteristics of the foreign-born population, particularly aging immigrants and increased ethnocultural diversity. We need to know more about the housing, living arrangements, and health status and healthcare of Canada's aging immigrants. Canada's immigrants will be even more ethnoculturally diverse than before, and we need more knowledge on what this means for the most effective way to educate and prepare young immigrants and Canadian-born children of immigrants (the second immigrant generation) for Canada's future work force. A related important aspect of changing demographics is that the Canadian-born population (including Canadian-born children of immigrants) will also be much more ethnoculturally diverse.⁴⁰

- *Making academic research on labour market issues accessible to policy makers and the public.* There is a considerable research literature on labour market challenges and problems for immigrants. However, this literature is diverse (that is, multi-disciplinary using different data and methods) and often not easily accessible to non-academic researchers. Policy briefs and other interpretative reports to summarize and explain this literature would help inform policymaking as well as educate the public.

- *Social integration, inclusion, and welcoming communities.* This is a uniquely challenging area for expanding current knowledge because of data and methodology requirements. Surveys that include one or a limited number of questions on whether immigrants feel included or welcomed in their communities can only scratch the surface for understanding this topic. Multi-method research combining rigorous quantitative and qualitative methods would be needed to examine various dimensions of social integration and inclusion, for example, using indicators such as residential assimilation, youth friendship patterns, and dating and intermarriage.

ARCTIC, RURAL AND REMOTE COMMUNITIES

Rural and remote communities in Canada, particularly in the North, face different demographic challenges than other types of communities in Canada, including rural areas in the South. These challenges are related to the broader demographic processes of population aging, slowing population growth and changing migration patterns, but are likely to be experienced differently than in other regions or community types.

Emerging Issues

Two main processes affect the populations of the North. One is natural increase due to higher fertility than other Canadian regions, although fertility is declining in the North. The other is a high rate of migration, particularly related to resource development. As a result, the population of the North has been growing: Yukon and Nunavut have been growing more quickly than the total Canadian population over the past decade. The Northwest Territories, however, has lost population recently because of out-migration. The combination of in-migration and higher fertility mean that the population of the North is younger than the Canadian population.⁴¹

These processes contribute to two emerging issues that will be felt in the short and medium term.

- *Continuing skills shortages in particular industries.* There is academic disagreement about the degree to which population aging may lead to widespread skills shortages, or whether the labour markets

⁴⁰ Statistics Canada, *Projections of the Diversity of the Canadian Population, 2006 to 2031*. Ottawa: Statistics Canada, Demography Division. Catalogue no. 91-551-X, 2010.

⁴¹ A.Milan, *Age and sex structure: Canada, provinces and Territories, 2010*. Ottawa: Statistics Canada. Retrieved from: <http://www.statcan.gc.ca/pub/91-209-x/2011001/article/11511-eng.pdf>

will adjust in various ways.⁴² Nonetheless, rural and remote communities will likely face shortages of skills in particular occupations and industries, especially those with longer educational requirements and those in which large numbers of retirements can be expected in the short term.⁴³ In the North, this is compounded by the difficulties already experienced in recruiting and retaining professionals in industries such as health care.⁴⁴

- *Infrastructure needs in response to changing population, in a difficult geography.* The growth and age composition of the population in northern and remote communities will lead to continuing challenges for infrastructure such as roads, housing, and social and health service provision. For many non-Aboriginal rural and remote communities that do not have labour in-migration, infrastructure associated with population aging is an emerging issue. For many communities, such as some in the Northwest Territories and Northern provinces, out-migration by younger people has led to an older remaining rural population. Some needs may be exacerbated by remoteness and difficult geography, such as the need for transportation or mobility assistance. On the other hand, other communities will experience challenges associated with a young and growing population. The population “turbulence” associated with high in- and out-migration will add additional challenges to service delivery.

Future Challenges

In the longer term, three interrelated future challenges are important.

- *Rapid social and cultural change.* The North has been the site of dramatic changes over the past several decades. These have involved rapid modernization and development, and have meant the importation of new lifestyles and cultures⁴⁵. This has been especially devastating for Inuit and other Aboriginal communities, which have seen cultural and geographic displacement affecting social and physical well-being.⁴⁶ As resource-based economic activity continues to increase, there will likely be more in-migration. Moreover, international migration to the North and other remote communities will likely increase, leading to challenges of immigrant integration.⁴⁷

- *Increasing income and social inequality.* Income inequality has been rising in the general Canadian population and has been identified as a major social policy problem. The problem in the north may be even greater in the future. Already in 2011, the census divisions with the highest median incomes and those with the lowest median incomes were both found in the North.⁴⁸ This reflects the disparity between communities that have access to resources development opportunities and those that do not. This between-community inequality will likely increase, as might the inequality between individuals. In particular, integrating the young and growing Aboriginal population into the economy will be a major challenge, with the potential that disparities between Aboriginal and non-Aboriginal northerners will widen.

⁴² J.Creedy and R. Guest, *Population Ageing, Pensions and Growth: Intertemporal Trade-Offs and Consumption Planning*. Cheltenham, UK.:Edward Elgar 2013.

⁴³ J.A.McMullin, M. Cooke and T. Tomchick. in P.Taylor (editor). *Ageing Labour Forces: Promises and Prospects*. Cheltenham, UK: Edward Elgar 2008: 62-83

⁴⁴ N. Hanlon and G. Halseth “The greying of resource communities in northern British Columbia: implications for health care delivery in already-underserved communities,” *The Canadian Geographer* 49(1): 1-24.

⁴⁵ C.Southcott, “Globalization and Rural Change in Canada’s Territorial North”, in J.R.Parkins, J. R. and M.Reed, (editors). *Social Transformation in Rural Canada; New insights into Community, Cultures, and Collective Action*. Vancouver: UBC Press 2013:43-65.

⁴⁶ C.A.M.Richmond and N.A. Ross, “The determinants of First Nation and Inuit health: A critical population health approach,” *Health and Place* 15(2, 2009): 403-411.

⁴⁷ Y.Yoshida and H. Ramos, “Destination Rural Canada: A Basic Overview of Recent Immigrants to Rural Small Towns,” Pages 67-87 in J.Parkins and M.Reed (editors.) *Social Transformation in Rural Canada*. Vancouver: UBC Press, 2013.

⁴⁸ A.Sisco and C.Stonebridge. *Toward Thriving Northern Communities*. Ottawa: The Conference Board of Canada, 2010.

- *Lower social cohesion.* Increasing inequality, combined with rapid population turnover and change is likely to have implications for social cohesion. High migration, especially short-term labour migration, might itself lead to reduced social cohesion or social capital in Northern communities.⁴⁹ This might exacerbate other dimensions of social cohesion, including Aboriginal-non-Aboriginal relations.

Expanding Our Knowledge Base

Although research in the North is increasing, there are some areas in which further research or knowledge translation efforts, and better data, are required. We offer some examples below.

- *Research on effective recruitment and retention of professionals.* The problem of recruiting and retaining professionals to work in remote areas is not a new one, although there are unique challenges in Northern rural communities. However, there has not been a systematic assessment and dissemination of best practices for recruitment and retentions, especially one specific to a Northern context.
- *Better data on the northern populations.* Although there is more data about the North regularly available than before, not all Statistics Canada surveys collect data or sufficient data in the North. For example, the new Longitudinal and International Survey on Adults, which will allow the examination of long-term employment and work trajectories, does not include Northern provinces and territories.

ENERGY, RESOURCE CONSUMPTION AND CLIMATE CHANGE

There are important potential effects of global peak population on Canada's energy and resource consumption and climate change. Climate change is likely to have large direct and indirect effects on the environment, and on energy and resource demands.

Emerging Issues

- *World population and Canada.* Canada and many industrialized countries face the prospect of slower growth and population aging, whereas other world regions continue to face major challenges associated with rapid population growth. All countries, however, face environmental effects resulting from population change. The United Nation's medium growth projection suggests that the world's population could add an additional 2.3 billion over the 2010-2050 period before leveling off somewhat (this is not an inconsequential increase because it is close to the combined current population total for China and India). Even with the low variant, which assumes a major drop in fertility to levels below-replacement, the population momentum inherent in the world's current age structure insures an additional billion over the next half century. While U.N. projections suggest that North America (Canada and the United States) should maintain its share of global population of about 5 per cent, some world regions are expected to increase dramatically (such as Africa, whose share is set to rise from 15 per cent currently to about 24 per cent by mid-century). In a broader sense, the consequences of this growth will extend to Canada, regardless of Canada's rate of population growth. In a context of economic globalization, an additional 2 billion global population will increase the demand for Canadian resources and energy, with the associated environmental effects.

As a simple example, Canada is now the largest exporter of crude oil to the United States, and the federal government has been actively seeking to expand energy exports to a broader range of countries, including the Pacific Rim and China in particular. Because China's demographic future could range from 1.2 to 1.6 billion by mid-century, what happens to this demographic giant will be important to Canada, and to the global environment. As trade expands, the demand for Canadian resource and energy exports is expected to increase, at the same time that the environmental impact of increased greenhouse gas (GHG) emissions crosses international borders.

⁴⁹ M.Cooke, E.O'Sullivan, and L.Van Wyck. *The Effects of Migration on First Nations and Inuit Community Well-Being Index*. Report prepared for Strategic Analysis Directorate, Aboriginal Affairs and Northern Development Canada, 2012.

- *Canada's environmental record.* By international standards, Canada's environmental record has been mixed. As an indication of this, the Yale Centre for Environmental Law and Policy recently published a ranking of over 160 countries according to a composite index meant to measure "sustainable development".⁵⁰ While the reference measure is somewhat vague, it essentially refers to maintaining or improving the economic and social welfare of societies without doing irreparable damage to the environment. The composite index summarizes data across 25 public health and environmental indicators. Although Canada's record has been superior in terms of "promoting the social welfare of its population", it has been judged problematic in terms of "avoiding irreparable damage to the environment". Canada scored 46th overall, and could have ranked much higher had it not been for its abysmally poor performance on one of the most heavily weighted indicators that entered into the composite index: the extent to which a country produces GHG emissions.

Canada currently ranks 151st across 163 countries in terms of the per capita production of GHG emissions, with little change in this relative ranking in recent years. A large part is due to the fact that Canada, unlike many other more developed countries, has a particularly energy-intensive industrial structure and an economy based on the extraction and exportation of natural resources and energy, with large current energy extraction ongoing especially in the oil sands areas of Alberta. Despite recent improvements to reduce the energy intensity of economic activity, only one other country in the OECD has an energy intensity that is as high as Canada's. Canada has also clearly lagged behind most other countries in the OECD in terms of reducing its energy intensity, despite a declared commitment to do so by the federal government.

While Canada contributes more than its share of GHG emissions, it has also been experiencing the impact of global warming, yet so far, the greatest initial warming has occurred in the sparsely populated northern most reaches of the country where winter temperatures have been much higher than the longer term average.⁵¹ It is noteworthy that the most southern and densely populated regions of the country have witnessed much less warming, regardless of public perceptions. Over the next several decades, IPCC (2013) forecasts suggest that this warming may be felt increasingly in the more southern regions of Canada, with uncertain environmental and social effects.

Future Challenges

In the early 1970s, Ehrlich and Holdren formulated the IPAT equation with the intention to refute the argument that "population size", in and of itself, was a minor factor explaining environmental change.⁵² The IPAT equation was proposed as a starting point for investigating the impact of human populations on the environment. These interrelationships were: Impact (I) = Population (P) * Affluence (A) * Technology (T), where Impact (I) refers to the amount of a particular kind of environmental degradation (for example, GHG emissions), the size of the population (P), affluence (A) is typically measured in terms of income per capita, and technology (T) is meant to capture the environmentally damaging properties of a particular production technique.

While the model has been criticized as being an oversimplification, its primary utility is to highlight the centrality of demography for discussing environmental problems. For example, the IPCC (2000) has used a slightly revised version (called the Kaya identity) in an attempt to disentangle the importance of demography to increased CO₂ emissions at the global level. This model, in various forms, has suggested repeatedly that across nations, regardless of level of affluence, increased population matters and typically implies a proportional increase in environmental impact. The impact of the (A) affluence, on the other hand, is not quite as straightforward because empirical evidence suggests that its effect is neither always proportional nor linear. While greater affluence is typically associated with a greater carbon footprint, several post-industrial societies have witnessed some decline in GHG emissions due to a shift away from

⁵⁰ Yale Centre for Environmental Law and Policy, *EPI index: Summary for Policy Makers.*, 2010.

⁵¹ Environment Canada, *Climate Trends and Variations Bulletin.* , 2013.

⁵² P.R.Ehrlich and J.P. Holdren. "Impact of Population Growth", *Science* 1710 (1971): 1212-1217.

their most energy intensive industries associated with the manufacturing sectors.⁵³ The role of (T) technology should not be overstated, because several European countries are much further along than Canada in terms of an energy transition away from fossil fuels toward less CO₂ intensive alternatives, including hydroelectricity, nuclear and to a lesser extent, geothermal, wind and solar.

- *Canada's energy transition.* In this context, the insights of Canadian geographer Vaclav Smil are useful. Smil writes that “a world without fossil fuel combustion is highly desirable, and, to be optimistic, our collective determination, commitment and persistence could accelerate its arrival. But getting there will be expensive and will require considerable patience. Coming energy transitions will unfold, as past ones have done, across decades, and not years’”.⁵⁴ With this in mind, consider the enormous political, economic and technological challenges involved, as both the domestic and international demand for fossil fuels remains high, and a growing proportion of all Canadian economic activity is tied into the investment and further extraction from Canada's resource sector. The future challenge in this context is to move through the energy transition away from fossil fuels, a necessity that will become more pressing as the impact of global warming becomes more obvious to the Canadian public. Much of the current economic and political leadership in Canada is highly committed toward the further expansion of Canadian energy sector, and Canada has known fossil fuel reserves that are estimated to be third only to Venezuela and Saudi Arabia.

- *Toward population stability.* In terms of the population component, as global population moves toward stabilization toward the middle of the current century, what will be Canada's future? Given the high level of consumption or affluence (A) that characterizes North America, Canada can potentially play a larger role in climate change through achieving a stable population rather than a growing one. While the growing consensus is that at the global level a smaller population would be better, and the sooner we arrive at population stability the better, especially given rising consumption, a worthwhile debate is the extent to which Canada shares a concern to move toward population stability. From a standpoint of achieving environmental sustainability, it is clear that slower population growth or even population stability makes such an achievement more realistic and obtainable. Although, even with population stability, economic growth will continue to challenge efforts to reduce CHG emissions and promote environmental sustainability.

Expanding Our Knowledge Base

- *Collaborative research.* In the study of environmental impact, there is a tendency among natural scientists to emphasize the consequences of continuing growth in a finite world (the fixed limits to growth). On the other hand, among social scientists, and economists in particular, there has been a tendency to emphasize the ability of modern economies to create technologies and socioeconomic innovations that have the capacity to modify, control and sometimes transcend natural environmental limits.

Among Canadian demographers, the most commonly acknowledged demographic problem is the issue of population aging, as linked to below-replacement fertility, as well as related challenges that accompany a reliance on immigration to maintain population and labor force growth. The idea of limiting population growth is seldom debated. Heavily influenced by the economics literature, there is a tendency to ignore the idea of fixed limits, and if anything, to believe that Canada is perhaps “under-populated” by world standards. Many social scientists appear to distance themselves from the natural sciences, or from the basic reality that all “human societies are ultimately embedded in nature”. Yet on the other hand, there is perhaps the opposite tendency on the part of the natural sciences to largely ignore the potential for political, technological and sociocultural innovation, and to assume that the limits are unyielding and we

⁵³ C.L. Harper and T.H. Fletcher, *Environment and Society: Human Perspectives on Environmental Issues*. Toronto: Pearson Education, 2011.

⁵⁴ V. Smil, *Energy Myths and Realities: Bringing Science to the Energy Policy Debate*. American Enterprise Institute, Washington, DC: 2010:149.

have little say in the matter. This lack of dialogue between the natural and social scientists is a fundamental barrier to the promotion of a more informed research agenda into how Canada can achieve a sustainable economy, and to incorporate a more comprehensive assessment of the large-scale environmental risks that we currently face.

- *The energetics of Canadian society.* A useful example of the lack of interdisciplinary dialogue is that relatively few social scientists have been concerned with the “energetics of human societies” or the social and environmental consequences of energy production. Yet in light of the very real challenges that we currently face, both globally and nationally, in terms of reducing our reliance on fossil fuels, there is an obvious need for further collaborative research on understanding the energy trajectories of different societies. Comparative research with other more developed nations may assist us to better understand the many political, economic and technological barriers to a transition to a fossil free economy. Social scientists can certainly contribute through research on personal, household and regional differences in energy consumption, not to mention how international trade and globalization have influenced both the supply and demand for fossil fuels, among other less CO₂ intensive alternatives.

- *High risk choices.* The IPCC has established with near certainty the association between increased GHG emissions and global warming.⁵⁵ On this front, Canada is an important player internationally. Yet human environment interactions are complex and include many nonlinear relationships and feedback mechanisms. It is extremely difficult to forecast the pace of global warming, as well as our reaction to it. Yet in light of the extremely high risks associated with a warming planet, the social sciences may be very well placed in terms of thinking of high risk choices in a continuing context of great uncertainty. Forecasting the future is extremely difficult, yet the social sciences may provide some prudent basis for proposed action and policy on energy use and our continued reliance on fossil fuels. In addition, in light of the enormous difficulties involved in moving away from our dependency on fossil fuels, it would seem well advised that social scientists work more closely with climate scientists in carefully identifying and monitoring the pace of warming in Canada, as to how this impacts specific regions of the country and how we are affected and/or adjust to what is increasingly looking to be inevitable.

⁵⁵ IPCC. *Emissions Scenarios*. Cambridge. Cambridge University Press, 2000. IPCC. *Climate Change 2013: The Physical Science Basis*. Twelfth Session of Working Group I. Bern, Switzerland, 2013.

ANNEX: RESEARCH CAPACITY FOR THE STUDY OF GLOBAL PEAK POPULATION

These notes follow up on discussion of our main report. Based on discussion of our report with SSHRC staff, we were asked to provide additional information on Canada's research capacity to address global peak population issues. These notes describe Canadian research centres and programs with active research related to population studies as well as two important partnerships in Canada with strong population interests.

Who is Doing What?

Canadian researchers have been involved with the broad questions of population projections, population and sustainable development, and population and environment (see especially the section on dealing with energy, resource consumption, and climate change). At the time of the U.N. Population and Development conference in Cairo, 1994, Roderic Beaujot, through the Federation of Canadian Demographers and a member of the Canadian Delegation, helped organize a series of keynote addresses by demographers and an associated workshop that was subsequently summarized in an article in *Canadian Studies in Population* (Beaujot, 1996).⁵⁶ Afterwards, Beaujot and other colleagues founded Action Canada for Population and Development (a NGO dedicated to ensuring that Canada would take its responsibility in funding the Plan of Action of the conference).

The value of the concept of "global peak population" is that it can be linked with a number of strategic sub-themes where Canadian researchers are heavily involved. Besides the Federation of Canadian Demographers, there are two associations of demographers, the Association des démographes du Québec and the Canadian Population Society, including their journals: *Cahiers québécois de démographie* and *Canadian Studies in Population*. There are also several university centres and partnerships interested in population issues.

Montréal is an important hub regarding demographic research. First, it is the home of the Université de Montréal's Department of Demography, the only demography department in Canada. Founded in 1965, this Department has trained hundreds of demographers who are now active in universities, Canadian and provincial public administrations, international organizations including the United Nations (a former student is currently chief of the Population Estimates and Projections Section of the U.N. Population Division), and the private sector. The department is strong on mortality and fertility and family demography. The department has excellent research capacities in Canadian and in African demography. Second, the Centre Urbanisation, Culture, Société of the Institut national de la recherche scientifique (INRS), also located in Montréal, is another research centre housing many researchers with interest in population changes. INRS is strong on the following themes: Canadian and Quebec demography, fertility and family demography, immigration and integration, and population projections including microsimulation. INRS also offers a master and doctorate program specialized in demography. More recently, a new group of researchers interested in population issues was formed at McGill University under the Centre on Population Dynamics. This Centre involves a collaboration between three departments, with a focus on five main themes: family dynamics; social and economic determinants of health; education, skill acquisition, and labour; migration and aging over the life course.

Western University in London, Ontario has a long record of distinguished work in the field of population studies. The previous Population Studies Centre has amalgamated with the Health and Aging Centre to form the Centre for Population, Aging, and Health. The areas of strength include family demography, immigration, mortality and health, and population change and public policy.

⁵⁶ Roderic Beaujot, Anatole Romaniuc and Simone St. Germain-Roy. IUSSP Distinguished lecture series at the International Conference on Population and Development: a summary. *Canadian Studies in Population* 23(1, 1996): 69-98.

University of Toronto has an outstanding sociology program, with more than 60 faculty members. Its department includes several faculty members with demographic interests, mostly in the areas of immigration and ethnicity.

University of Victoria has four demographers in the sociology department. More than a dozen faculty participate in the university's Population Research Group (PRG), including scholars from anthropology, economics, geography, statistics, and sociology. Current research interests include aging, health and HIV/AIDS, immigration, family and household, fertility, and mathematical modeling. University of Lethbridge houses the Prentice Institute for Global Population and Economy. The Population Studies Centre at University of Alberta manages and produces Canadian Studies in Population.

In addition to the centres and programs above, there are population researchers in other universities, including Memorial University of Newfoundland, University of New Brunswick, Université Laval, University of Ottawa, University of Waterloo, and University of Calgary.

Research Partnerships

There are two relevant SSHRC funded Strategic Knowledge Clusters: the Population Change and Lifecourse Cluster (PCLC) and the Canadian Labour Market and Skills Researcher Network (CLSRN). The PCLC counts 187 members from 30 Canadian universities and 12 international universities. The PCLC is well connected with several federal ministries, in terms of data development, research exchanges and collaboration: Aboriginal Affairs and Northern Development Canada, Citizenship and Immigration Canada, Health Canada, Employment and Social Development Canada, Policy Horizons Canada, Public Health Agency of Canada, and Statistics Canada. The main research themes of the Cluster are directly related to five of the six key questions addressed by the report: aging and paid work, families, immigrants and migrants, aging, lifelong learning and life course flexibility, and health over the life course.

The CLSRN has a more economic oriented focus, but since the economic integration of immigrants and economic inequalities in Canada are the two main current research programs of the network, several research questions addressed by its members are pertinent to the issues related to the implications of global peak population for Canada's future.

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