

Some Economic Issues Surrounding Population Change

by Don McRae ¹

SUMMARY

This paper examines the economic implications of two aspects of population change in British Columbia; population growth and population aging. Five issues relating to population change and the economy are raised. These are:

- Is population growth necessary in order to ensure economic well-being?
- Can we afford an aging population?
- Is retirement feasible as an industry in B.C.?
- Can we control population change?
- Regional implications of population growth.

Based on research carried out at the national level there is very little evidence to suggest that population growth is a major factor in determining economic well-being in an open economy. It is not so much population size that influences per capita output, but rather how that resource is utilized, or, in effect, the productivity of the population.

On the question of our ability to afford the increasing social expenditures associated with an aging population, previous research suggests that the answer is positive as long as economic growth continues at a pace equivalent to that of the past. The concern then becomes whether we can sustain the historical levels of economic growth given our dependence on natural resource extraction for that growth and the current concerns regarding resource depletion.

On the question of the economic benefits of promoting retirement as an industry in British Columbia, previous research has indicated that the costs, primarily resulting from additional health care expenditures, exceed the benefits gained through increased consumption, investment and tax revenues. Hence, from a provincial perspective, promoting retirement in British Columbia is not advisable as a policy.

On the question of whether we can control population change, the simple answer is not effectively. We have little control over the factors that contribute to population growth and aging at the provincial level. Hence, our best option may

¹ The views expressed in this paper are those of the author and not necessarily those of the Government of British Columbia.

be to understand what demographic changes are likely to occur and prepare for the possible consequences of those changes.

Finally, population change in this province will not occur equally in all regions. Some regions within the province will gain population and grow older and some will not. As a result, the significance of the economic issues raised in this paper will vary from region to region.

I. INTRODUCTION

Population change both affects, and is affected by, economic conditions in this province. There are a number of demographic and social changes that are occurring today that will affect the economy. Such things as population growth, the aging of the population, the changing role of women in the labour force, the changing family structure, are just a few of the demographic shifts occurring today. Of these changes, an overview of the economic impacts of the first two, population growth and the aging of the population, will be examined here.

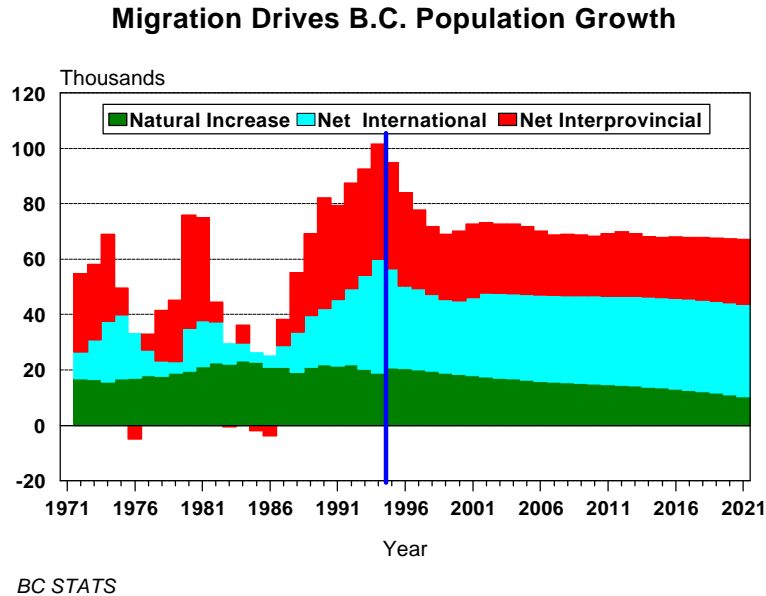
II. DEMOGRAPHIC OVERVIEW

Population Growth

Two components will drive population growth in British Columbia over the next 30 years. The first component, called natural increase, is the excess of births over deaths. The second component is migration, which can be broken down further into international and interprovincial migration flows.

Over the past 30 years approximately 36 per cent of the population gain in this province was due to natural increase, while net migration accounted for 64 per cent. Over the next 30 years, natural increase will form an ever smaller proportion of the overall population growth (approximately 23 per cent). Hence, migration will become more and more important as the engine that drives population growth in British Columbia.

Figure 1



The reason for this change in the source of population growth is two fold. First, the current fertility rate of the provincial population is below the level that will replace the population.² The continuation of this situation will result in a continual decline in the level of natural increase, eventually turning negative as the number of deaths exceeds the number of births.

The second factor is that international migration to British Columbia over the next 30 years is expected to be more than double that of the past 30 years. This is due largely to the expectation that government policy will continue to follow the relatively high immigration intake levels introduced in the late 1980's.

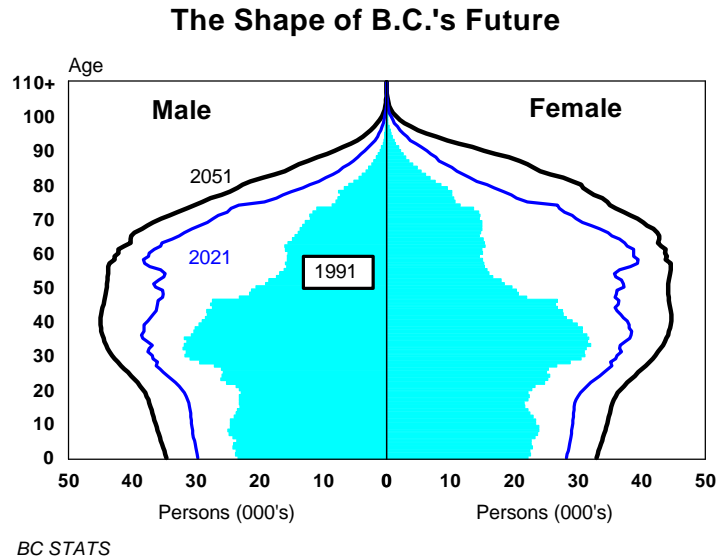
Population Aging

While the population of this province is growing, it is also aging. In a demographic sense, aging means that higher proportions of the future population will be in the older age groups. This aging of the population is caused by a long-term historical decline in the fertility of the population. The rapid increase in the birth rate that occurred between 1947 and 1966, commonly referred to as the baby-boom, helped delay the onset of the full effect of this aging of the population. As members of the baby-boom generation begin to reach age 65 by 2011, the aging process will accelerate. As seen in Figure 2, in the 15 to 20 years

² In order to sustain the current population level in the absence of migration, a Total Fertility Rate of 2.1 births per woman between the ages of 15 to 49 is required. The current Total Fertility Rate in British Columbia is 1.7 births per woman between the ages of 15 to 49.

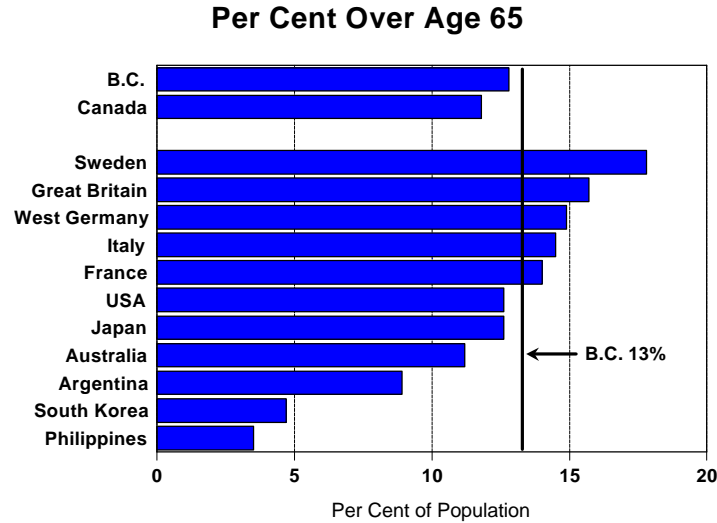
following that date the number and proportion of seniors will increase dramatically.

Figure 2



British Columbia is not unique in this demographic trend. Figure 2 depicts the shape demographic future for the rest of Canada as well as for many western countries, including the United States, Australia and New Zealand. Currently, the proportion of the provincial population that is over the age of 65 is slightly higher than that of the rest of Canada, but less than that of Great Britain, France, West Germany, Sweden and Italy.

Figure 3

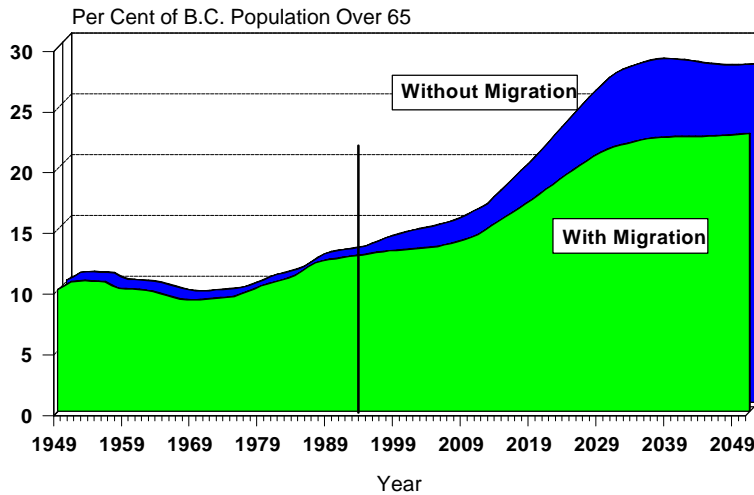


At present, approximately 13 per cent of the population of British Columbia is over the age of 65. This proportion will increase to 18 per cent by the year 2021, and finally stabilize at approximately 23 per cent by 2036.

One of the factors that helps slow this aging process is the migration of people to the province. On average, more people under the age of 65 move to this province than people over 65. Since 1961, only about seven per cent of the net movement of people into British Columbia was of persons over the age of 65. Hence, during times of high net inflows of population, as is the case currently, population aging is slowed. However, during times of net outflows of population, population aging is accelerated. In the absence of migration, the proportion of the population over the age of 65 would reach 22 per cent by the year 2021 and stabilize at about 28 per cent by 2031.

Figure 4

Migration Slows Population Aging



BC STATS

III. ISSUES TO BE ADDRESSED:

The following are some of the issues related to population change and the economy. This list is by no means exhaustive. Some of these issues have been studied extensively at the national level. Where national data exists, it needs to be determined whether the results are applicable to the demographic and economic conditions in British Columbia.

1. Do We Need Population Growth in order to Ensure Economic Well-being?

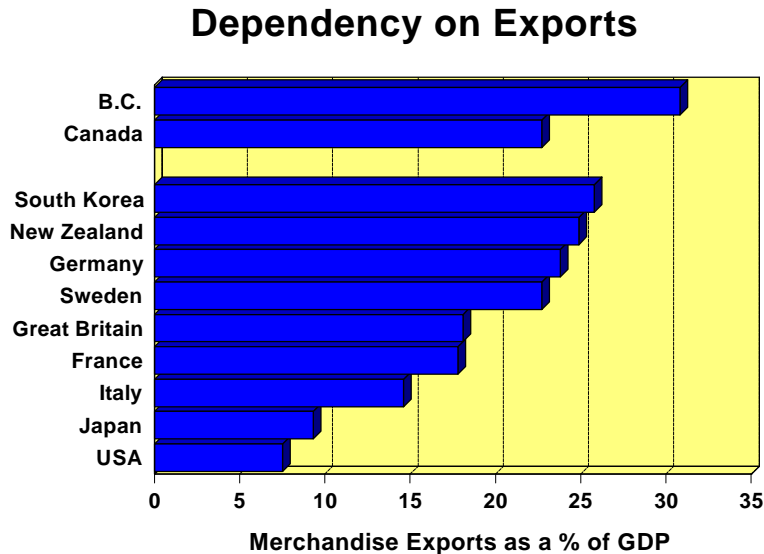
In April of 1986, the federal government commissioned a study called the *Review of Demography and its Implications for Economic and Social Policy*. This study examined possible changes in the future size, structure and distribution of the population of Canada. In 1989, the findings of this commission were summarized in a report entitled *Charting Canada's Future* [Health and Welfare Canada 1989]. One of the conclusions of this report was:

"The consensus among those economists who have considered the question is that, within broad limits, population growth or sheer numbers of people is not a major factor in economic growth or economic well-being in modern economies that play an active role in world trade" [Health and Welfare Canada 1989, p. 9].

Both British Columbia and Canada can be characterized as possessing such economies. The importance of trade to the provincial and national economies is reflected in the fact that currently, exports form approximately 30 per cent of the

total economic output of the province (GDP), and roughly 23 per cent for Canada. Figure 5 illustrates that, similar to other countries such as New Zealand and South Korea, economic prosperity in British Columbia depends heavily on economic conditions in our major export markets.

Figure 5



BC STATS

A McMaster University study by Frank Denton, Christine Feaver and Byron Spencer found similar results using a model called MEDS that was specifically developed to simulate the Canadian economic-demographic system [Denton et al. 1989]. Their research indicated that when using two measures of economic well-being— income per person, and income per household—little difference could be detected whether the Canadian population in the year 2036 was 27 million, 30 million, 34 million, or 41 million.

Finally, a 1991 report by the Economic Council of Canada studied the economic effects of Canadian population growth as a result of immigration and concluded that Canadian per capita income would be increased only marginally if population growth was higher [Economic Council of Canada 1991a].

The Economic Council report goes on to note that even though our per capita standard of living would not be affected significantly by population growth, our world position in terms of economic size might be. Under a no-immigration scenario, over the next 50 years, Canada would remain a small economic power in relation to the United States and the larger nations of Europe. A high growth scenario (i.e. immigration of approximately 300,000 per year) would imply a medium-power status for Canada by today's standards.

The Economic Council noted that in order to examine the link between per capita income and population growth consideration must be given to the effects of economies of scale in production. It can be argued that as the population grows from zero, output per person increases due to such factors as specialization, reduced transportation costs, reduced per capita costs for government services, etc. However, at some point congestion will result and per capita output will diminish as a result of stress on the land base or difficulties associated with operating large bureaucracies. The Economic Council report examined this issue of economies of scale, and estimated that these scale effects were very small.³

If these same general conclusions are applicable to a smaller economy and population such as that of British Columbia, we can expect that the only tangible economic benefit of population growth is the economic and political power within Canada that a larger population base will bring.⁴ This may mean simply a larger influence in federal politics and the economic benefits of such a position. Despite this benefit, it will take some time before the population of this province would approach that of Ontario or Quebec. Currently, British Columbia represents about 12 per cent of the Canadian population while Ontario is 37 per cent and Quebec is 25 per cent. Under reasonable population growth assumptions, by the year 2051 British Columbia will still only represent 16 per cent of the Canadian population.

2. Can we Afford an Aging Population?

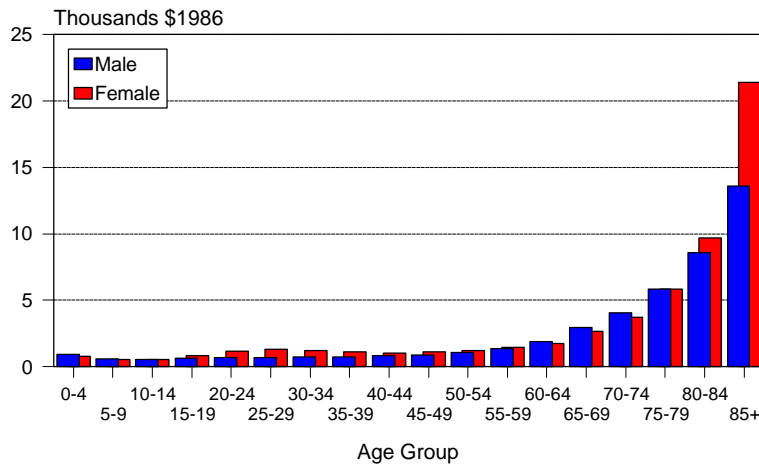
Another issue that arises when considering population growth, or the lack of such growth, is whether we can afford the increasing social costs and growing tax burdens, associated with an aging population. The proportion of the population that is over the age of 65 will increase from 13 per cent currently to 23 per cent by 2036. This aging process will increase expenditures on social services such as health care due to the much higher rate of health care utilization by the elderly.

³ The Economic Council estimated that due to scale effects, per capita income would increase only 0.1 to 0.3 per cent per million population increase given a Canadian population of 27 million [Economic Council of Canada 1991a, p. 31].

⁴ On the other hand, as we will see later in this report, population change will not occur equally in all regions of the province. Migration, and the consequent population growth, will likely be funnelled into a few specific areas within B.C. If one were to consider the scale effects argument, it may be true that on a regional level, a doubling in the population of a particular community could have a significant impact on regional per capita incomes.

Figure 6

British Columbia Per Capita Health
Care Costs - 1990/91



BC STATS

This issue was examined by Statistics Canada in the October 1988 issue of *The Canadian Economic Observer* [Fellegi 1988]. The report, written by Ivan Fellegi the Chief Statistician of Canada, addressed the question of affordability at the national level. It was concluded that the expected growth rates in government expenditures on health, education and pensions which are attributable to an aging population will be comparable to the economic growth rates observed over the past 30 years. Therefore, should long term economic growth in Canada continue as it has over the past 30 years, and per capita social expenditures increase at predicted rates, then public spending in health, education and pensions would, in 50 years time, represent the same burden on the Canadian economy as it does at present.⁵

A similar conclusion was reached by a study examining the issue of affordability of social programs in British Columbia [McRae and Schrier, 1992]. As a result of these studies we can conclude that it is not so much demographic change that will affect the affordability of social programs in the future, but rather economic change. If economic growth in British Columbia continues at past levels over the long term, then with careful stewardship of public sector expenditures we may well be able to afford an aging population. The question is whether we can sustain the current level of economic growth given our dependence on natural resource extraction for that growth and the current concerns regarding resource depletion.

⁵ It can be argued that the present burden is not sustainable given federal government deficits averaging more than \$30 billion per year over the past ten years.

3. Retirement as an Industry in B.C.

Given the aging of the population in British Columbia and in Canada, is retirement a feasible industry for this province? It is certainly true that retirement supports the economic base of a number of communities in this province.⁶ Should attempts be made to expand this economic dependency on retirement to other communities? The simple answer to this question is "no". When this issue is studied from a provincial perspective, it was concluded that the increased health care costs associated with older populations out-weigh any economic benefits from increased consumption or tax revenues on the part of older migrants to this province [Central Statistics Bureau 1987]. Previous research has indicated that the minimum income at which a 65 year old in-migrant to this province would yield a net benefit is approximately \$53,000 per year for the remaining years of his or her life.⁷ In 1992, only 3 per cent of Canadian seniors had an annual income greater than \$50,000.

In the case of internal migration within British Columbia, different results would be obtained. Since there is no net increase in health care costs associated with internal migration, the creation of a retirement industry would likely add to the economic base of a community, and thus provide stability. However, this economic gain could be at the expense of some other community in British Columbia. In addition, actively promoting retirement communities in British Columbia would attract population from both within and outside the province. As a result, there would likely be a net cost to the province overall.

4. Control of Population Change

For the most part, we in British Columbia have little control over the factors that contribute to population growth and population aging. Policies intended to increase the birth rate, and hence population growth, have had some success in some European countries such as France and Sweden, but these policies have tended to be expensive. Currently, immigration policy in Canada is almost exclusively the domain of the federal government with limited input from the province as to the level of immigration. Finally, interprovincial migration to and from British Columbia is not easily controlled. People move to this province as a result of a wide variety of economic, demographic, social and political factors. British Columbia has the distinction of attracting migrants from the rest of Canada even during relatively poor economic times.

On a local level we have slightly more control over where people settle through regional economic development policies, regional planning such as zoning laws, and the development of transportation networks. It can be argued that, although

⁶ See: Horne and Robson [1993].

⁷ 1992 dollars.

this approach may be successful in changing population growth patterns in selected areas, it may create other problems by driving up land prices which ultimately affect housing affordability for some segments of the population. Hence, we are caught in a dilemma. If we restrict the supply of land in certain areas in an attempt to redirect regional population growth, we provide a benefit to current land owners but harm future residents, whether they be migrants to an area or the local (young) population establishing new households.

At the provincial level, we do not have a clearly defined population policy. Instead we have a series of provincial and regional economic policies that affect population. This is in part due to the fact that we cannot directly control population change. The most successful strategy may be to understand what demographic changes are likely to occur provincially and regionally and to prepare for, or in some cases attempt to influence, those changes.

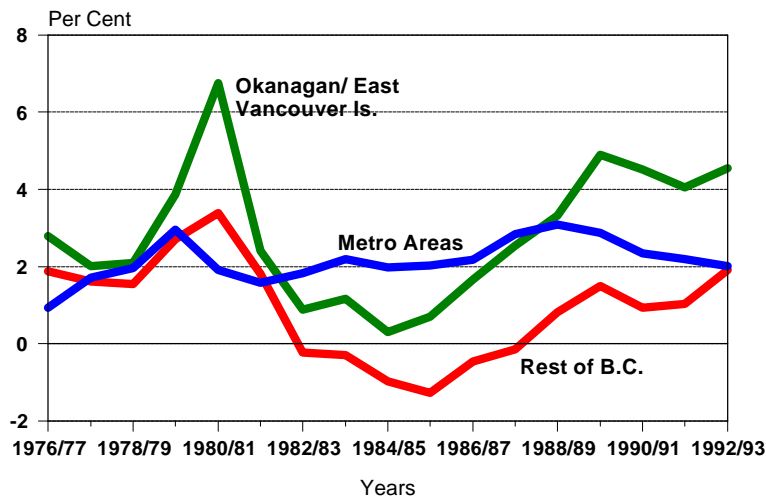
5. Regional Implications of Population Change

We can expect the population of British Columbia to grow larger and to age over the next 30 years. However, these same demographic changes will not occur equally in all regions of the province. There will be some areas that may not grow at all and some that will increase significantly. Similarly, some areas of the province will grow older quite rapidly while others will age more slowly.

These differential rates of population change will result from the relative economic strengths of the various regions of the province. As has been the case in the past, regions with a diversified economic base will likely experience higher population growth in the future.

Figure 7

B.C. Population Change by Sub-Regions



BC STATS

As demonstrated in Figure 7, there have been wide variations in regional growth patterns over the past fifteen years. During the late seventies and up to 1982, population growth in British Columbia was distributed relatively evenly throughout the province. However, during the 1980's, a dramatic change in regional population growth patterns emerged. During the mid eighties, only the major metropolitan areas of Vancouver and Victoria experienced healthy population growth in the two per cent range, while other traditional growth areas such as the Okanagan and eastern Vancouver Island recorded annual growth rates of less than one per cent. The remainder of the province, representing approximately 25 per cent of the population, experienced losses.⁸

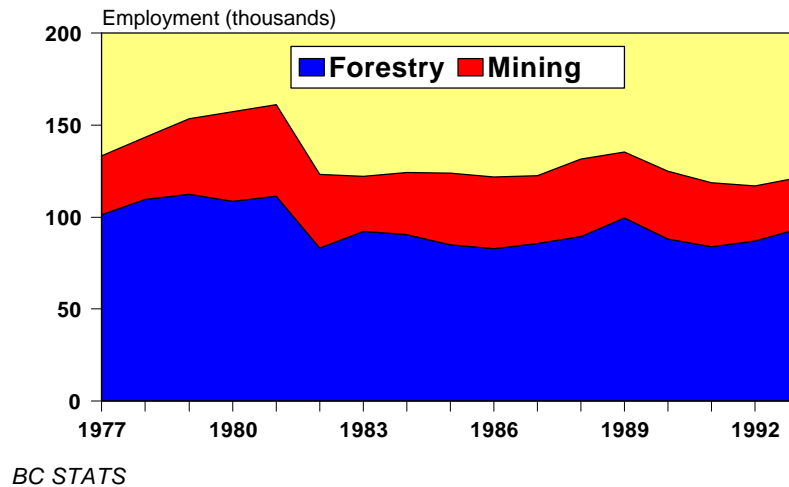
Much of the regional population loss can be attributed to a restructuring in many of the resource-based industries throughout the province. This change is most evident in the forestry and mining industries, the economic driver for many of the smaller communities in British Columbia. As can be seen in Figure 8, the recession of 1982 resulted in a significant decline in direct employment in the forestry and mining industries, which resulted in an erosion in the employment base in much of rural British Columbia. As production levels increased throughout the eighties, direct employment in these industries did not keep pace. The result was a general migration of population away from regions with a shrinking employment base, in favour of communities where employment prospects were more favourable. This, coupled with the increasing importance of

⁸ Since the early 1990's there has been a general return to a more even regional population growth pattern.

the service sector, resulted in declining populations in outlying areas in favour of the province's larger metropolitan areas.

Figure 8

Direct Employment in Forestry and Mining Industries - B.C.



Since population growth has, and will likely continue to be, concentrated within a few areas of the province the economic costs and benefits of population change are very much regional issues. Due to the scale effects mentioned earlier, it may be true that on a local level, significant changes in per capita economic well-being are possible if the population of a community is doubled or cut in half. However, the data to support such claims are not easily obtainable. In addition, if we are to weigh the costs and benefits of population change some consideration must be given to the social and environmental aspects of community population growth or decline. As a result, given the lack of attention paid to the environmental and social aspects, the issues related to the economic impacts of population change raised by this report should only be considered as part of the overall story.

Don McRae is Manager of the Population Statistics Section, BC STATS, Ministry of Government Services.

References

- Central Statistics Bureau (1987), "Potential Opportunities for the Provincial Retirement Industry: A Preliminary Review", unpublished report by the Central Statistics Bureau, Ministry of Economic Development, Province of British Columbia.
- Denton, Frank T., Christine H. Feaver and Byron G. Spencer (1989), "MEDS: Models of the Economic-Demographic System: A Report on the Project and Some Preliminary Analysis" (Hamilton: QSEP Research Report No. 246, Faculty of Social Sciences, McMaster University).
- Economic Council of Canada (1991a), *Economic and Social Impacts of Immigration* (Ottawa: Supply and Services Canada).
- Economic Council of Canada (1991b), *New Faces in the Crowd: Economic and Social Impacts of Immigration* (Ottawa: Supply and Services Canada).
- Fellegi, Ivan p.(1988), "Can We Afford An Aging Society?" *Canadian Economic Observer*, October 1988, (Ottawa: Supply and Services Canada).
- Health and Welfare Canada (1989), *Charting Canada's Future; A Report of the Demographic Review* (Ottawa: Supply and Services Canada).
- Horne and Robson (1993), *British Columbia Community Economic Dependencies*, background report prepared for the British Columbia Round Table on the Environment and the Economy. Treasury Board Secretariat, Ministry of Finance and Corporate Relations, Province of British Columbia.
- McRae and Schrier (1992), *Can Existing Levels of Social Services be Sustained Given an Aging Population?* background report prepared for the British Columbia Round Table on the Environment and the Economy. Central Statistics Branch, Treasury Board Secretariat, Ministry of Finance and Corporate Relations, Province of British Columbia.