

**Population Change and Public Policy**  
**Concept Paper for a SSHRC Strategic Research Cluster**

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## **Concept Paper for a SSHRC Strategic Research Cluster**

### **Executive Summary**

The proposal is to create a cluster to study the challenges posed by demographic change in advanced industrial societies with a specific focus on Canada. Researchers associated with the cluster will focus on understanding the evolving demographics of Canadian society, and the implications of population change, for economic and social policy.

Virtually all wealthy societies are now experiencing slow population growth while several are already experiencing population decline. Immigration is coming to play an increasingly important role in many of these societies. As a result, populations are both aging and become more ethnically diverse. Moreover, the growing importance of migration means that some regions will continue to grow while others may face significant decline. Among the key questions scholars from the cluster will address are:

- How will the changing age composition of our population affect the labour market, productivity and competitiveness?
- Will an aging population threaten our ability to sustain a high standard of living and an effective social safety net?
- How are patterns of both internal and international migration influencing the demographic make-up of Canadian communities?
- Will increasing ethnic diversity strengthen our ability to compete in a globalized economy?
- Will diversity increase inequality and threaten social cohesion?
- What challenges are presented by the trends and disparities in mortality and health status for current social policies and institutions?
- How will regions and communities with low fertility and limited immigration adapt to aging populations and possible demographic decline?

The proposed cluster will fill a significant void in Canadian social science research. Although demographic questions receive attention from scholars in many disciplines, no agency or research community is responsible for examining the changing nature of our population, the inter-relations among demographic variables, and the implications for the evolving society. These trends are posing challenges for economies and social policies that were developed when populations were growing and the elderly component was modest in size. Besides seeking to explain the nature of the demographic challenges and their consequences for modern societies, the cluster will engage discussions on policy alternatives, with stakeholders and the broader public

The proposed virtual network will establish research priorities with stakeholder involvement, conduct research, and disseminate results to a broader public through face-to-face workshops and conferences, in print and electronic media.

## I. The Research

### A. Importance of Studying Population Change

Canada's demographic situation presents many similarities to the situation in other advanced industrial societies. Like Canada, all of Europe, Australia, and Japan now experience fertility rates below replacement. Yet Japan, most European societies and now Australia, have been less open to immigration than Canada and the United States. The U.S., on the other hand, has significantly higher fertility than Canada and is now the only advanced society in which fertility is at replacement level. Thus, there is much to be learned by examining the Canadian situation in the appropriate international context, paying due attention to the common forces that are leading to slow growth and population aging while also examining the unique features of the Canadian context. Moreover, a focus on demographic change and its consequences must examine how the impact of demographic change is mediated by other social trends and institutions ranging from family change to the education system and the macro-economy.

As seen at the time of the releases from the 2001 Census, there is a strong public appetite for more knowledge on the evolving demographics and their implications. When the initial population counts were released, there was concern that the population would stop growing, with the *Globe and Mail* using the headline of "Canada's population still growing, but for how long?" The geographic distribution released at the time indicated that growth was largely concentrated in four large urban areas; the provinces that did not include one of these areas either declined or increased by at most one percent over the previous five years. When the age and sex data were released, concerns were immediately raised about labour shortages, and Prime Minister Chrétien called for higher immigration to ensure sufficient labour. The data by immigration status brought concern about the economic integration of recent immigrants, while the language data raised issues concerning the relative strength of the French language compared to third languages in the country.

These scenarios from the 2001 Census are very different from those of the 1961 Census, which was the effective knowledge base for establishing Canada's major social programs. At that time, there was particular concern about the significant pocket of poverty represented by the elderly, and much confidence that, with rising incomes among taxpayers, the anticipated increases in the labour force, and the relatively small population of elderly, the country could well afford pension and health programs that would especially benefit this disadvantaged population. This was also a time when gender models largely assumed breadwinner families, and where marriages were assumed to be stable. The Bilingualism and Biculturalism Commission was reporting that persons with French mother tongue had significant income disadvantages, and it was anticipating a future where other provinces besides New Brunswick would have sufficient numbers of French speakers to justify bilingual status. Recent immigrants, on the other hand, were doing well, and by the time of the 1971 Census almost all of the age-sex cohorts of post-war (1946-60) immigrants had exceeded the average income of the Canadian born population (Richmond and Kalbach, 1980).

When low fertility started, issues of aging and eventual population decline were not seen to be particularly significant, partly because they were long term questions. In *Population aging in*

*Canada*, McDaniel (1986) tended to paint a favourable picture to population aging. In part, she observed that the causes of aging are “good” things, like people being able to control their childbearing, more diversified opportunities for women, and people living longer. At first, population aging was occurring “at the bottom” in the sense that there were fewer young people. The smaller number of children made the population older but there was the advantage of fewer young dependents, which was liberating for adults. We have since experienced “aging at the middle” as the baby boom has moved up in ages, but this has been experienced as a “demographic bonus” because it meant a large proportion of the population at labour force ages. Especially after 2011, we will experience “aging at the top” which will mean fewer people at typical ages to be in the labour force, and eventually significant numbers of frail elderly, and persons in their last years of life where medical and dependency costs can be high.

Other long term changes could have different implications in the future compared to the past. In a discussion of changes in mortality, fertility and migration over the century, Livi-Bacci (2000) proposes that past demographic change has benefited human resources, but this is less likely to be the case for the future. Low fertility liberated adults to be in the labour force, but eventually it means fewer persons at ages to enter the labour force. The decline in mortality first affected young persons, and thus reduced the wastage of human resources, while the main beneficiaries of more recent improvements in mortality are beyond labour force ages. Migration re-allocates resources to areas of greater need, but eventually there can be concern about population size and inefficiencies in the largest metropolitan areas.

Writing in *Science* on “Europe’s population at a turning point,” Lutz and his colleagues (2003) see the concerns of aging and population decline as including challenges to social security and health systems, harder productivity gains, strains on relations among generations who are contributors or beneficiaries of public pension programs, and diminished social cohesion if societies have difficulty incorporating larger numbers of immigrants. Consequently, the policy discussions surrounding aging include structural adjustments not only to pension systems, but to labour markets and health and fiscal systems.

## **B. Policy challenges**

The policy challenges that arise in the face of demographic change can be seen as falling in two categories: first, policies that seek to influence the course of demographic events, and second, policy adjustments that are necessary in various areas because of the implications of population change. To date, the first set of issues has received rather little attention. While immigration policies have long been a focus of interest, both academics and policymakers have largely ignored issues of low fertility. There is renewed interest of late, however; sociologists, demographers, and economists have begun to look not only at traditional approaches such as financial assistance to families but questions related to the organization of work, the balance between work and family obligations, and the gendered nature of housework and childcare.

Ultimately, investments in children and parenting provide long-term security for the society. Investments in young families can take a variety of forms, from family-friendly work environments and better funding of parental leave, to opportunities for part-time work with good benefits, publicly funded child care, higher child-tax benefits and more provisions for lone-

parent families. Policy discussions about aging should address structural adjustments to pension systems, as well as to labour markets, and health and fiscal systems. These adjustments will require concerted efforts, especially as aging societies tend to pay particular attention to the aged. Without sustained attention to the issues faced by young families, society's potential for reproduction may be undermined. As the current demographic bonus disappears, it is vital to recognize that investments in the early stages of life help to ensure the long-term welfare of society as a whole.

Canada is in a unique situation with a set of policies for the admission and integration of immigrants. Some observers see Canada on the forefront of a post-modern world in terms of its openness to pluralism and multi-culturalism. Although immigration contributes positively to Canadian society, there may be excessive proneness to thinking of immigration as the solution to demographic and economic questions (Green and Green, 1999). Immigration accentuates the inequality in the geographic distribution of population, and does little to help the areas that are not growing. For a multitude of reasons, including possibly the size of immigrant cohorts and the importance of the service sector in the economy, recent immigrants are having significant difficulties of economic integration. In comparison, the immigrants of the immediate post-war period had the advantage of following a period of lower immigration, and they were coming into a rapidly growing economy (Massey, 1995).

Given that demographic processes are fundamental to societies and their regeneration, a number of issues arise (Demeny, 1988). How many new members are to be added and by what means (through births or immigration)? How are the costs of these additions to be paid, and who receives the benefits? How should the costs and benefits of children be absorbed by the families to which they are born, the larger extended family, the community, and the society as a whole? How are the costs and benefits of immigration to be distributed between, on the one hand, the immigrants themselves and their sponsoring families and, on the other hand, the receiving country, province, city, and community? To what extent are health and safety the responsibility of the individual or the surrounding society? Population aging can bring conflicts of interest between the younger and older segments of the population. How does the society accommodate itself to an aging population, in terms of regenerating the labour force, pensions, and health care, while ensuring that inter-generational transfers do not disadvantage the young?

Compared to the situation in the 1960s when Canada's major social programs were being established, there are major changes in the population groups most subject to disadvantage, and in the potential for dependents to be supported through families. The population groups showing significant disadvantages are less often the elderly and persons of French mother tongue, but more often persons in lone-parent families and recent immigrants. The inequality by gender has declined, though it remains significant, and persons of Aboriginal origins remain significantly disadvantaged.

The situation is also changing considerably with regard to labour market questions. As the baby boom, and women, entered the labour market, there was no shortage of supply. However, these were one-time phenomena that cannot be repeated. With labour supply no longer as abundant, the Canadian Occupational Projection System produces results that expect the situation to change to a situation of shortage in some ten years, with shortages in specific occupations in the short-

term (Halliwell, 2004). The slower growing labour force implies a need to maximize the human resource potential of all elements of the population.

### **C. Major Areas of Research**

The objective is to study the determinants and dynamics of population change and the associated consequences for the collective destiny of Canadian society. The four following broad areas are envisioned as a means to demarcate the research. These major areas leave open diverse links to social and economic forces and outcomes that will arise in specific research. At the same time, many issues cut across areas. For instance, discussions of immigration include not only the economic integration of immigrants, geographic distribution and population composition, but also the composition of the immigrant stream by economic, family and refugee classes, the impact of immigration on the economy and the growth dynamics of the population, where “replacement migration” is often used as a concept. Population aging is another cross-cutting topic, which includes factors associated with youth, the labour force and retirement, including discussions on the relative priority of various policy sectors (health vs. education) but also pension funding and productivity. In terms of frameworks for analysis, the life course perspective provides another unifying dimension.

#### *1. Low fertility in the context of changing family and work obligations*

It is important to understand why fertility is lower (or higher) in given societies or settings. Is low fertility inevitable in modern societies? Why are men and women unable to achieve the number of children they desire? Why is a rising proportion of men and women remaining childless? How do the new forms of family life affect fertility and the socialization of children? Fertility needs to be related to determinants at the individual, family and societal levels. Differential fertility is also relevant to the changing population composition, including the relative growth of the Aboriginal population and the visible minority component.

Gender needs to be a significant part of discussions on childbearing. Lapierre-Adamcyk and Lussier (2003: 100) observe succinctly that “la redéfinition du rôle des femmes, qui inclut, en plus de celui d’épouse et de mère, celui de productrice participant au marché du travail, modifie la valeur de l’enfant et la replace dans l’éventail des possibilités de contribution à la vie de la société.” The significant differences in the timing of first births between women in teaching as compared to business or law suggest that occupations provide different amounts of flexibility to accommodate family roles (Ranson, 1998). It may also be that there are different orientations across women: *family-centered* women will have children in any case, *career-centered* women will have few if any children, and *dual-role* women will have children if the circumstances are correct; the latter are more likely to be responsive to the development of “women-friendly” policies (Esping-Anderson, 2001: 52-53; Hakim, 2003).

Several topics regarding reproduction need to be related to questions of economic production and the changing nature of work. To what extent is the postponement of fertility due to difficulty in finding a decent job? To what extent are difficulties in balancing work and family linked to low fertility? Would the creation of more “family-friendly” policies in the work world lead to a rise in fertility? Do traditional family systems based on role specialization lead to lower fertility? Is

greater equality between men and women leading to higher level of fertility? Does a more equitable sharing of household tasks lead to a fertility rate closer to replacement? For instance, McDonald (2000) proposes that fertility is particularly low when there is more gender equity in the broader society than in families. Using data from the United States, Torr and Short (2004) find a u-shaped relationship - both the most modern and the most traditional housework arrangements are positively related to the likelihood of a second birth.

Other topics need further analysis in terms of new conjugal and family forms, besides their influence on the dynamics of fertility at the individual and societal levels. This includes questions relating to how different kinds of families function, make decisions and achieve economic well-being. Family composition and family histories have important repercussions on the organization of day-to-day life and well-being of individuals, including transfers and exchanges within and across households. The de-institutionalization of conjugal and family life raises important legal and social issues in terms of the rights and responsibilities of partners at separation and of parents toward children (Le Bourdais and Lapierre-Adamcyk, 2004). These changing family dynamics have long-term implications regarding support and exchanges across generations, and they pose challenges for welfare state economies and policies. Family functions are changing not only in terms of caring for children, but also caring for elderly, earning and community participation.

Especially when considering the potential effects of policy, comparisons across societies and over time are particularly important (Gauthier, 1996). After considering the policy context of fertility in five countries (France, Germany, Poland, Spain and Sweden), Grant et al. (2004) propose that government policies can slow declines in fertility rates, but that no single policy works, and the effects take place slowly. This Rand publication also proposes that “policies indirectly aimed at fertility which target improvements in broader conditions may have beneficial fertility effects” (idem, p. xiv). In a broad ethical context, Henripin (1989: 123) proposes that true individual freedom occurs when the state both supports contraception and has policies favouring fertility: “en matière de procréation, ne pourrait-on pas définir comme société vraiment libre, celle qui permet à ses membres d’avoir des enfants s’ils le souhaitent et de ne pas en avoir s’ils n’en veulent pas?” A pro-family policy would probably include fiscal structures that take into account the number of dependent children when taxation is used to redistribute across families and individuals.

## *2. Immigration, internal migration, and distribution of Canada’s population*

Both international and internal migrations are accentuating specific places of destination, and consequently there are considerable discrepancies in population growth over space. Visible minorities are particularly concentrated in the three metropolitan areas of Toronto, Vancouver and Montreal. Population growth is concentrated in large urban areas, while provinces or regions outside of these areas have very little population growth, or population decline. The spatial divide includes differences by ethnicity, age and socio-economic status. Areas that involve more departures than arrivals are typically older in age structure, smaller communities, less prosperous, and they may arrive at populations that are not sustainable in terms of jobs and the services needed for aging populations.

The patterns and prospects of international migration need to be placed in the context of historical and ongoing actions of both receiving and sending countries (Massey and Taylor, 2004). Both the pre-WWI and the post-WWII immigration waves are linked to periods of greater globalization. These global patterns are creating world-class urban regions, market penetration in the periphery, mobile populations and need for foreign workers in the global cities (Massey et al., 1993). Following dual labour market theory, capital seeks to use foreign labour to fill the variable portion of demand in the secondary labour market. By calling for the admission of higher numbers of persons in the economic class, capital creates more competition. The non-recognition of credentials can help to maximize profits from the labour of skilled immigrants.

If economic questions are at the origin of migration patterns, social questions play important roles in the perpetuation of the movement (Massey et al., 1993; Boyd, 1989). Migrants are linked by family and other networks, and various institutions including intermediaries and humanitarian organizations play roles in terms of information, assistance and the accumulation of social capital. These forms of social capital may also relate to family strategies associated with home leaving and care of dependents.

These international contexts need to be part of discussions on the dominance of given cities and on the opportunity structures of immigrants. At the same time, we can ask if there are means to attenuate the dominance of Toronto, Montreal and Vancouver. Will Canada see greater growth in its secondary cities as has occurred recently in the United States? What social, economic, and demographic factors determine whether immigrants remain or move away from the large metropolitan areas of Canada in favour of smaller cities (Trovato, 1988)? What happens to immigrants who go to smaller places? Is it possible to maintain the quality of social networks based on smaller sized locations (Bezanson, 2003). More research and public dissemination of research results on these questions could help in decisions both for individual migrants and for host communities.

There are other important issues to discuss. How does population distribution relate to other disparities across regions and the potential for economic segregation, political cohesion, and differential policy needs? To what extent are regional trends in employment shaping and being shaped by immigration and internal migration (Statistics Canada, 2004)? Immigration brings not only differential growth over space but also differences in terms of population composition, especially by visible minority status. To what extent are the opportunity structures of immigrants affected by the relative numbers of arrivals. Can we assess the sustainability of a continuation over the long term of past levels of immigration?

Issues relating to immigration also include multi-culturalism and equal opportunity for visible minorities. It is important to know the extent to which the immigrant class (economic, family, refugee) continues to play roles in opportunities after longer periods of residence. Further studies are needed in regard to the disadvantaged opportunity structures of the more recent cohorts of immigrants (Picot, 2004). The study of second and third generation visible minorities provides other means to analyse the associated opportunity structures (Boyd, 2002).

There are clearly a number of implications of urbanization and population redistribution. For instance, population distribution, redistribution and urbanization also need to consider issues of

climate change and the physical environment. In Quebec, immigration not only plays to the advantage of the one region of Montreal, but immigrants also associate less with the majority language and they are more likely to leave the province. The implications of these demographic trends include the greater growth of Ontario compared to Quebec within the federation.

### 3. *Labour force, aging, and life-course flexibility*

In summarizing “Europe’s demographic challenge,” the Rand publication on *Low Fertility and Population Ageing* (Grant et al., 2004: xiii) proposes that demographic trends could have the following potentially damaging consequences: the decline of working-age populations brings reductions in human capital “which potentially reduces productivity,” the pension and social insurance systems “can become heavily burdened,” declines in household size can reduce “the ability to care for the growing elderly population,” and the elderly “face sharply increased health care needs and costs.” Others have questioned some of these implications and have suggested that this “crisis orientation” seeks to undermine the political support for social security systems (see Gutman and Gee, 2000, Mullan 2000, Schultz 1999, Townson, 2001). An appraisal by the Applied Research Analysis Directorate at Health Canada (2004) concludes that the age-related increases in expenditure are small relative to other financial pressures on the health system.

In the theme of “Population aging and life-course flexibility,” the Policy Research Initiative (2004a; Hicks, 2003a) has especially emphasized flexibility in labour force involvement as a means to allow for work/life balance, reproduction, caring, and the extension of the work life. The element of “choice” is highlighted in this proposition, including periods of withdrawal or partial withdrawal from the labour force and choice in the retirement decision. From focus group discussions, it appears that people would consider working longer at a job that they enjoy, assuming that their health was adequate and there was possibility of working flexible or part-time hours (Policy Research Initiative, 2004c). It was concluded that encouraging people to remain in the labour force later in life, in exchange for work-family life flexibility earlier in life, was viewed more positively if it was presented as a means of “giving Canadians greater choice and helping them to achieve their career and life goals.” Besides the problem that many people do not seem to like their job, the challenge is seen as making job opportunities available to older workers and to ensure that they continue to have the necessary skills (Hicks, 2003b). Surveys of older workers indicate that the majority want gradual or transitional retirement (Gendron, 1997). Other relevant factors include the retirement incentives associated with benefit programs (Gruber and Wise, 2004). International comparisons indicate that retirement is earlier when the minimum age for entitlement to pension benefits is lower, when the value of pensions is higher, when there are fewer pension benefits from additional years of work, and when disability pensions are available below the normal retirement age (Gruber and Wise, 1997).

Other factors predict an increase in labour force participation at older ages, including rising levels of education and a greater share of workers in professional occupations (see Judy and D’Amico 1997). Sunter (2001) expects the labour market attachment of women to strengthen along with their continued investment in education, as younger cohorts replace older generations with less labour market attachment (see also McDaniel, 2002, OECD, 1996). The portion of the life cycle devoted to paid employment has been decreasing throughout the 20<sup>th</sup> century, especially in the last quarter (Sunter and Morissette 1994). Demand factors also play an important

role, with the labour force participation rate increasing at ages 55-69, after a long period of decline (Cross, 2005). The change since 1996 is remarkable, bringing the 2004 participation rate at ages 55-69 significantly above the 1976 level, partly because it includes more women.

While we consider the flexibility and choice that would enable a later exit from working life, it is important to also appreciate the difficulties experienced by new entrants to the labour force, including recent immigrants (Morissette, 2005). The lower wages of entry level workers is driving the income inequality. There are many pressures that are affecting the ability of the younger generation to make successful transitions from school to work (Beaujot, 2004). Also there is less lifetime employment at one workplace, less stability in careers and more contract or contingent work (Krahn, 1995). These changes in career patterns, employment patterns and educational requirements have increased the difficulties of the younger generation in making successful transitions to adult status, enduring relationships and reproduction.

Another important question regards the extent to which productivity growth will be influenced by the changing age composition of the labour force. There is need for more research on the variability across individuals in their productivity patterns over the life course. In *Aging and Demographic Change in the Canadian Context*, Prager (2002) proposes that the trend to life-long learning and more variable career patterns, along with higher proportions of white-collar workers, will allow for continued productivity growth. There will also be less inexperienced workers entering the workplace with the associated low productivity. However, at some point, many experience a decline in productivity. In their analysis of the period 1955-85, Lapierre-Adamcyk et al. (1988) found that the productivity gains had been associated with a more educated, younger, and less male-dominant labour force. In comparison to younger workers, older workers are highly paid in relation to their productivity, thus an older labour force increases the costs of labour.

The analysis of income inequality indicates that Canada largely did not experience the rising income inequality that was seen in the United States and the United Kingdom through the 1980s and early 1990s. However, over the period of the 1990s, the “gains associated with economic expansion in Canada went mainly to higher income families” (Picot and Myles, 2005). Earnings inequalities of couples by level of education have increased over the period 1980-2000 (Morissette, 2004). Other differentials have remained stable. The relationship between parental income and post-secondary participation has persisted over the period 1993-2001, but the participation gap has not increased across family income levels (Frenette, 2005)

There is need for more analyses of these questions of the demographics of the labour force, including questions of change in the supply and demand for labour, regional differences, the influence of age structure on the opportunities of given generations, and labour force renewal. These analyses need to include the entire population aged 15 and over, rather than only those who are in the labour force. For instance, the growth of non-standard work should take into account the fact that there has also been an increase in the proportion of the population that is employed. That is, there is an increase in non-standard work among workers, but does this translate into an increase of non-standard work in the population. Morissette (2005) finds little evidence that well paid jobs have been disappearing in Canada over the period 1981-2004. An OECD study considers the variation across countries in the average yearly hours worked per

capita (that is dividing total hours worked by the total population size). There is remarkable variation in these average hours worked, from some 900 hours per year in Canada, Australia and the United States to figures between 600 and 800 in France, Germany, Denmark and Britain (OECD, 2004: 5). It would seem that average hours are somewhat related to levels of unemployment, productivity and average standards of living, but they are especially related to questions of work/life balance.

#### *4. Mortality, morbidity, and the changing nature of the elderly population*

The leading trends in mortality and morbidity have seen continued increases in life expectancy, but also considerable inequality, and substantial numbers of people living with disabilities. Although the rate of mortality decline has slowed compared to the earlier part of the 20<sup>th</sup> century, life expectancy has never stopped increasing (Bourbeau and Smuga, 2003). Along with the decrease in fertility, the decrease in mortality contributes to the aging of the population. The oldest-old are the fastest growing segment of the population, and this trend will continue into the near and more distant future. There are alternate views on the ultimate potential to extend life expectancy. Some see a continued rise to reach 100 years in 2060 (Oeppen and Vaupel, 2002), while others envisage that it would be difficult to go beyond age 85 unless the aging process itself were to be modified (Olshansky et al., 2001). Nonetheless, it is important to appreciate that past projections of mortality improvements in Canada have been under-estimates, and that significant gains beyond those anticipated would have important repercussions on public pension and social security systems (Bourbeau et al., 2005).

Other important trends include the compression of mortality and the rectangularization of the survival curves, as more deaths occur within a shorter age range. These trends, along with the trends in disability and morbidity by age, bring a changed composition of the elderly population over cohorts. In effect, the elderly of tomorrow will be different from the elderly of yesterday.

There remain very significant mortality inequalities associated with sex, socioeconomic status, region and religious or ethnic groups (Trovato and Lalu, 2001; Trovato, 2001, 2000). The difference by sex is declining, but it is clear that social factors play a larger role than biological factors because the elimination of the effects of tobacco and accidents would make the rates equal (Trovato and Lalu, 1995, 1996; Waldron, 1986; 2000). Comparisons over urban regions indicate considerable disparity (Choinière et al., 2003; Wilkins et al., 2002; Gilmour and Gentleman, 1999). The differences over space do not always disappear after controls for individual-level determinants (Ross, 2004). The differences by socio-economic status, and the specific case of the Aboriginal population, are the most alarming, especially in the context of socialized medicine which was to give all persons equal access to the health system. What challenges are presented by the trends and disparities in mortality and health status for current social policies and institutions? What are the health needs of various parts of the population, especially the Aboriginal population and other disadvantaged groups?

Another concern regards the number of years lived with disabilities. In 1996, there was an 11 year difference for women and 8.5 year difference for men between life expectancy and the expected years lived without disabilities. In some cases, this raises questions regarding the pertinence of saving lives at all costs (Légaré and Carrière, 1999). While these questions of

disability clearly affect the costs of health and care, the rising costs of health care are less related to aging and more related to the number of deaths, since a large proportion of health care costs are spent during the last months of life (Légaré et al., forthcoming). The total costs of health, including home care and long-term care services are expected to rise as the baby boom generations enter older ages. The costs of caring and associated social services are expected to rise more than the health costs of curing (Légaré, 2005). This also raises questions of the mix of formal and informal care, along with the possibilities of informal care in the context of family change. While most projections expect increases in life expectancy, there could be unexpected diseases, or conditions that would have an opposite effect. This could relate to obesity, which has increased from 32 to 47 percent of persons aged 15 and over between 1985 and 1998-99 (Statistics Canada, 1999). Other consequences are far from being established, including environmental hazards such as radiation, pollution and the green house effect.

Among the policy issues, the question of “care vs. cure” is an important consideration: should priority be given to home care and palliative, or should the focus be on interventions and treatments? Given the unequal size of generations, and especially the smaller size of current generations, questions can be raised regarding the appropriateness of pay-as-you-go as the only means of funding health and care (Légaré et al., forthcoming). This could be an argument for reducing the public debt over the next ten years when there is a maximum proportion of the population at ages to be in the labour force. But the most significant issue is probably that of health inequalities by gender and socio-economic status, especially if demographic, economic and family trends produce a more stratified society. It would appear, for instance, that, compared to the first demographic transition, the second demographic transition, especially through the diversification across families, is promoting greater inequalities in the population (Lesthaeghe and Neels, 2002).

#### **D. Cross-cutting themes**

The life course as a framework of analysis is envisioned for the four above themes. The life course approach, which disentangles the age, cohort and period effects, is at the heart and one of the strengths of the demographic approach. This approach is necessary if we are to understand the determinants of demographic change and to grasp the consequences of these changes, both at the individual and societal levels. For fertility, the determinants are different not only for given stages of the life course, but also by parity. For migration, the immigration cohort, along with period of arrival and age, are key to understanding integration. The differential levels of mortality and morbidity across generations are central to appreciating the changing nature of the elderly population. The Policy Research Initiative (2004b) proposes that, by linking to the various institutions over the life course, this approach provides a particularly useful framework for social policy analysis, including the analysis of the extent to which institutions help in making the transitions. The PRI further proposes that this approach be used for analysing future policy needs, pressures and opportunities in the following areas: “population aging and life course flexibility pressures; skills and human capital pressures and opportunities; the problem of persistent poverty; spatial issues; and precarious work and precarious families” (idem., p. 33).

Each of the four major areas of research will include the cross-cutting themes of equity and cohesion. This includes two themes proposed by the Policy Research Initiative (2004b: 27): an equal society, and a diverse but cohesive society. Population change can affect equity and cohesion, over generations, over space, by gender, and across other population groups. The value added of this cluster is to consider the demographic dimensions of inequality and solidarity, by focussing on micro questions associated with individuals over the life course, and macro questions of population size, growth, distribution and composition. The demographic approach also has the advantage of considering all parts of the population.

*Inter-generational* equity can be affected by the differential treatment of cohorts in terms of paying the contributions and receiving benefits from the Canada Pension Plan. This inter-generational equity is also affected by the delayed life course transitions, which highlights the importance of post-reproductive productivity. That is, the concept of inter-generational equity needs to include the prospects of a generative culture within an aging society, by considering how persons in the post-reproductive and elderly stages of life support children and reproduction.

The differential growth of various parts of the country, with their differential histories and population compositions, can affect disparity and solidarity over *space*. For instance, in its report on *The Canadian Labour Market at a Glance*, Statistics Canada (2004) observes that regional and sectoral trends in employment are both shaping and being shaped by immigration and internal migration.

Similarly, equity and solidarity across *gender* is affected by the changed understandings regarding intimate relationships and the market work of men and women over the life course. Alternate models of the division of paid and unpaid work are central to these differentials by gender (Beaujot, 2000; Beaujot and Liu, 2005).

Equity over *population groups* is affected by their differential growth, along with their unique features of geographic distribution, opportunity structures and potentials for integration. How are opportunities to be maximized while maintaining cultural differences? How to ensure both cohesion of the whole society and distinctiveness of sub-populations? In the case of the Aboriginal population, questions of equity need to be analyzed in relation to the differential demographics of mortality, fertility and internal migration.

## **E. The path ahead**

In an article focussing on Australia, McNicoll (1995) observes that there are various impediments to population policy in liberal democracies. Besides the lack of a political basis for long-term planning, the emphasis on individual welfare, the lack of attention to scale and the difficulty of considering questions of the environment, there is also a tendency for “government to see its constituency only in terms of organized groups and its role that of arbitrating competing claims.” It would appear that the interests of organized groups relate less to the population as a whole, than to specific concerns like those of family, feminism, environment, health, multi-culturalism or refugees. That is, the potential constituents to a discussion of population and policy are often absorbed in distinct political domains and they are consequently responsive to separate rather than common interests (Beaujot, 2005). Yet the collective side of population

cannot be ignored; at stake are the long-term interests of the society, including its very reproduction and the diversity that it manages to incorporate. Such is the challenge of this cluster: *While various agencies have continued interests in various aspects of population, be it in terms of labour, immigration, health, social development, education, pensions, family or citizenship, no agency considers the overall macro situation of population change and its implications.*

Clearly, the associated research needs to take into account micro-level determinants, since it is individuals who give birth, move and die. This research on determinants needs to be based on theoretical models and appropriate data, especially data that permit a life course perspective. The analysis of determinants, at the micro, meso and macro levels, will permit theoretically and empirically based understanding of the potential for policy intervention. Many specific concerns also need to be analysed at both the micro and macro level, such as disparities in fertility, health or migration.

Science is more adapted to the study of determinants than consequences. The study of consequences and implications often involves modelling the change, as well as comparisons over history or across societies. International comparisons based on similar data have been sponsored by various agencies, and the cluster will continue to be involved in this research. Properly constructed historical comparisons can be used to study consequences at the macro-level. There is also the potential for comparisons across the regions of Canada, where common elements but also differential demographic dynamics and policy differences provide elements of a quasi-experimental setting. Some of the modelling can be done with population projections, while other approaches use more detailed simulations based on life course transitions at the micro-level (e.g. LifePaths). Basic demographic projections can further incorporate macro phenomena that are linked to population. For instance, in looking at the future labour force in sixteen countries, McDonald and Kippen (2001) manipulate data not only on fertility and immigration, but on labour force entry and departure, to show that bringing male labour-force participation rates back to the levels of 1970, and bringing women's rates closer to those of Sweden, would increase the total Canadian labour force by 25 percent. As another example, arguing that the anticipated increase in pension expenditures is unsustainable in the seven countries under investigation, Bongaarts (2004) manipulates various demographic rates and ratios to observe that a reduction in pension expenditures can be achieved through one or more of the following: fertility, immigration, employment ratio, mean age at retirement, and pension benefit rates. In Canada, Denton et al. (2001) have included not only projections of population, but also labour force, as well as pension, health and education costs. Romaniuc (2005) uses models of stationary population as a theoretical concept through which we might look at a vision for the future and possible policy options.

The cluster will seek to better understand the determinants or processes of population change, and it will promote research and discussion on the implications that may be linked to population change. By providing a deep contextual look at the determinants and consequences of population change, and through systematic interactions with stakeholders and the broader public, the cluster will help provide the context for important policy discussions on the future of Canada.

## **II. Structure Design**

### **A. General Structure**

In some countries, notably in Europe, there are agencies devoted to the study of population change and its relevance to public policies. The Institut National d'Études Démographiques (INED) has been important to population research and the development of policy in France. The Netherlands Interdisciplinary Demographic Institute (NIDI) has come to play similar roles in Holland. Canada does not have such an organization. For a period in 1986-92, the federal government through Health and Welfare Canada undertook a Review of Demography and its Implications for Economic and Social Policy with participation from many members of the proposed cluster. However, this agency was set aside for budgetary reasons at the same time as the Economic Council of Canada. Human Resources and Skills Development Canada, Industry Canada and SSHRC are currently sponsoring studies of "Implications for the labour market and skills development of an aging population". And, some agencies have maintained interests in particular aspects of population, for instance, education, health, labour, immigration, and social development, however, there is no agency that takes into account the population change and its implications as a whole. While academic research on population change has continued through regular funding, this has not been systematically linked to the policy sector.

The proposed cluster is envisioned to accomplish objectives of a population research institute for Canada without the kind of institutional structure and in-house research that are part of the INED and NIDI models. In our vision of the planned "virtual institute", the proposed structure will be able to develop, support and disseminate the research that is needed to ensure that researchers, persons in policy/planning departments, and the general public are kept abreast of population change, associated implications, and relevant policy considerations. As an essential feature of the cluster, research areas will be identified in partnership with government agencies and the private sector. Researchers, based in different universities and government agencies and belonging to different disciplines, will work together on identified areas of research priority. The research will include analyses at both the micro and macro levels, and it will adopt the most appropriate data and techniques, including the life course as a framework. Findings from the research will be disseminated widely through various media including the internet, face-to-face meetings, and print publications that are accessible to non-technically oriented readers. The cluster will aim for a long-term viability of the network through innovative ways of education, training, and involvement in research of young Canadian scholars.

### **B. Canada's Strengths in the Area**

Canada has developed a strong basis for research not only on purely demographic issues but on topics that lie at the intersection of demographic change and social policy. There is a strong tradition of demographic research not only in our universities but in the public sector as well, most notably at Statistics Canada. We briefly highlight some of the most important contributions that have been made and some of the work that is on-going.

1. Canada has two world-class university centres of population research at the University of Western Ontario and at the Centre Interuniversitaire d'Études Démographiques in Montreal.

Both groups have a strong core of full-time demographic researchers with extensive records of research on contemporary issues in demography including family change, population aging, mortality, immigration, and demographic techniques. These two groups have worked together well in the past, most recently on a large project funded through the SSHRC strategic area of Social Cohesion in a Globalizing Era. These two groups will form the prime nuclei of the research cluster. Beyond these two groups, there is relevant strength in academic institutions across the country. Economists at McMaster University have made important contributions to the study of population aging and the demands on social programmes. Demographers at University of Alberta are studying the causes of mortality differentials, and the demography of immigrant and ethnic minorities. Scholars at the University of Toronto have particular expertise in the area of immigration. A new group formed at the University of Victoria is doing important work in the areas of family change and aging. A group of persons interested in demographic questions and social statistics is emerging at McGill.

2. Canada can boast one of the leading statistical agencies in the world. Statistics Canada's work to develop longitudinal surveys such as the National Longitudinal Survey of Children and Youth, the Survey of Labour and Income Dynamics, the National Population Health Survey, and the Youth in Transition Survey, as well as its commitment to research using census data have transformed social science research in the country and makes Canada as well equipped as any nation to address questions of demographic and social change. The expansion and maturation of the Research Data Centres programme has opened the door to much broader use by Canadian scholars of these precious data sources. Moreover, Statistics Canada itself has a large group of accomplished researchers with good links to the academic community and a track record of active involvement in Canada's professional societies.

3. Canadian demographers have long been active in collaborative efforts to study population change and its implications for social policy. Many members of the proposed cluster participated in Review of Demography and its Implications for Economic and Social Policy, which operated from 1986-1992. Others participated in a major review of immigration by the Economic Council of Canada in the late 1980s and continue to do work in this area supported by the various centres associated with the Metropolis project.

4. Canadian demographers, at both universities and in the public service, have strong ties to leading researchers in other Western countries and have been very active in international organizations, especially the International Union for the Scientific Study of Population. The topics to be addressed by researchers in this cluster are especially suitable for international comparison and we look forward to strengthening our ties to colleagues in other countries. European social scientists are especially interested in Canada's experiences in the area of immigration and the success of our policies relating to the integration of newcomers. Various countries have a common interest in understanding low fertility and its implications.

5. The leaders of the network are experienced in managing groups and networks. Besides being Director of the Population Studies Centre at the University of Western Ontario, *Roderic Beaujot's* writing has helped to bring together the research on the population of Canada. During the time of the Review of Demography and its Implications for Economic and Social Policy, he played an active role in supporting research and dissemination, as President of the Federation of

Canadian Demographers. *Robert Bourbeau* has directed the Research Group on Demography of Quebec and is now Deputy Director of the Centre Interuniversitaire d'Études Démographiques. *Céline Le Bourdais* was the founding Director of both the Centre Interuniversitaire d'Études Démographiques and the Centre Interuniversitaire Québécois de Statistiques Sociales. *Frank Trovato* is Past-President of the Canadian Population Society, and a former editor of Canadian Studies in Population. *Zheng Wu* is affiliated with the Population Research Group and Centre on Aging at the University of Victoria, and with the Centre for Studies in Demography and Ecology at the University of Washington. *Byron Spencer* is Director of the Research Institute for Quantitative Studies in Economics and Population (QSEP) at McMaster University, and principal investigator of the SSHRC-funded Social and Economic Dimensions of an Aging Population (SEDAP) Research Program. *Zenaida R. Ravanera* has done several studies on the life courses of Canadians and helped coordinate Family Transformation and Social Cohesion, a SSHRC-funded strategic grant. *Monica Boyd*, a Fellow of the Royal Society of Canada, has a Canada Research Chair in Sociology at the University of Toronto, and is a visiting scholar at Statistics Canada. *Kevin McQuillan* is past chair of the Department of Sociology and Member of the Board of Governors at the University of Western Ontario. Besides belonging to various work-groups and research teams, all members of the leadership team have played active roles in Canadian and Quebec professional associations of demographers.

### **C. Organization of the Cluster**

The establishment of the cluster greatly depends on a major assumption that SSHRC's conceptual and financial support for the cluster will be for the long haul (10 years and beyond) with periodic appraisals. The cluster is not meant to be a strategic research program with definite start and end, but is designed to be an institute, albeit a "virtual" one, that will go through a process of development and maturity. The planned cluster's structure will consist of: (1) a network of researchers and stakeholders; (2) a formal organization; and (3) a research cycle.

#### **1. Network of Researchers and Stakeholders.**

a. *The Researchers:* The core of the network will be researchers willing and able to do studies on population change. Seventy-five researchers have been identified as having worked in the research areas of interest to the cluster and, currently, 44 have indicated their intention to become part of the network. They come from Canadian universities and belong to various disciplines including demography, sociology, economics, and geography. In a number of universities located in Ontario, Quebec and British Columbia, there are groups of five or more researchers who will be involved in the network, notably from the Population Studies Centre of the University of Western Ontario, University of Toronto, Université de Montreal, Institut National de la Recherche Scientifique, McGill University, and University of Victoria. Other researchers are affiliated with 16 additional universities including four universities in the Prairies and three in the Atlantic Provinces. Researchers in government agencies (for example, in Statistics Canada) will be invited to join in the network.

b. *The Partners:* A second group of the network will be stakeholders mainly interested in making use of the results of the studies, including government agencies (federal,

provincial, or city and municipal), non-governmental organizations, business groups, and the media. We have started by involving agencies of the federal government including Policy Research Initiative, Health Canada, Citizenship and Immigration, Social Development, Human Resources and Skills Development, Finance, Statistics Canada and Canada Pension Plan. Representatives of these agencies participated in a workshop in February 2005 at London, Ontario where both research and structural questions were discussed. Other agencies will be associated as time progresses, especially from provincial and municipal government, non-governmental organizations and the private sector.

The Policy Research Initiative has invited the present cluster, along with select other strategic clusters, into a partnership entitled *The Population, Work and Family Policy Research Collaboration*. This project is to explore issues and potential policy interventions related to the aging of the population, the evolution of the Canadian labour market, and the role and responsibilities of families. The PRI mandate, as part of the Privy Council Office, is to identify high-priority issues for the middle term policy agenda through consultation with representatives of federal agencies, to synthesize the relevant research on these issues, commission or conduct work to respond to unanswered questions, and to prepare policy options where appropriate. The PRI also plays a strategic role as chair of the Policy Research Data Group of the federal government. The *Collaboration* will provide a process and venue for the cluster to have a regular, ongoing, and effective interface with the transversal policy research coordination process that PRI manages within the federal government; a privileged venue of open exchange with senior policy people across a range of departments and agencies; a structured series of roundtables and an annual symposium to showcase the collaboration and policy-relevant research of the cluster. The leadership of the cluster will co-manage the *Population, Work and Family Policy Research Collaboration*, meeting with the representatives of the PRI twice a year, most likely in conjunction with one of the planned events, to clarify issues and plan joint activities.

**c. International Link.** The network will link with international organizations including population institutes of other countries, the International Union for the Scientific Study of Population, offices of the United Nations involved with population issues (such as UNFPA, UNECE), Population Council, World Bank, and OECD. These links will build on the strong ties that Canadian scholars have to leading researchers in other Western countries. The Population Research Group at University of Victoria is linked to the Center for Studies in Demography and Ecology at the University of Washington. Similar links with other population groups are envisaged.

## **2. Formal Organization**

**a. Board of Directors** – The Board will set the cluster’s general direction and will consist of nine members: five from the academics, three from the stakeholders (government agencies, non-governmental organization, private sector), and one student. The procedure for selection of the board, the tenure of office, regular meetings, and other procedural

matters governing the functions of the Board and the network will be drawn and agreed upon by the network members.

b. *Executive Committee* – A sub-set of the Board of Directors, the Executive Committee will report to the Board and it will be responsible for the day to day operation of the cluster. It will consist of three academics, headed by a chair who will also be the director of the cluster.

c. *Research Committees* – These will be committees that will be formed as needed for the cluster's projects. Their functions will revolve around a research cycle (see below).

d. *Administrative Office* – The office will provide administrative and various types of support to the network, the Board, and the Committees. Among its task will be preparation and maintenance of websites and the facilitation of research cycle activities and dissemination. The personnel of the administrative office will include a Manager and the services of a professional communications person with a background in population and public policy to translate research results into materials for stakeholders.

3. *Cycle of research* – The core function of the cluster is to do a series of activities that form a research cycle. It will consist of identification of research theme based on policy issues; doing the research; and disseminating results through several channels.

a. *Identification of research topic.* Workshops and surveys of partners and researchers will be conducted periodically to determine areas that should be given priority. On the basis of knowledge and information gathered, the Board will decide on research priorities and form committees that will take responsibility for particular research projects.

b. *The research proper.* Having been mandated by the Board of Directors, a research committee will proceed to undertake activities leading towards the achievement of the assigned task. The number of researchers and the data to be used will vary with the complexity of research issues. The committee members could, for example, do the research themselves. A more likely scenario, however, is that projects would require collaboration of other network members, graduate students in training, and experts from within Canada and from other countries.

Research data will be mostly from the Canadian censuses, vital registration, administrative records, and from cross-sectional and longitudinal surveys. Some comparative research would need data from other countries such as data from the Generations and Gender Surveys currently being undertaken by a number of European countries, and the Current Population Survey in the United States.

Throughout the research proper, the committees will be interacting with others in the network, making use of various means of communication such as the internet facilities. They will be mindful of the *policy cycle*, ensuring that communications with those involved in policy making are maintained in all the phases of the research cycle.

c. *Dissemination of Results.* Results will be disseminated in two general ways: through academic communities, and public dissemination. The first will include presentation of research results in academic conferences and publications in academic print and e-journals of various disciplines and on public policy. The second will be public dissemination of results through conferences and various means of communication involving different media and modes of dissemination. Among the possibilities are: meetings centered around certain themes, publications (in print and through the internet) of research briefs, policy issues series, series on facts and fallacies about population change, news releases, and newsletters targeted to stakeholders. In order to reach as broad an audience as possible, resources of communications offices in the universities and means of dissemination by government agencies (such as Statistics Canada's *The Daily*, Policy Research Initiative's *Horizons*) will also be used.

To encourage academic researchers to put more effort into dissemination to a wider public, the cluster will help explore ways for university merit system to appropriately reward non-academic publications.

The internet will be both a means of dissemination of results and a way of coordinating activities of the network. The website will be an essential tool; other internet tools such as e-group and inter-active presentations will also be explored and will be utilized when deemed workable and effective.

#### **D. Education and Training Component**

To ensure the long-term viability of the network, graduate students will be systematically involved through supporting exchanges, work-placements, research assistantships, and post-docs. Further, the cluster would serve as the hub for inter-university co-operation on education and training for the study of population change. Currently in Canada, only two universities (the University of Western Ontario for English Canada and the Centre Interuniversitaire d'Études Démographiques for French Canada) offer doctoral programs in demography. There are, however, courses of relevance to the study of population change and public policy that are offered in other disciplines in other universities. For instance, the University of Victoria offers courses on Population Economics, Population Dynamics, and Population Problems and Policies. Other graduate technical and substantive courses are offered at the University of Alberta, the University of Toronto and McMaster University.

Techniques of analysis to study population change and its implications are constantly being developed in particular centers, universities and government agencies. The network will provide the facilities and resources to ensure that the various courses and expertise on techniques are made accessible to students and researchers in various locations within the country. These could be done in a number of ways such as:

- a. Making available interactive lectures for certain topics and courses using the internet or electronic technologies.
- b. Developing a system of training in the use of certain techniques of analysis for macro-level research, for example, Statistics Canada's LifePaths software,

MacMaster's MEDS, software on environment simulation and population projections developed by the International Institute for Applied Systems Analysis (IIASA). The training would make use of a combination of media such as face-to-face lecture and workshops for introducing the software, followed up with the use of electronic media for hands-on application of the software. Whenever possible, the cluster will collaborate with the Policy Research Initiative for the development of data and research tools, and with the various data training schools that are offering relevant programs.

- c. A more complex inter-university co-operation will be explored such as developing a degree-granting program on population and public policy where students from universities in various locations attend lectures delivered through electronic media.

## **E. Time Frame**

The cluster requires a long-term plan for its development into an effective "virtual" institute. For the purposes of planning the organization and funding for the cluster, we envision a 15 year time frame with the first 3 years as a start-up period, the next 6 years as a period of expansion, and the final 6 years as period of maturity and stability.

The primary aim for the first three years would be the organization of the network and will involve:

1. Organizing the network's structure to include obtaining formal commitments from network members, forming the Board of Directors, hiring administrative staff, and developing internet based facilities such as an inter-active website as a tool for network co-ordination and research dissemination.
2. Establishing research committees that would undertake the research cycle activities described above. These research committees could be on any of the research areas identified in the first part of this concept paper. Given the current work and interests of many of the researchers and partner agencies, and in line with the *Population, Work and Family Policy Research Collaboration* with the Policy Research Initiative (PRI), two committees could be readily initiated.
  - a. Committee on Aging and Life Course Flexibility. The committee would build on the research on aging undertaken by Jacques Légaré and his group on Current and Future Social Security Public Spending for Quebec, the work at McMaster by Byron Spencer and his group on Social and Economic Dimensions of an Aging Population, Health Canada's Implications of Aging for the Health System, and the Policy Research Initiative project on Population Aging and Life-Course Flexibility. One of its activities could be a synthesis of the work already done focusing on policy options, and possibly in comparison to policies in other developed countries. We would also hold a workshop, on its own or in collaboration with PRI, to disseminate the findings of these various studies, and to identify research gaps that could then become the research agenda for the committee; and, we would develop materials for dissemination to a wider

audience through electronic and print media .

- b. Committee on Low Fertility and Its Implications. Building on the micro-level research on fertility and family that has been done by many of the network members, the committee could further examine the macro-level consequences of low fertility and changes in the family. Among its activities could be a workshop to assess the current work on fertility (in Canada and other countries) and to plan new research focusing on the macro-level. Inputs will be sought from partners (if possible, in collaboration with Policy Research Initiative) on issues of interest to them. In short, the committee would go through the cycle of research that starts with identification of research priorities and culminates with various ways of disseminating results.
3. Developing a training system revolving around a particular research tool, possibly, Statistics Canada's LIFEPAATH software or McMaster University's MEDS projection program.

The activities for the first three years would be a process of establishing collaboration among researchers, involving students, and relating to partners and other users of research output. By the fourth year, our network should be well functioning with research committees and research cycles in place and would have established systems and routines that would be put to further use in the next six years of the project.

A number of research areas would be the focus from the 4<sup>th</sup> year onwards, possibly, immigration, internal migration, and distribution of Canadian population; mortality, morbidity, and health; and labour force, together with the other cross-cutting themes, in particular, the life course as a policy perspective and issues relating to equity and cohesion.

During this phase, the cluster would identify new emerging topics and issues of relevance to population change and public policy, and it would establish appropriate research committees. For example, while the cluster's focus in its initial years of operation would be on issues of immediate concern to Canada such as those of aging, low fertility, and immigration, we foresee that the cluster would need to tackle wider world issues such as population and environment, and population and development, both of which are linked to a globalizing world.

## **F. Funding Requirement and Financial Plans**

The cluster will need funds to cover the general administration of the cluster, release time for the director, and depending on the research project, funds for remuneration of (or release time for) researchers, and funds for consultants and experts within and outside Canada, graduate students to work as trainees and research assistants, and for post-doctoral fellows. Dissemination of results will require funds as well, in particular, for holding workshops and conferences and for various publications, in print and electronic media.

To achieve its objectives, the cluster will need a total annual budget of \$500,000 when fully operational, although, in its first year, a smaller amount of about \$300,000 will be needed as the

systems for research, training, and dissemination are being established. Three-quarters of the annual budget will cover research, training, and dissemination. As with other SSHRC-funded projects (e.g., Community-University Research Alliance, Initiatives for the New Economy) involving inter-disciplinary cooperation of a large number of researchers, students and partners, the cluster will incur administrative costs for coordination and management of its activities, projected to be a quarter of its annual budget.

To fully function as an institute, albeit in a virtual sense, the cluster has to have a secure funding for its operation. In its early years, that is, in the first three years, and possibly for the following six years, the cluster could be treated as a strategic program with funding from SSHRC as it establishes and develops its structures and systems. In subsequent years, however, it should have found sources of funding that would allow it to reduce its dependence on SSHRC.

The network will explore the possibility of endowment and other sources to fund the cluster's annual budget, which for planning convenience could be thought of in terms of four components: administrative, research, dissemination, and training. At the very least, the cluster needs to secure funding for its administrative cost as the networking functions might still be possible with this minimal amount of funding. This would assume that (a) *research* would be funded from other sources (for example, SSHRC's standard research grant), the output from which would then be disseminated through the cluster; (b) for *dissemination*, some funds could be obtained for workshops and conferences (such as from SSHRC's Aid to Research Workshops and Conferences in Canada); and (c) for *training*, some universities' regular funds for graduate students would be specifically allocated for students affiliated with the cluster.

This model with reduced funding may be viable but it does have a number of drawbacks. The first is that research priorities identified by the cluster may not be adequately addressed. For example, if funding depends on standard SSHRC grants, there may not be an interest for the researchers to address the mandate of the cluster, namely, research on issues relevant for policy purposes. Similarly, a dependence on funding through contracts with specific partner agencies may focus research too narrowly to be useful to other agencies and other users of the research output. As much as possible, therefore, the cluster should explore a source of funds that would cover the four components of research, training, dissemination and administration.

## **G. Transparency, Accountability, and Evaluation**

The cluster will aim at transparency in its operation through a number of ways. The website, used for dissemination of research output and coordination of network activities, will also be made interactive (through, for example, the use of feedback forms) so that opinions from network members, users of research outputs and other viewers can be readily received.

An annual report will be prepared by the Executive Board to highlight the cluster's activities, use of funds, and accomplishments. The Board of Directors will also make an internal assessment of the network's strengths and weaknesses prior to setting the direction for the following year. Finally, an evaluation by external reviewers will be conducted at the end of the cluster's third year of operation, and every three years thereafter.

### **III. Cluster Participants**

The following are Canadian researchers who have done work on the cluster's research areas, government agencies that have been contacted and indicated interest in participating, and international contacts. In the survey of researchers conducted by the cluster, 44 have indicated their willingness to participate in the network. A planning workshop in February 2005 included 26 academics and 9 persons from the partner agencies listed below.

#### **Atlantic:**

- Dalhousie University: Economics - Osberg, Lars
- Saint Mary's University: Economics - Harvey, Andrew S.; Sociology and Criminology - Okraku, Ishmael
- Mount St. Vincent University: Family Studies and Gerontology – Keefe, Janice

#### **Quebec:**

- INRS-Centre Urbanisation, culture et société: Laplante, Benoît; Ledent, Jacques; Termote, Marc; Zhu, Nong; Lesemann, Frederic
- McGill University: Anthropology - Costopoulos, André; Economics - MacKinnon, Mary Elizabeth; Sociology –Le Bourdais, Céline; Masi, Anthony C; Sandberg, John; Epidemiology/Sociology - Quesnel-Vallée, Amélie
- Université de Montréal: Démographie - Bourbeau, Robert; Desjardins, Bertrand; Dillon, Lisa; Lapierre-Adamcyk, Evelyne; Legaré, Jacques; LeGrand, Thomas; Marcil-Gratton, Nicole; Piché, Victor; Robitaille, Norbert.
- Université du Québec à Montréal: Sciences économiques - Lefebvre, Pierre; Merrigan, Philip
- Concordia University – Gauvreau, Danielle

#### **Ontario:**

- McMaster University: Economics - Denton, Frank; Dooley, Martin; Spencer, Byron
- Nipissing University: Sociology - Hall, David
- Queen's University: Economics - Green, Alan; McInnis, Marvin; Sociology - Gyimah, Stephen; Krull, Catherine; Geography - Rosenberg, Mark W.; School of Policy Studies - Sweetman, Arthur
- University of Toronto: Geography - Bourne, Larry; Sociology - Boyd, Monica; Fong, Eric; Jones, Charles; Reitz, Jeffrey; Economics - Foot, David
- University of Western Ontario: Sociology - Abada, Teresa; Balakrishnan, T.R.; Beaujot, Roderic; Bélanger, Danièle; Ebanks, G. Edward; Gagnon, Alain; Maxim, Paul; McQuillan, Kevin; Rajulton, Fernando; Ravanera, Zenaida; White, Jerry; King's College - Kerr, Don
- University of Windsor: VP Research - McDaniel, Susan
- Wilfrid Laurier University: Economics - Marr, William
- York University: Geography - Murdie, Robert; Sociology - Simmons, Alan

#### **Prairies:**

- University of Alberta: Sociology – Frank Trovato
- University of Calgary: Sociology - Wanner, Richard; Gauthier, Anne
- University of Manitoba: Community Health Sciences - Halli, Shiva

- University of Saskatchewan: College of Commerce - Venne, Rosemary

**British Columbia:**

- Simon Fraser University: Gerontology Research Centre - Wister, Andrew
- University of Victoria: Sociology - Burch, Thomas K.; Jansson, Mikael; Wu, Zheng; Centre on Aging/Sociology - Penning, Margaret J; Geography - Cloutier-Fisher, Denise; Economics - Mosk, Carl; Engineer, Merwan; Anthropology - Roth, Eric; History - Sager, Eric W.; Baskerville, Peter; Mathematics - van den Driessche, Pauline

**Partners:**

- Social Development Canada: Hicks, Peter; Dea, Christian; Lenjosek, Gordon
- Human Resources and Skills Development Canada: Halliwell, Cliff; Fougere, Maxime
- Policy Research Initiative: Voyer, Jean Pierre; Hunsley, Terrance; Denhez, Alain
- Citizenship and Immigration Canada: Ruddick, Elizabeth; Kustec, Stan
- Health Canada: Wheeler, Mark; Mallory, Charles
- Office of the Chief Actuary: Menard, Jean Claude
- Finance Canada: Danforth, Jeff ; Paquet, Marie-France
- Statistics Canada: Norris, Doug; Turcotte, Pierre; Rowe, Geoff
- Vanier Institute of the Family: Glossop, Robert

**International Contacts:**

- Population Council: Bongaarts, John; McNicoll, Geoffrey
- International Institute for Applied Systems Analysis: Lutz, Wolfgang

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