

DEMOGRAPHIC CHANGE AND PUBLIC POLICY IN ONTARIO

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Introduction

People determine the role of democratic governments in the economy. They are the workers, taxpayers, public program recipients and voters. While corporations and other institutions influence the policies of governments and may be both contributors to, and recipients of, public programs, ultimately it is people in their capacity as voters that determine whether the government with its chosen policies and programs continue with their mandate.

Demographics is the study of people and their behavior. Demographic economics focuses on their economic behavior, while psychographics is concerned with their attitudes. Economic behavior is influenced by many forces. Perhaps the most important is income, which reflects the state of the economy including unemployment rates, wage rates, tax rates and interest rates. For any individual, income may also reflect the availability and extent of public programs and their health status.

Income facilitates expenditure and both income and expenditure provide sources of government revenue through taxation (e.g. PIT and PST for provincial governments in Canada). These revenues provide the sources of funding for public programs and, therefore, constrain or enhance the opportunities for policy continuation or change by government.

Another important influence on economic behavior is age. People need and do different things at different stages of their lives. At younger ages they need education followed by jobs

and careers, houses, pensions and health care. This life-cycle (or life-course) behavior is an important influence on the provision of goods and services in both the private and the public sectors.

It is now widely recognized that population aging is an unassailable mega-trend in the developed world. The increase in the average age of the population over the past forty years primarily reflects smaller family sizes coincident with the availability of the birth control pill and the increasing education and reentry of women into the workforce commencing in the 1960s. Fertility rates in Canada, which peaked at almost four children per woman in the late 1950s at the height of what is now known as the baby boom generation, decreased to around one and a half children by the late 1990s. Replacement fertility is 2.1 children per woman (one for each partner and a small contribution to cover childless couples), which is the current level in the USA. While the current fertility rate in Canada appears to be low, it is still above Japan and most of the European countries.

Continuation of low fertility results in a smaller share of young generations in a population and a consequent larger share of older generations, which is a characteristic of population aging. It is important to note that aging does not necessarily mean aged. Despite an aging population Canada remains one of the youngest countries in the developed world (along with Australia, New Zealand and USA, all of which also experienced a post-war baby boom).

Of course, population size and age composition are also influenced by mortality and migration trends. Gradually increasing life expectancy in Canada since the 1930s has served to intensify the aging trend over the past forty years. Life expectancy has increased from an average of 61 years in the 1930s to around 78.5 years by the late 1990s. Early advances were attributable to reductions in infant mortality, but more recent increases are attributable to decreased mortality in the older age groups and expectations are for a continuation of this trend.

With both fertility and mortality trends contributing to population aging, it is practically impossible for the remaining component of population growth, namely migration, to offset these dominant influences. People are most mobile in the twenties, whether they are moving around

the country or around the world. Consequently, with more and more Canadians now in their forties and fifties, migration potentially offers a limited counter-balance to an aging population. Note, however, when it comes to inter-provincial migration, a gain for the receiving province inevitably means a loss for the sending province so there is no effect on the national trends.

Government programs and policies that do not respond over time to these demographic trends are unlikely to be viewed as successful by an increasingly educated and politically informed electorate. For example, it is now recognized if not always well understood that an aging population makes greater demands on the health care system. Health care organizations and governments that do not respond to these increasing demands are likely to be punished by people in the board room and ballot box. Attitudes are important to outcomes, and many attitudes are likely to be influenced by the willingness of the appropriate organizations and their leaders to respond effectively to demographic change.

Demographic Change – The Past

At the turn of the new millennium the population of Ontario was estimated to be 11.9 million persons. This represented over 38 per cent of the Canadian population and would rank Ontario seventh in comparison with US states, slightly smaller than Pennsylvania and larger than Ohio. Almost 93 per cent of the Ontario population is located in the southern part of the province. Two-thirds of the Ontario population are located in the Greater Toronto (44.6 per cent) and Central (22.1 per cent) regions, and a further 12.9 per cent in the Southwest region often known as the Golden Horseshoe. When combined with New York state, this population agglomeration is the fourth largest in North America, behind the New York, Los Angeles and Chicago agglomerations (Strategic Projections, 2000).

Over the 1970s the growth of the Ontario population was slightly below the national average, but over the 1980s and 1990s population growth in Ontario exceeded the national average. Between 1991 and 2001, the Ontario population grew an average 1.4 per cent per annum compared to a national average of 1.1 per cent. Only the populations of Alberta and British Columbia grew faster over this decade.

Quantitatively, the most important determinant of population growth in Canada is births. The number of births peaked in Canada in 1959 at almost 480,000. This characterized the post-war baby boom. Thereafter, births decreased to around 343,000 in 1973, a decrease of almost 30 per cent at a time that the population was growing by almost 30 per cent. Then births started to increase again as the Boomer generation started having their families. Annual births in Canada again passed the 400,000 mark in the early 1990s, the first time since the end of the baby boom era in the mid 1960s. Foot (1996) has called this the Boom, Bust and Echo cycle. Subsequently, births decreased over the 1990s as the tail end of the Boom and the Bust generations became the new parents. Births fell to match the 1973 low in 1998 and by the new millennium are the lowest in the post-war period.

Births in Ontario have mirrored the national trend, falling from levels in excess of 150,000 annually in the early 1960s to a low of under 122,000 in 1978, then rising to over 152,000 by 1991. Currently, births are estimated at around 130,000 annually. This decline is expected to continue to around 125,000 by mid-decade. This drop in births of almost 18 per cent off the 1991 peak is expected to occur at a time that the population grows by almost 17 per cent.

Not surprisingly, a growing population leads to increased numbers of deaths. Annual deaths in Canada have increased from around 150,000 in the baby boom era of the early 1960s to over 200,000 by the mid-1990s. In Ontario, deaths increased from around 52,000 in the early 1960s to over 80,000 by the late 1990s. This upward trend is expected to continue, as a result of both population growth and aging.

Migration also contributes to population growth. Post-war annual immigration to Canada has fluctuated between a high of over 282,000 in 1957 to low of 72,000 only four years later. Over most of the 1990s annual immigration intake to Canada exceeded 200,000 persons with Ontario securing approximately one-half of this intake. While quantitatively births still contribute more than immigrants to population growth in Ontario, there is now only about a 20 per cent difference in these numbers.

Emigration from Canada is difficult to measure accurately as there are no administrative procedures to collect these numbers. Over much of the 1970s and 1980s, estimates of approximately 25,000 annually were consistent with the quinquennial census results. More recently Statistics Canada (2001) has revised (and redefined) annual figures upwards to 55,000 persons and uses even higher numbers in its population projections (see below). Slightly more than one-half are assumed to come from Ontario, which reflects in part the higher level of immigration to the province.

Ontario also gains and loses people to other provinces in Canada. Over the past thirty years these annual flows have usually been between 50,000 and 100,000 persons, resulting in net inter-provincial migration flows that are quite volatile. For example, over the 1960s and 1980s Ontario gained around 17,000 persons a year in net migration with other provinces, whereas over the 1970s and 1990s it lost approximately 1,000 persons a year in net migration with other provinces. This volatility makes provincial population projections an hazardous exercise.

In summary, currently in Ontario births contribute about 130,000 persons annually to the provincial population while deaths remove about 85,000 persons, resulting in a natural increase of 45,000 persons annually. International immigration contributes about 115,000 persons annually and emigration removes about 30,000 persons, resulting in a net contribution of 85,000 persons to provincial population growth, or almost twice the natural increase. Finally, net inter-provincial migration may contribute up to 20,000 persons annually to the growth of population in Ontario. Under these conditions, up to 150,000 people a year are added to the provincial population of 11.9 million persons, a growth rate of less than 1.3 per cent. In the case of zero net inter-provincial migration, these figures drop to 130,000 and 1.1 cent annually respectively.

Demographic Change – The Future

Strategic planning requires a forward-looking focus. Consequently, strategic planning for a provincial government requires provincial population projections if demographic information is to be included in the strategic plan. The future is inherently uncertain, so demographers usually develop alternative projections based on a broad range of assumptions about the future. Often the

middle-of-the-pack projection is used as the most likely, but the alternatives can be used to test the sensitivity of the results to alternative assumptions (about migration, for example).

As indicated above, population change is determined by births, deaths and migration. For a province, migration includes both net international and net inter-provincial migration. Consequently, assumptions about the future trajectories of all of these components of growth are necessary to produce a provincial population projection. Note that different assumptions will produce different projections. For strategic planning purposes the challenge is to identify the common features and key sensitivities.

Population projections for Canada and the provinces and territories are periodically produced by Statistics Canada. The most recent projection covers the period 2000-26 (Statistics Canada, 2001). In addition, many provinces develop their own population projections for planning purposes at both the provincial and sub-provincial levels. The Ontario Ministry of Finance (2000) projections cover the province and its 49 regional municipalities for the period 1999-2028. A brief review of these two sources is provided in this section.

In the middle Statistics Canada projection (number 2) the population of the province of Ontario is projected to grow from 11.8 million in 2001 to 13.2 million in 2011 and 14.4 million in 2021. This projection implies annual average growth rates of 1.1 and 0.9 per cent respectively. Slowing population growth is a characteristic of an aging population. This projection assumes stable fertility at current levels, rising life expectancy, 225,000 immigrants to Canada, slightly increasing emigration from current levels and a net inter-provincial migration gain of just over 12,000 persons a year for Ontario.

Alternative projections based on different assumptions show an Ontario population varying between 12.9 and 13.4 million in 2011 and between 13.7 and 15.0 million in 2021. Under even more favorable inter-provincial migration gains (21,000+; number 4) the population of the province increases to 13.6 million in 2011 and 15.4 million in 2021. This is an unlikely scenario.

The Ontario Ministry of Finance Reference Scenario produces a provincial population that increases from 11.8 million in 2001 to 13.2 million in 2011 and 14.5 million in 2021. This is very similar to the middle Statistics Canada projection. The Low and High projections by Finance show a provincial population varying between 12.6 and 13.6 million in 2011 and between 13.2 and 15.4 million in 2021. These are even wider ranges than those produced by Statistics Canada. The high growth scenario embodies 145,000 immigrants and 15,000 net inter-provincial migrants to Ontario.

There is one common element in all of these population projections – the aging of the provincial population. For example, in the Finance Reference Scenario the median age of the provincial population increases from 36.6 years in 2001 to 41.5 years in 2021, an increase of almost five years in twenty years. By comparison, the median age of the provincial population increased from 24.1 to 30.1 years between 1901 and 1951, then declined with the baby boom before rising again in the 1970s.

Age Structure

Population aging is almost always associated with an increase in the share of older members in the population. In 1901 five per cent of Canadians were in their senior ages (65+ years). By 1951, the senior share had increased to 7.8 per cent and over the next fifty years to 12.6 per cent by 2001. The senior share in Ontario is the same as the national average. The province with the highest senior share in 2001 was Saskatchewan (14.6 per cent), while the province with the lowest was Newfoundland (11.8 per cent). Nonetheless, these shares are relatively low in comparison with many other developed countries. By 2000 the senior share was already 18 per cent in Italy, 17 per cent in Japan, Sweden, Belgium, Greece and Spain and 16 per cent in France, Germany, Portugal and the UK.

The population projections outlined in the previous section are all characterized by an increasing share of seniors in the future Ontario population. For example, the share of seniors for Ontario in the Statistics Canada middle projection increases from 12.6 per cent in 2001 to 14.1 per cent in 2011 and 17.7 per cent in 2021. The comparable figures in the Ontario Ministry of

Finance Reference Scenario are 14.1 and 17.8 per cent respectively. In both projections the share increases to over 20 per cent in the mid-2020s. Obviously, this projection reflects an increasing number of seniors from approximately 1.5 million persons in 2001 to over 2.5 million persons by 2021 and over 3.0 million by 2026. This is the source of the apparently alarming statistic that the number of seniors in the province will double over the first 25 years of the new millennium.

However, it is useful to reflect on the results of these projections. First, Ontario is projected in twenty years to be where Japan and much of Europe are today. This means that other governments and jurisdictions will be facing an aging challenge well before Ontario and, presumably, Ontario will have the luxury of observing and choosing best-practice strategies from their experiences. Second, even within Canada Ontario is in the middle so, once again, Ontario potentially will have the opportunity to witness the success or failure of aging policies in other older Canadian jurisdictions before implementing them at home. Third, the growth in the senior share is not unprecedented or a straight line projection. In fact, the growth in the senior share in Ontario between 1981 and 1991 was greater than is projected between 2001 and 2011.

A generational approach can contribute to a better understanding of the reasons for these summary statistics. In particular, the first three decades of the 1900s (with the exception of the WWI years) produced rapid population growth in Canada, first through expanded immigration and then through increased births, especially in the Roaring 1920s. The Canadian population almost doubled between 1901 (5.4 million) and 1931 (10.4 million) and annual population growth averaged over two per cent (Foot, 1982). The depression of the 1930s cut annual population growth by more than one half through reduced immigration and births. Population growth then averaged 1.7 per cent over the 1940s, 2.7 per cent over the 1950s and 1.7 per cent over the 1960s, primarily as a result of the baby boom generation born between 1947 and 1966 (Foot, 1996), before falling to 1.3 per cent over the 1970s and 1980s.

A person born in 1920 reached age 65 in 1985, so between 1985 and 1994 the Roaring 1920s generation reached their senior years and the senior share increased noticeably. Between 1981 and 1991 the senior share in Ontario increased from 9.9 to 11.6 per cent, an increase of 1.7 per cent. Subsequently the smaller 1930s generation reached their senior years over the late

1990s. Someone turning 65 in 2002 was born in 1937 when there were fewer births in Canada (and elsewhere). Consequently, the senior share grew more slowly between 1991 (11.6 per cent) and 2001 (12.6 per cent). The first Boomer born in 1947 reaches age 65 in 2012, so the growth in the senior share over the first decade of the new millennium (from 12.6 to 14.1 per cent) remains below that experienced over 1981-91. This provides a substantial window of opportunity to strategically plan for the eventual entry of the Boomer generation into their senior year between 2012 and 2031.

An aging population is also usually associated with a reduced share of the young in a population, and vice versa. As previously noted, the median age of the population fell over the 1950s and 1960s with the birth of the baby boom generation. By 1961 those under age fifteen comprised 33.9 per cent of the Canadian population, almost as high as the 1901 share (34.4 per cent). In Ontario, the 1961 share (32.2 per cent) exceeded the 1901 provincial share (31.4 per cent). By 1981 the share of the young had fallen to 22.3 per cent in Canada (21.6 per cent in Ontario) and by 2001 it was down to 18.8 per cent in Canada. However, for the first time in the last century, Ontario now has a higher young share (19.2 per cent in 2001) than the national average.

Once again, generational analysis can be instructive. The migration of Boomers to Ontario (especially from the Atlantic provinces) over the 1960s and 1970s, produced a large generation in their prime parenting ages over the 1980s and 1990s in the province. Not surprisingly, births rose over the 1980s to a peak in 1991 in Ontario as this generation produced the baby boom echo generation. Foot (1996) defines the echo generation in Canada as being born between 1980 and 1996. In 1996 they were aged zero to 16 years. By 2001 they were aged 5 to 21 years with a peak at age 10 years.

This phenomenon did not occur throughout Canada. The western provinces of Manitoba, Saskatchewan and Alberta have a higher young share than Ontario, while the eastern provinces of Newfoundland, Nova Scotia, New Brunswick and Quebec have lower young shares, as does British Columbia. It is useful to note that the echo generation is very noticeable throughout the US, which also reflects their higher fertility. This is the workforce of the future.

Economic Dependency

In any society, those of working age provide for those too young or too elderly to work. This is termed economic dependency. In modern society, the young are defined as those of pre-school and educational age while the elderly are defined as those of pensionable age. These definitions lead to the concept of a dependency ratio, which is defined as the dependent group populations expressed as a ratio to the working age population. A high dependency ratio reflects a heavy burden on the society, while a low dependency ratio has the opposite interpretation.

The dependency ratio in Canada was 0.65 in 1901, which means that there were 1.54 persons of working age for each person of non-working age. Fifty years later it was lower at 0.62, so there were 1.90 persons of working age for each person of non-working age. The baby boom drove the dependency ratio up to 0.71 by 1961 thereby reducing the number of persons of working age for each non-working age person to 1.41. Subsequently, it declined substantially to 0.47 in 1981 and 0.46 in 2001. This means that there are now over two people of working age for each non-working age person. Economic dependency has never been so favorable in Canada.

In essence, this generally increasing favorable economic dependency is the result of declining young dependency more than offsetting increasing senior dependency over the twentieth century. For example, between 1971 and 2001 in Canada, the young dependency ratio has fallen from 0.47 to 0.27, while the senior dependency ratio has risen from 0.13 to 0.18 resulting in the total dependency ratio falling from 0.60 to 0.46.

Ontario has mirrored these national trends although, as a result of the echo generation, the province has moved from just below the national average to just above the national average by 2001. However, Ontario economic dependency in 2001 (0.47) is not only well below historical levels, it is also well below the levels in Saskatchewan (0.56) and Manitoba (0.52) both of which have higher young and senior shares relative to Ontario. The province with the most favorable dependency ratio in 2001 was Newfoundland (0.40), followed by New Brunswick, Quebec and Alberta (0.44).

These economic dependency calculations suggest that Canada has never had such a favorable demographic composition. The highest share of its population are now of working (and therefore of taxable) age than ever before, because the Boomers are now all in their working ages (35 to 54 in 2001). Moreover, once again Ontario is not especially disadvantaged by comparison with other provinces.

What about the future? Will the increasing senior population be offset by the decreasing young population as a result of the decreased number of births? The answer is yes for the first decade of the new millennium and no for the second decade and beyond. Statistics Canada projects a dependency ratio for Canada of 0.43 in 2011 and 0.51 in 2021, by which time the elderly ratio (0.28) exceeds the young ratio (0.23). An economic dependency ratio of 0.57 is projected for 2026, which is still well below the Boomer peak in 1971 and the pre-1951 levels.

Once again, Ontario follows the national average, although the large dependent echo generation in 2001 results in a lower than average dependency ratio into the new millennium as they become of labor force age. By 2011 the economic dependency in Ontario is back to the national average (0.43). Thereafter, it is below the national average at 0.50 in 2021 and 0.55 in 2026. These figures are corroborated by the Ontario Ministry of Finance Reference projection.

In summary, a rising senior share in the population is more than offset by a falling young share over the first decade of the new millennium as the echo generation enters the labor force, thereby providing a further window of opportunity to prepare for the subsequent aging of the Boomer generation into its senior years. And even then total dependency is below the historical levels associated with their birth. While this is a strategic challenge it does not appear to be a crisis!

Intergovernmental Relations

These simple economic dependency calculations do mask one feature of special relevance for governments. As Foot (1984) and others have noted, governments are probably

more vulnerable to increasing senior dependency than society at large since responsibility for the young is dominantly borne by families in the private sector (with the exception of education expenses) whereas responsibility for seniors (in terms of health and basic pension expenses) has been increasingly assumed by the public sector. Foot (1984) estimated (based on data compiled for 1976) that it cost approximately 2.5 times as much to support a senior on public programs as a young person. While these data need updating to the current fiscal environment, they do provide an opportunity to test the sensitivity of the previous conclusions to these alternative assumptions. From a peak of 0.91 in 1961, this ratio fell to 0.68 by 1981, and then rose slightly to 0.73 by 2001. By 2021 this ratio rises to 0.90, almost the level experienced in 1961, and by 2026 to 1.02, which is higher than previously experienced in the past fifty years. Nonetheless, there is still well over twenty years to prepare and the projected level, while 40 per cent above the 2001 level, is not double or triple that level as many pundits have implied.

Moreover, the Canadian Constitution and the fiscal arrangements emanating from its implementation leave different levels of government with different fiscal vulnerabilities to an aging population. Foot (1986) argued that the federal government has the most vulnerability and local governments the least vulnerability to fiscal expenditures from an aging population. Provincial governments are responsible for programs and policies that appear to be applicable to all age groups and are, therefore, only mildly negatively influenced by population aging. The federal capping of shared expenditures with the provinces, the offloading of seniors housing from federal to provincial to local governments and of road maintenance and home care from provincial to local governments in some jurisdictions over the 1990s, for example, has undoubtedly modified these earlier conclusions, most likely in the direction of reducing the intergovernmental differences in the expenditure vulnerabilities to population aging.

It should not be forgotten that population aging also has important government revenue implications, and that these implications are generally favorable to government fiscal balances. The Boomers are now in their prime income earning and, hence, taxpaying ages and, in fact, average taxes paid do not decline significantly in retirement, since seniors have accumulated most of the wealth.

There is, however, one issue that has been consistently overlooked in the economic dependency analysis on governments and that is the differences between urban and rural (or large and small) local governments. The distinction between urban and rural is difficult at best, which complicates the analysis. Nonetheless, in light of the allocation of more expenditure responsibilities to local governments in recent years, especially in Ontario, this issue deserves attention.

Three alternative definitions were employed based on the population size of the community. Urban was defined as communities with populations over 100,000 persons, over 50,000 persons and over 30,000 persons respectively. Conversely, communities not in these categories were considered non-urban (small or rural). Using the recently released 2001 census data, the first cutoff is between Barrie (with a population of 103,700) and Whitby (87,400), the second cutoff is between North Bay (50,600) and Caledon (48,400) and the third cutoff is between Milton (31,500) and Stratford (29,700). In the first case, 22 communities covering 47.7 per cent of the Ontario population is defined as urban; the second case expands to 37 communities covering 73.7 per cent and the third case to 50 communities covering 78.3 per cent of the provincial population.

In all cases, the share of school-aged population (aged 5 to 19 years) is lower in the urban compared to the non-urban jurisdictions. The figures ranged from 19.2 compared to 21.5 per cent in the first more restrictive urban definition to 20.0 and 21.8 per cent in the third least restrictive urban definition. Clearly, smaller communities in Ontario have a larger share of the school-age young in their populations. This conclusion does not change if the pre-school group (aged 0 to 4 years) is also included.

At the other end of the age spectrum, the share of seniors is also lower in urban compared to non-urban communities, ranging from 12.2 compared to 13.5 per cent for the most restrictive urban definition to 12.4 and 14.7 per cent under the least restrictive urban definition. Clearly, smaller communities in Ontario also have a larger share of the elderly in their populations. Consequently, smaller communities in Ontario must have a smaller share of their populations in the working ages compared to larger communities.

These findings have important implications. Since smaller communities in Ontario have noticeably higher economic dependency, their fiscal flexibility is smaller, their abilities to absorb additional expenditure responsibilities lower and their vulnerability to population aging higher than urban jurisdictions, however defined. The provincial government needs to be cognizant of these demographic realities when considering its responsibilities to local governments in the province.

Program Expenditures

The largest item in the provincial program budget is health expenditures, followed by education expenditures. The impacts of population aging and the implications for strategic planning are best illustrated by first considering these two dominant expenditure items, both in the past and into the future.

The first Boomer born in 1947 reached elementary school age (six) in 1953 and secondary school age (thirteen) in 1960. Consequently, school enrolments expanded rapidly over the 1950s and 1960s. Growth then slowed noticeably in the 1970s and early 1980s as the Bust generation of late 1960s and 1970s reached their elementary and secondary ages. The first Boomer reached post-secondary education age (nineteen) in 1966, the year in which Ontario established its College system. Post-secondary enrolments grew over the subsequent twenty-five years as the Boomers moved through their college and university years.

As noted above, births started up in Ontario in the late 1970s as the Boomers started to have their children, resulting in the echo generation of the 1980s and early 1990s. This placed considerable demands on child-care and pre-school programs over this period. The first Echo Boomers reached elementary school age in the mid-1980s and secondary school age in the early 1990s. As a result, after a decade and half of no growth and no jobs over the 1970s and early 1980s, the elementary-secondary education system expanded again over the second half of the 1980s and 1990s. Demands for capital grants for new schools increased along with needs for expanded operating funds and new teachers.

Nowhere in the education system, it seems, was there any recognition or strategic planning for the inevitable decline on the horizon. In Ontario the peak of the echo generation was born in 1991. This group moved through the mid-point of their elementary education (age 9) in 2000. Suddenly school closings were introduced as new policies by many school boards, although these often have been attributed to the new provincial government guidelines!

The peak of the echo generation will move through the mid-point of its high school years (age 15 or 16) in the mid-2000s and thereafter school boards in the province will face both declining elementary and declining secondary enrolments. Of course, there will be some variation around the province as regional demographic differences and intra-provincial migration play a role in the experiences of individual school boards. Nonetheless the big-picture trends are clear. Hopefully, the provincial government will not need, or be inclined to create, another Commission on Declining School Enrolments in the mid-2000s as it did in the mid-1970s.

Over the first half-decade of the new millennium, school boards could respond to these trends by gradually transferring resources (including, if necessary, schools) from elementary to secondary uses. Any existing provisions that constrain such responses should be examined immediately. However, school boards are likely to argue that declining enrolments provide an opportunity to reduce class sizes and improve the quality of education, thereby reversing some of the negative trends of the past two decades. The provincial government will then have a choice between improving elementary-secondary education and using the funds elsewhere. And there are likely to be many alternative uses for these funds, even within the education portfolio.

Not surprisingly, the increasing births of the late 1970s in Ontario started to result in increasing post-secondary enrolments twenty years later, in the late 1990s. At the turn of the new millennium, colleges and universities are facing increasing applications and enrolments. In 2003 this is compounded by the impact of the double-cohort effect of eliminating grade 13 from the secondary education curriculum in Ontario. Parenthetically, the best time to have implemented this policy change would have been in the mid-1990s when the trough of the bust generation was

reaching their post-secondary education ages. This is an example of how demographic information could have been used to inform strategic planning and public policy in the province.

The peak of the echo born in 1991 will reach age 19 in 2010 and will be half way through their first degree by 2012. Consequently, the pressures on colleges and universities to admit ever more students over the next decade will be substantial. Consequently, post-secondary institutions have been requesting more funding both for capital and operating expenses to meet these challenges. From a demographic viewpoint, this is the educational growth sector of the new millennium.

But these post-secondary institutions should also be doing their demographic strategic planning. Capital facilities last a long time and so strategic planning should embrace a similar time horizon. If births in Ontario started down in 1992, first admissions will start down 19 years later, namely in 2011. Consequently, if careful planning is not undertaken, excess capacity in both staff and built facilities may emerge in the post-secondary sector in Ontario over the 2010s.

Based on demographic information, Foot (2001) has suggested one possible solution strategy for this challenge. Since the Eastern provinces have a smaller youth share but also contain many well-established and excellent post-secondary educational institutions, excess capacity is likely to emerge in these institutions in the 2000s. Consequently, these institutions might well be closing facilities at the same time that Ontario is establishing new facilities. This is not a problem from a faculty and staff perspective, since people are mobile and some employees who are no longer needed in eastern Canada will be able to find opportunities in Ontario. However, this is not the case for the bricks-and-mortar facilities that are not mobile. From a national perspective, it would be desirable for some Ontario students to study at post-secondary institutions in eastern Canada. This sharing policy might preserve excellent institutions in eastern Canada while at the same time easing pressure on post-secondary facilities in Ontario. Moreover, over-expansion in Ontario in the 2000s might not be wise in light of the likely easing of enrolment demands in the 2010s.

Since education is a provincial responsibility under the Canadian Constitution, one way to implement this strategy would be the establishment of bi-lateral post-secondary education agreements between Ontario and selected eastern provinces that would enable some Ontario students to study outside the province with no financial penalty. Appropriate planning for new facilities in the province would then be easier. Alternatively, the solution could be left to market forces, but there is no guarantee that the myopia of market forces would minimize excess capacity in any region.

In summary, with demographic change driving declining elementary enrolments and expanding post-secondary enrolments over the 2000s, resource reallocations within the education portfolio appear to be a sensible policy. Thereafter, in the 2010s, education enrolment growth will decrease and resource transfers outside of the traditional education sector may be necessary. An aging workforce is likely to make increasing demands on continuing education resources, but the largest demand is likely to be elsewhere, namely in health care.

The first Boomer born in 1947 reaches age 65 in 2012 and age 75 in 2022. While people use health care throughout their lives, use of physicians and drugs increases in a person's fifties and use of hospital facilities increases in a person's sixties and especially their seventies. Those born in the Roaring 1920s are currently in their seventies. Funding cutbacks and expanding demands from this generation have resulted in hospital space becoming a contentious issue in the province. Meanwhile, expensive new drugs and expanding demands from both the Boomers and their parents has resulted in escalating drug costs within the health portfolio.

Relief is on the horizon as the Roaring 1920s generation passes away and is replaced by the smaller 1930s Depression generation in their seventies over the 2000s. Of course, longer life expectancy will mean more patients in their eighties and older, but the slowdown of growth in demands from the younger generation will be pleasant news for the challenged health care sector.

However, the growth in health care demands will still exceed population growth by a substantial amount. For example, the Final Report of the Provincial and Territorial Ministers of

Health (2000) estimates that health expenditure growth due to population aging will exceed health expenditure growth due to population growth after the mid-2000s. By the early 2020s, the Report estimates annual health expenditure growth due to population growth of 0.5 per cent compared to 1.25 per cent due to population aging. Combined these two components result in annual health expenditure growth of 1.75 per cent (in constant dollars), which is two and one-half times population growth but probably below the real growth potential of the economy.

The Ministers of Health estimate that health expenditure growth in Ontario will be slightly above the national average, but it will still lag behind Alberta and British Columbia. These estimates suggest that the real growth potential of the Ontario economy will be greater than the growth in health expenditures in the province. Based on these estimates, there should be no difficulty in generating the revenues to provide health care to an aging Ontario population. The Achilles heel of the health care system is likely to be elsewhere, namely, in the inability to recruit workers in an increasingly slower growing workforce.

Parenthetically, it is interesting to note that since rural areas, however defined, have higher senior shares in their populations and seniors are the most intensive users of hospitals, customer-oriented public policy would ensure good hospital access in rural areas. Recent decisions on hospital closings in Ontario and other provinces do not recognize these demographic imperatives.

Other quantitatively less important provincial budget items are also affected by the changing demographics of the province. For example, since it is the males in their teens and twenties that are responsible for most crime in the province, an aging population leads to a reduction in the overall crime rate. This has happened throughout North America over the 1990s as the massive Boomer generation aged out of its crime-prone ages. The continuing impacts of the aging Boomer generation more than offsets the contribution of their echo children, so crime rates can be expected to continue to decrease in the years ahead, especially in the 2010s and beyond.

Once again there are differential impacts within the crime sector. One area of growth is fraud, since this is the preferred crime of older criminals. This crime category covers the gambit from blue collar, through white collar to starched collar crime. Detecting and solving fraud crime requires different police training than is part of the traditional curriculum. Moreover, police on the fraud beat do not need the same physical attributes that police on the drug or homicide beats need. Well experienced but aging officers could be trained in forensic accounting and recycled into the fraud division for many more years of successful police work.

Another portfolio impacted by changing population is transportation. On average, public transportation is the preferred transportation mode of the young. It is cheap and young workers in their twenties tend to locate in the downtown cores that are well served by public transportation. As the Boomers grew up over the 1960s and 1970s, demands for public transportation grew rapidly. They rode the intercity buses such as Greyhound. Then in the 1980s the Boomers reached their thirties, started their families and moved out to the suburbs. Sprawling suburbs cannot be well serviced by public transportation and they were ready to drive their automobiles anyway. Transit got into trouble and the roads became crowded in many jurisdictions...and Greyhound went into bankruptcy proceedings. By the mid-1990s the children of the Boomers were teenagers and, as expected, riding public transportation. This moderate growth can be expected for another 10 or 15 years, when they too will start families and move to areas conducive to raising their children and pets.

Transportation surveys show that automobile use peaks in the early forties, when parents drive their tween and early teenage children to their numerous activities. The peak of the baby boom, born in 1960 turned 40 in 2000 and entered their peak driving ages. Not surprisingly, traffic congestion is a problem in many urban areas as the Boomers are all driving their automobiles. Population growth and population aging have both contributed to traffic congestion in the major urban centers. Since, on average, a person drives increasingly less after their mid-forties, population aging will contribute to less traffic congestion in the years ahead.

Culture and recreation are other government expenditure items influenced by population aging. In essence, the young are interested in discos and sports, while the older members of the

population are interested in live theatre and birding. Capital and operating project funding policies need to adapt to the changing needs of the population if a government wishes to serve the needs of its electorate.

Many other government portfolios and policies are also impacted by population change, including population aging. Demographic and life-cycle information can be used to explain and understand past trends and to project likely future trends and policy needs. Moreover, they can be used to integrate portfolios and policies, so that new demands in one area may met using resources from another area where demands are shrinking. But perhaps of even more importance, they are forward looking and enable proactive rather than reactive policies to be developed.

Workforce Implications

People are also employees. Demographic change has important workforce implications in Ontario and elsewhere. Again, some historical analysis can contribute to understanding the trends. The first Boomer born in 1947 reached age 16 in 1963. Consequently, from the mid-1960s to the late 1980s the labor force in Canada grew rapidly as the Boomers entered their working ages. Youth unemployment became a major issue as ever more youth faced the challenge of finding their first job. Then over the 1990s labor force growth slowed noticeably as the smaller group born in the 1970s entered their working ages. The labor market became tighter and the unemployment rate fell. By the late 1990s reports of labor market shortages were commonplace, as were accounts of bonuses for young workers. Canada had moved from youth unemployment to youth bonuses in a decade.

Concern for future labor market shortages continued into the new millennium, despite the slowdown in hiring attributable to the events of September 11, 2001. At the national level, these concerns have some legitimacy since the lack of an echo generation in older provinces (such as Quebec and eastern Canada) offsets the impact of the echo generation in younger provinces (notably Ontario, Manitoba, Saskatchewan and Alberta). Since there were 25 per cent more births in Ontario in 1991 than in 1978, there were approximately 25 per cent more 10 year olds than 23 year olds in 2001. That means there will be approximately 25 per cent more 21 year olds

in 2012 than there are in 2001. Both the Ontario Ministry of Finance (2000) and the Statistics Canada (2001) projections for Ontario in 2011 show approximately 16 per cent more 20 to 24 year olds than in 2001 (compared to a national average of under 7 per cent). The USA has an even larger echo so it is unlikely that young Ontarians will find expanded employment opportunities south of the border. The echo generation in Ontario means growing numbers of new labor force entrants for the first decade of the new millennium. Consequently, a labor market shortage is unlikely to emerge over this period in the province.

The aging of the workforce also produces policy challenges. There are now more workers aged 40 and over (40-64) than under 40 (15-39) in the workforces of both Canada and Ontario. This increasing share of older workers in the workforce will continue despite the workforce entry of the echo generation over the first decade and a half of the new millennium.

The first Boomer born in 1947 reached age 55 in 2002. Over the first decade of the new millennium there will be a rapidly increasing number of workers in their fifties who have largely finished raising their children, are becoming grandparents and are finding elder care an increasing part of their lives. They are not yet able or ready to retire, but could use more free time in their schedules. The time is now right to implement flexible workplace and phased retirement policies.

An increasing number of workers are likely to embrace the offer of a reduced workload for a proportionate reduction in pay. For example, a policy that permitted a worker to work four days a week between age 50 and 54, three days between 55 and 59, two days between 60 and 64 and one day a week between 65 and 69 with an associated proportionate reduction in pay might be attractive to an increasing number of employees. Other flexible workplace options, such as half days for 50 per cent pay or nine months of the year for 75 per cent pay, might also be attractive.

These flexible workplace policies have the advantage of being adapted to individual employee needs while at the same time releasing monies that can be used to renew the workforce with new younger workers at no increase in the wage bill. Moreover, they facilitate two-way

mentoring where the older employees transfer their experience to the younger employees and the younger employees transfer the latest technology skills to the older employees, thereby providing potential for raising productivity in the organization.

Unfortunately, many existing public policies impede such policies. The most important are pension policies where it is not possible to be both a contributor (on work days) and a beneficiary (on non-work days) at the same time. Pension plans need to be examined with a view to accommodating more flexible workplace policies. This is not an easy task but progress is now required to respond to the needs of an aging workforce in the new millennium.

Mandatory retirement is another policy in need of review in light of more flexible workplace policies. Even small changes could be considered for implementation. For example, working half time for five years before the mandatory age and half time for five years after the mandatory retirement age could still be considered consistent with a policy of mandatory retirement.

Similarly, many workplace taxes or contributions such as employment insurance or workers compensation have caps or fixed costs that encourage employers to work existing employees longer hours rather than introduce the flexible hours and workforce renewal indicated by these new policies. Now is the time to examine the role of all workplace policies with regard to flexible workplace arrangements if society is to proactively reap the potential benefits of an aging workforce.

Conclusions

Demographic analysis provides a powerful tool to understand the past and foretell the future. Good government in Ontario and elsewhere requires an understanding of the needs of the members of the society that elected them. People are both consumers and workers, as well as taxpayers and voters. Proactive strategic planning based on demographic analysis can anticipate

their needs and assist in the formulation of appropriate policies. It can both identify areas of increasing resource needs and, perhaps more importantly, areas of decreasing resource needs. In this way resource transfers can be gradually effected that minimizes the need to generate new resources or cut needed programs. Demographic information is readily available, but insufficiently used. The future role of government in the economy will, in large part, be determined by the demographic trends outlined in this paper. It is all about satisfying the needs of people – the people who elect the government to help them reach their own goals.

References

Foot, D.K. (1982), *Canada's Population Outlook: Demographic Futures and Economic Challenges* (Toronto: Lorimer for the Canadian Institute of Economic Policy), 268pp.

Foot, D.K. (1984), "The Demographic Future of Fiscal Federalism in Canada", *Canadian Public Policy*, 10:4, 406-14.

Foot, D.K. (1996), *Boom, Bust & Echo: How to Profit from the Coming Demographic Shift* (with D. Stoffman) (Toronto: Macfarlane, Walter & Ross), 245pp.

Foot, D.K. (2001), "Canadian Education: Demographic Change and Future challenges", *Education Canada*, 41:1, 24-7.

Ontario Ministry of Finance (2000), *Ontario Population Projections, 1999-2028* (Toronto: Ministry of Finance), 96pp.

Statistics Canada (2001), *Population Projections for Canada, Provinces and Territories, 2000-2026* (Ottawa: Ministry of Industry), 188pp.

Strategic Projections (2000), *Tomorrow's Markets Today: Canada's Metropolitan Area Prospects to 2021* (Oakville: Strategic Projections Inc.), 286pp.