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Research Publications

CANADA IN THE 21ST CENTURY

I. SCENE SETTING

DEMOGRAPHIC TRENDS IN CANADA, 1996-2006: IMPLICATIONS FOR THE PUBLIC AND PRIVATE SECTORS

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DEMOGRAPHIC TRENDS IN CANADA, 1996-2006: IMPLICATIONS FOR THE PUBLIC AND PRIVATE SECTORS

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PREFACE

AS A NEW MILLENNIUM APPROACHES, Canadians are going through a time of dramatic economic change. Markets are becoming global and economic activity across nations is becoming increasingly integrated. Revolutionary developments in computer and communications technology are facilitating globalization, and are also altering a great deal the workplace and the lifestyles of Canadians. At the same time, largely as a consequence of the information revolution, knowledge-based activities are becoming increasingly important within the Canadian economy as well as the economies of other industrialized nations.

These and related major transformations of the economic environment invite comparison with the Industrial Revolution of the 1800s. As in the earlier time, major structural changes are giving rise to uncertainties. Firms and workers are struggling to find their place in the new economic order. Canadians collectively face the question of whether their nation's physical, human and institutional resources will provide a firm foundation for continued prosperity. Many see Canada's prospects as being much less secure than in earlier years, when the country's rich natural resources played a major role in shaping the Canadian economy.

To examine fully the medium to longer-term opportunities and challenges of these developments, the Micro-Economic Policy Analysis Branch of Industry Canada asked a group of experts to provide their "vision" for Canada in the 21st century on a number of important issues. Each author was required to undertake two formidable tasks: first, to identify major historical trends and develop scenarios to illustrate how developments in his/her respective area might unfold over the next ten to fifteen years; and second, to examine the medium-term consequences of these developments for the Canadian economy.

The papers coming out of this exercise are now being published under the general heading of "Canada in the 21st Century". This series consists of eleven papers on different aspects of Canada's medium-term outlook. The papers are divided into three major sections. The first section, *Scene Setting*, focuses on important developments that are going to shape the medium-term economic environment in Canada. The second section, *Resources and Technology*, looks at trends among some important components of Canada's wealth creation and considers the actions needed to ensure that these factors provide a firm foundation for continued prosperity. The last section, *Responding to the Challenges*, explores individual, corporate and government responses to the medium-term challenges and offers some options for appropriate course of action.

In the final paper of the *Scene Setting* section, the implications of the aging Canadian population for the domestic economic environment are examined by David Foot, Richard Loreto and Tom McCormack of the Madison Avenue Demographics Group. The authors argue that, by 2006, significant

shortages of workers under the age of 35 might occur in some service sector activities where it is not easily possible to substitute technology for labour. In addition, self-employment is likely to increase in future years as the baby boomers generation move into its peak self-employment years. These changes in the nature of the labour supply are likely to be accompanied by some significant, demographically-related shifts in spending patterns toward leisure, health services and financial services.

INTRODUCTION[1]

THE PURPOSE OF THIS PAPER is to describe and analyse demographic trends in Canada and to discuss their implications for public and private sector activities during the next ten years. Although our findings and conclusions rest on the large body of empirical work listed in the "Bibliography", the paper has been commissioned by Industry Canada as a non-technical work that will be used to facilitate discussion among a variety of stakeholder groups. Accordingly, the use of data in the text has been limited and specific references to sources have not been made. This information, typically found in academic work, can be obtained by consulting the listed references or contacting the authors.

The paper is organised in four sections. The first one positions the paper in terms of its purpose, approach, and organisation. The second one examines key demographic trends at the national, provincial, and urban levels, both on a retrospective and prospective basis. The next section examines the general implications of demographic change for a variety of products and services in the public and private sectors. The fourth section provides a general conclusion on the relative importance of demographic analysis in public and private sector policy development.

THE "DEMOGRAPHICS LESSON"

OVERVIEW OF DEMOGRAPHIC TRENDS[2]

ALTHOUGH DEMOGRAPHICS ARE CONCERNED with the interplay of many variables including ethnicity and gender, our analysis gives primacy to the impact of the age variable through the life cycle since age is the primary demographic determinant of economic behaviour. In determining the impact of demographics on economic behaviour, age explains "two-thirds of everything".

Canada's population is aging due to a prolonged (and likely continuing) period of low fertility and increasing life expectancy. Given Canada's population distribution, the age composition of the population will have a substantial impact on the provision of goods and services by the public and private sectors.

Canada's population growth is determined by two factors:

- net natural causes – the difference between births and deaths; and
- net migration – the difference between immigration and emigration.

On the birth side of the net natural equation, a useful distinction must be made between the fertility rate and the birth rate. The fertility rate is the

FIGURE 1

TOTAL FERTILITY RATE, BIRTHS IN THOUSANDS, 1921-1995

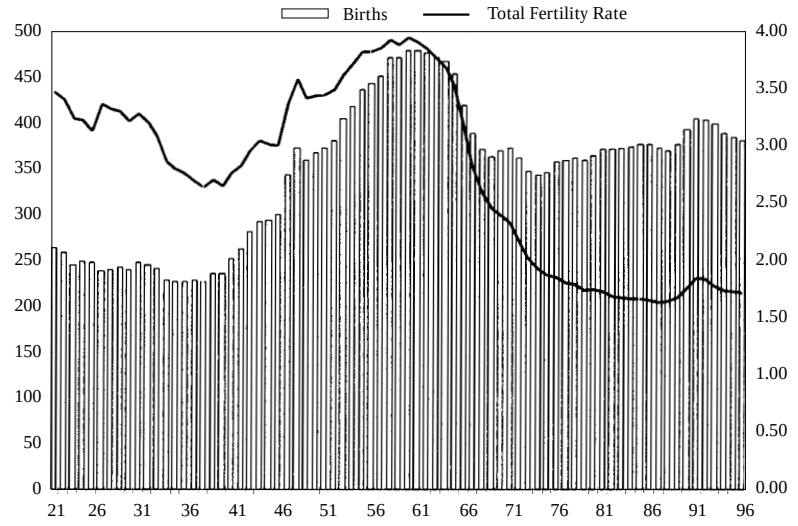
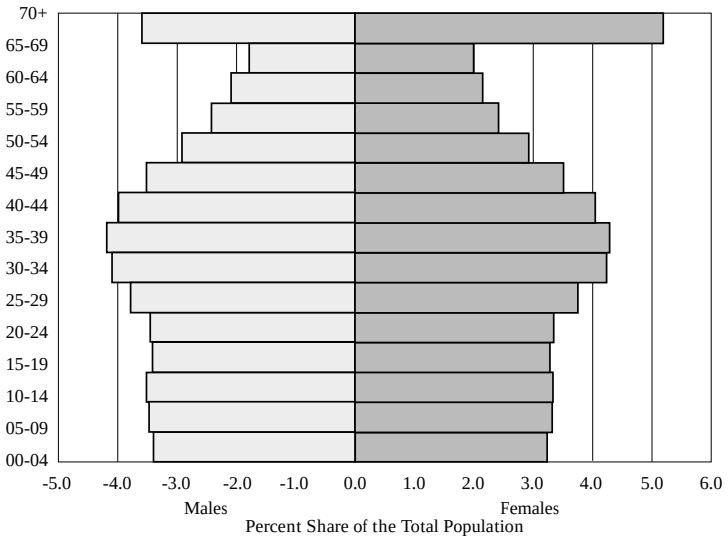


FIGURE 2

CANADA'S POPULATION AGE DISTRIBUTION, 1996



average number of births per female over her lifetime and it can be considered as a proxy for family size. The birth rate is the number of births in a given time period divided by the population.

Fertility in Canada has been declining since the 1960s and currently stands at 1.7 children per woman. This rate is below the replacement rate of 2.1. All of the provinces have fertility rates below replacement, with Newfoundland now having the lowest rate ever recorded for a province (1.3 in 1993). Only in Canada's aboriginal communities is fertility substantially above replacement.

Despite this low fertility, the number of births increased annually during the 1980s as the post-war "baby boom" generation traversed its prime child-bearing ages. Births peaked in 1990 and have been on a steady downward trend during this decade (a decrease of 4.7 percent between 1990-1994).

In terms of net natural population growth, the template of the "baby boom, bust, and echo" generations provides the key analytical framework for understanding the past fifty years and the next ten. The baby boom, born between 1947 and 1966, account for almost one-third (9.8 million) of Canada's current population of 30 million (see note no. 2). An important sub-cohort, within the boom generation, is those individuals born between 1960 (the peak of the boom) and 1966, the so-called "Generation X" who number approximately 2.6 million. The baby bust cohort, born during a period of declining fertility between 1967 and 1979, encompasses 5.4 million Canadians (around 55 percent the size of the boom cohort). The echo generation, born during the

1980s and first part of the 1990s, are the children of the boomers. They are more numerous (6.9 million or about 70 percent of the boom) than the preceding bust generation not because of an upswing in fertility but as a consequence of the sheer size of the baby boom cohort. Looking ahead it is now possible to discern the next generation or "millennium kids" that will be born during the period from 1995 to 2010. These are essentially the children of the baby bust generation and hence they will be a relatively small component of the Canadian population.

The "boom, bust, and echo" template is evident for Canada as a whole, Ontario, and the western provinces. The echo generation is not a salient factor in the populations of Quebec and the Maritime provinces due to relatively high levels of internal out-migration of the boom generation during the past several decades.

In relative terms Canada's baby boom was one of the largest of those developed nations that experienced this phenomenon in the post-war period (i.e., United States, Australia, and New Zealand). The importance of demographics to understanding past and future trends in public policy and market behaviour in Canada is the sheer size of the boom generation, the substantially smaller size of the bust generation, and the "middling" dimensions of the echo generation (i.e., smaller than the boom but larger than the bust generation). Given the primacy of the age variable on economic behaviour, the impact of these different cohorts marching through the various stages of the life cycle leaves an indelible stamp on the demand and supply of public and private goods and services.

Despite falling mortality rates, the number of deaths has increased steadily during the past fifty years and will continue to do so because of the aging of the population. Also, at today's mortality rates, there is a "gender gap", i.e., women, on average, live longer than men (81 versus 75 years). Notwithstanding the long-term increase in the mortality rate, in 1994 there were almost twice as many births (386,550) as deaths (211,535) in Canada.

Given these patterns of fertility and mortality, the net addition to Canada's population from natural means will be zero by the second decade of the next century. In the absence of population gain through immigration, Canada's population would then enter a long period of gradual decline.

Immigration has always been an important factor in the growth and vitality of Canada's population. Over time immigration has been used as a tool of economic policy, i.e., higher levels during good times when the economy is able to absorb the additional population and lower levels when economic growth is weak. However, a break with this linkage between the health of the economy and immigration policy was evident during the 1990s. Despite Canada's poor economic performance during much of this decade, immigration levels have been maintained at relatively high levels in historical terms.

Currently, slightly more than 200,000 immigrants come to Canada annually. When emigrants are factored in, there is a net gain of approximately 150,000 people annually from migration as a source of population growth. It is

interesting to note that at this level net migration is only slightly below net natural increase as a source of population growth.

Immigrants arriving in Canada vary in age but the majority are 20 to 44 years old, the period in life when individuals are most mobile. This period of peak personal mobility is applicable both to international and internal migration. Therefore, the component of population growth attributable to net migration adds more to some population cohorts than others.

Moreover, the destination within Canada of a majority of immigrants is Ontario (51.9 percent in 1994), particularly the Greater Toronto Area. Hence, net migration also affects the regional distribution of population both among and within provinces.

During the 1950s and 1960s the bulk of Canada's immigrants came from Europe. During the past twenty-five years, the majority of immigrants have come from Asia, the Caribbean region, and Central/South America. This reflects the aging (and hence lower mobility) of the European populations and the higher fertility (and higher mobility) of populations in Asian, Caribbean, and Central/South American countries. Given global patterns of fertility and mortality, immigration will not only add to Canada's population growth but also continue the process of ethnic and racial diversity that is a hallmark of our society.

Demographics provide a basis for projecting not predicting future trends. Projections are made on the basis of assumptions about fertility, mortality, and net migration (both international and internal). Scenarios for periods five, ten, or twenty years into the future can be constructed. Although projections can be made for periods further out, the longer the projection time frame, the less it is possible to control the other "one-third" of variables that affect economic behaviour. Therefore, given plausible assumptions, demographic projections have their most effective impact for periods from five to fifteen years in the future.

Our projections assume fertility and mortality rates at current levels and net migration of 150,000 annually. This creates a future scenario in which there is a continuing decline in the number of births and a continuing increase in the number of deaths. Consequently, population growth declines and net migration gradually becomes more important than net natural increase as a source of population growth.

CANADA'S POPULATION BY PROVINCE IN 1996

SINCE 1991 CANADA'S POPULATION HAS INCREASED by 6.4 percent from 27,296,900 to 29,033,500 (see note no. 2). Canada's people are unevenly distributed throughout the country. The most populated province, Ontario, had a total of about 10,823,300 persons in 1996, accounting for 37.3 percent of the country's entire population. Quebec, the second most populated province, had a total of about 7,187,300 persons (24.8 percent of the total). British Columbia, placing

TABLE 1

POPULATION OF CANADA, BY PROVINCE, 1996

Province	Population 1996	Percent Change 1991-1996	Percent Share, 1996
Newfoundland	563,009	-1.0	1.9
Prince Edward Island	135,978	4.8	0.5
Nova Scotia	923,615	2.6	3.2
New Brunswick	737,635	1.9	2.5
Quebec	7,187,252	4.2	24.8
Ontario	10,823,307	7.3	37.3
Manitoba	1,121,821	2.7	3.9
Saskatchewan	1,000,439	1.2	3.4
Alberta	2,717,369	6.7	9.4
British Columbia	3,731,184	13.7	12.9
Yukon	28,954	4.1	0.1
Northwest Territories	62,916	9.2	0.2
Canada	29,033,478	6.4	100.0

TABLE 2

SOURCES OF POPULATION GROWTH, CANADA, BY PROVINCE, 1991-1996

	Births	Deaths	Net Natural	Net Migration	Total Change
Newfoundland	31,031	19,280	11,752	-17,228	-5,476
Prince Edward Island	8,737	5,719	3,017	3,210	6,228
Nova Scotia	56,451	37,530	18,920	4,755	23,675
New Brunswick	43,105	28,674	14,431	-681	13,750
Quebec	446,222	257,429	188,793	102,488	291,282
Ontario	697,258	376,347	320,911	417,497	738,407
Manitoba	81,702	46,129	35,574	-5,703	29,871
Saskatchewan	70,689	40,617	30,073	-18,564	11,509
Alberta	194,191	75,898	118,293	53,521	171,814
British Columbia	219,154	127,867	91,287	357,842	449,129
Yukon	2,250	629	1,621	-492	1,129
Northwest Territories	7,061	1,300	5,761	-480	5,281
Canada	1,857,851	1,017,419	840,433	896,165	1,736,598

third, has about 3,731,200 (12.9 percent) while Alberta, in fourth place, has about 2,717,400 (9.4 percent). These four provinces, therefore, account for 84.2 percent of all Canadians. The remaining population – totaling 4,574,300 persons (or 15.8 percent of the total) – is scattered throughout the remaining six provinces and two territories.

The rate of growth of the population by province has varied significantly since the 1991 census. British Columbia grew fastest (13.7 percent over that 5-year period) followed by the Northwest Territories (9.2), Ontario (7.3), Alberta (6.7), Prince Edward Island (4.8), Quebec (4.2), the Yukon (4.1), Manitoba (2.7), Nova Scotia (2.6), New Brunswick (1.9), Saskatchewan (1.2), and Newfoundland (-1.0).

The variation in growth rates among the provinces over this period is due to variations in the fertility and mortality rates, variations in the age distributions of the base populations against which these rates apply, and variations in the degree to which each is an attractor for migrants from abroad or from other provinces or territories.

Table 2 reveals those provinces and territories exhibiting the fastest growth rates do so because of net migration. For example, British Columbia grew by 449,100 persons over the last five years, but 79.7 percent of that growth was due to net migration. Quebec, on the other hand, grew by 291,300 persons, but only 35.2 percent was due to net migration. Newfoundland's population fell by 5,500 – despite an 11,800 increase in its population due to net natural causes – because migration resulted in a net outward movement of 17,200 persons.

CANADA'S POPULATION BY URBAN AREA IN 1996

AS OF 1996 CANADA'S 29,033,500 PEOPLE were heavily concentrated among the largest urban areas of the country. For example:

- the 54 largest urban areas in Canada – including all Census Metropolitan Areas and all Census Agglomerations with populations in 1991 exceeding 50,000 persons – accounted for 69.8 percent of Canada's total population in 1996;
- these 54 collectively grew by 1,329,700 persons over the period from 1991 to 1996; thus they accounted for a disproportionate 76.6 percent of Canada's total growth over this period;
- the 54 urban areas as a group achieved a growth rate of 7.0 percent over the 1991 to 1996 period; in sharp contrast, the rest of Canada grew by only 4.9 percent (Canada's total gain was 6.4 percent);
- the four largest areas – each with a population exceeding 1,000,000 persons – account for 35.4 percent of Canada's total population;

- the 16 largest urban areas – each with a population of 250,000 persons or more – account for 56.2 percent of the total population in Canada.

The growth rate of Canada's population by urban area over the 1991 to 1996 period was uneven, however, ranging from a high of 22.7 percent in the Barrie, Ontario area (a compound annual growth rate of 4.2 percent) to a low of 0.4 percent in the Thunder Bay, Ontario urban area (a compound annual growth rate of 0.0 percent).

CANADA'S POPULATION GROWTH FROM 1996 TO 2006

OVER THE NEXT DECADE, Canada's population is projected to grow by about 2,593,000 persons. That projection is based on the following assumptions:

- the total fertility rate will hold at a rate of 1.74 live births per female;
- mortality rates by age and sex will hold constant at the rates prevailing during the early 1990s;
- net international immigration will average about 150,000 persons per year (i.e., immigration will average 200,000 per year, in line with current federal targets, and emigration will average 50,000 per year, in line with historical precedent).

The expected stability in the total fertility rate over the next decade implies the number of births on an annual basis will hover between 370,000 and 380,000 between now and 2006.

CANADA'S POPULATION GROWTH BY AGE FROM 1996 TO 2006

CANADA'S EXPECTED POPULATION GROWTH of 2,593,000 persons over the next decade is expected to be unevenly distributed by age. Over this period we expect the following:

- the age group expected to show the greatest growth in absolute terms over this period is that including all those over the age of 70; this group is expected to grow by about 705,000 persons over this period, thus accounting for 27 percent of all of Canada's population growth;
- the age group 55 to 59 is expected to grow by 548,000 and the age group 50 to 54 is expected to grow by 529,000; thus those in their 50s are expected to account for 1,077,000 of Canada's 2,593,000 growth over this period, or almost 42 percent of the total; this group represents those who are currently between the ages of 40 and 49, the front end of the baby boom generation;

TABLE 3

POPULATION OF CANADA BY URBAN AREA
RANKED BY POPULATION, 1996

Urban Area	Province	Population 1996	Percent Change 1991-1996	Percent Share in 1996
Toronto	Ont	4,222,790	8.5	14.5
Montreal	Que	3,258,915	4.2	11.2
Vancouver	BC	1,811,962	13.1	6.2
Ottawa-Hull	Ont	1,005,150	9.2	3.5
Edmonton	Alb	869,029	3.5	3.0
Calgary	Alb	827,567	9.8	2.9
Quebec	Que	677,155	4.9	2.3
Winnipeg	Man	669,587	2.6	2.3
Hamilton	Ont	626,076	4.4	2.2
London	Ont	406,395	6.5	1.4
Kitchener	Ont	387,501	8.7	1.3
St. Catharines-Niagara	Ont	379,310	4.0	1.3
Halifax	NS	336,291	4.9	1.2
Victoria	BC	306,830	6.6	1.1
Windsor	Ont	278,924	6.4	1.0
Oshawa	Ont	258,618	7.7	0.9
Saskatoon	Sask	220,998	5.2	0.8
Regina	Sask	196,746	2.6	0.7
St. John's	Nfld	177,239	3.1	0.6
Chicoutimi-Jonquière	Que	165,372	2.8	0.6
Sudbury	Ont	161,914	2.7	0.6
Sherbrooke	Que	145,468	4.5	0.5
Kingston	Ont	143,317	5.1	0.5
Trois-Rivières	Que	139,817	2.6	0.5
Kelowna	BC	136,629	22.2	0.5
Abbotsford	BC	135,383	19.2	0.5
Saint John	NB	126,687	1.4	0.4
Thunder Bay	Ont	124,951	0.4	0.4
Sydney	NS	117,052	0.8	0.4
Barrie	Ont	113,070	22.7	0.4
Moncton	NB	111,542	4.7	0.4
Guelph	Ont	104,201	7.2	0.4
Brantford	Ont	102,319	5.4	0.4
Peterborough	Ont	101,188	3.2	0.3
Belleville	Ont	100,293	5.6	0.3
Sault Ste. Marie	Ont	91,416	7.5	0.3
Nanaimo	BC	89,285	21.5	0.3
Sarnia-Clearwater	Ont	88,928	1.2	0.3
Kamloops	BC	80,193	18.2	0.3
Prince George	BC	77,095	10.7	0.3

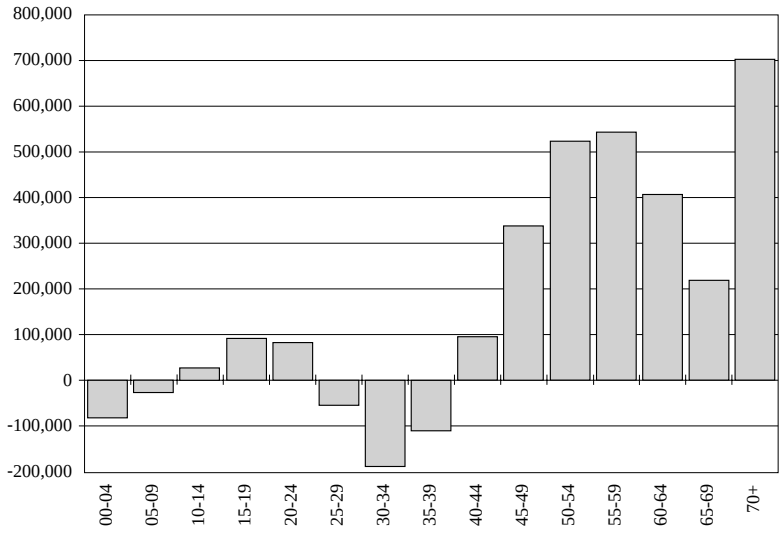
TABLE 3 (CONT'D)

Saint-Jean-sur-Richelieu	Que	76,941	12.6	0.3
Fredericton	NB	76,450	6.5	0.3
Chilliwack	BC	73,928	23.0	0.3
North Bay	Ont	66,647	5.3	0.2
Lethbridge	Alb	66,206	8.6	0.2
Granby	Que	64,135	8.0	0.2
Drummondville	Que	63,931	6.4	0.2
Red Deer	Alb	63,350	9.0	0.2
Shawinigan	Que	62,002	0.4	0.2
Charlottetown	PEI	60,631	5.6	0.2
Saint-Jérôme	Que	59,975	15.4	0.2
Medicine Hat	Alb	58,334	10.8	0.2
Cornwall	Ont	55,768	4.1	0.2
Saint-Hyacinthe	Que	51,146	1.9	0.2
Sub-Total		20,272,645	7.0	69.8
All Other Canada		8,760,833	4.9	30.2
Canada		29,033,478	6.4	100.0

- the next largest gains are expected among those aged 60 to 64 (up 407,000), those aged 45 to 49 (up 339,000) and those aged 65 to 69 (up 233,000); the 45-49 group represents those born at or near the peak of the baby boom;
- every five year age group under the age of 45 is expected to grow less than any of those groups over the age of 45, and in some cases significant declines are expected; these cohorts represent Generation "X" as well the baby bust and echo generations;
- the declines are expected to be especially large among those aged 30 to 39; these people – who as of 1996 are between the ages of 20 and 29 – are members of the baby bust generation and were born in the 1967 to 1976 period when births fell significantly compared to the previous decade;
- Canada's population among those under 45 is either growing by only a small amount or declining over the next decade despite the major inflows of immigrants assumed in these projections; immigrants tend to be relatively young, concentrated among the age groups from 20 to 44 (57 percent of immigrants between 1990-1992 were in this age group), often with young children in tow; if it were not for this immigration inflow Canada's population under the age of 45 would grow even less quickly over the next decade than we currently anticipate.

FIGURE 3

CANADA'S POPULATION GROWTH BY AGE, 1996-2006



CANADA'S POPULATION GROWTH BY PROVINCE FROM 1996 TO 2006

OVER THE NEXT DECADE WE EXPECT fertility rates and mortality rates by province will hold constant at recent levels, and we project net migration – representing net flows from abroad and from province to province – will heavily favour growth in Ontario, British Columbia and, to a lesser extent, Alberta (Quebec will be favoured, but only by net international migration, as it is a net loser in terms of net inter-provincial migration). Ontario, British Columbia, and Alberta are favoured by both types of migrants because they afford higher living standards and greater economic opportunities compared to all of the other provinces. Net migration will also be a positive factor for population growth in each of Nova Scotia, New Brunswick, and Prince Edward Island, but it will negatively impact the populations of Saskatchewan, Newfoundland, Manitoba, the Northwest Territories, and the Yukon. Thus, we expect Canada's population by province will grow over the next decade as indicated below.

TABLE 4
SOURCES OF POPULATION GROWTH, CANADA BY PROVINCE,
CUMULATIVE CHANGE, 1996-2006

	Births	Deaths	Net Natural	Net Migration	Total Change
Newfoundland	57,432	44,518	12,914	-21,091	-8,177
Prince Edward Island	17,583	12,580	5,003	4,296	9,299
Nova Scotia	104,757	84,363	20,394	14,957	35,350
New Brunswick	80,723	65,234	15,489	5,042	20,531
Quebec	821,374	632,375	188,999	245,929	434,929
Ontario	1,335,339	922,400	412,938	689,618	1,102,556
Manitoba	153,632	102,015	51,617	-7,015	44,602
Saskatchewan	136,603	88,620	47,983	-30,799	17,184
Alberta	368,497	190,758	177,739	78,806	256,545
British Columbia	466,580	319,081	147,499	523,120	670,619
Yukon	3,965	1,804	2,161	-476	1,686
Northwest Territories	14,203	3,550	10,653	-2,767	7,885
Canada	3,560,687	2,467,298	1,093,389	1,499,620	2,593,009

CANADA'S POPULATION GROWTH BY URBAN AREA FROM 1996 TO 2006

IN GENERAL WE EXPECT THOSE URBAN AREAS OF CANADA exhibiting the fastest and/or most significant absolute growth during the period from 1991 to 1996 to continue to do so over the next decade. For example, in relative terms we expect the ten fastest growing areas to be Barrie, Ontario followed by Chilliwack, Kelowna, Nanaimo, Kamloops and Abbotsford in British Columbia, Saint-Jérôme in Quebec, Vancouver in British Columbia, Saint-Jean-sur-Richelieu in Quebec, and Prince George in British Columbia.

We expect the ten urban areas making the greatest contribution to Canada's growth in absolute terms to be Toronto in Ontario, Montreal in Quebec, Vancouver in British Columbia, Ottawa-Hull in Ontario-Quebec, Calgary and Edmonton in Alberta, Quebec City in Quebec, Winnipeg in Manitoba, Hamilton in Ontario, and Kelowna in British Columbia.

Our expectations regarding urban growth in Canada over the next decade are summarized in the following table.

TABLE 5

POPULATION GROWTH, CANADA BY MAJOR URBAN AREA, 1996-2006

	1996	2006	96-06	% Change 96-06
Toronto	4,222,791	4,720,406	497,614	11.8
Montreal	3,258,907	3,456,544	197,637	6.1
Vancouver	1,811,934	2,124,981	313,047	17.3
Ottawa-Hull	1,005,187	1,131,547	126,361	12.6
Edmonton	869,003	912,409	43,406	5.0
Calgary	827,570	936,966	109,396	13.2
Quebec	677,165	724,665	47,500	7.0
Winnipeg	669,586	696,033	26,448	3.9
Hamilton	626,051	664,169	38,118	6.1
London	406,402	443,268	36,866	9.1
Kitchener	387,517	433,815	46,298	11.9
St. Catharines-Niagara	379,302	401,021	21,719	5.7
Halifax	336,297	360,168	23,870	7.1
Victoria	306,817	334,819	28,002	9.1
Windsor	278,909	303,654	24,746	8.9
Oshawa	258,617	283,395	24,778	9.6
Saskatoon	221,006	238,447	17,442	7.9
Regina	196,743	204,656	7,913	4.0
St. John's	177,238	187,310	10,072	5.7
Chicoutimi-Jonquière	165,385	172,381	6,996	4.2
Sudbury	161,892	168,364	6,473	4.0
Sherbrooke	145,457	155,325	9,868	6.8
Kingston	143,313	153,477	10,164	7.1
Trois-Rivières	139,815	145,610	5,794	4.1
Kelowna	136,625	173,625	36,999	27.1
Matsqui	135,365	167,592	32,227	23.8
Saint John	126,688	129,423	2,735	2.2
Thunder Bay	124,973	125,493	520	0.4
Sydney	116,977	118,317	1,340	1.1
Barrie	113,050	146,513	33,463	29.6
Moncton	111,535	119,561	8,027	7.2
Guelph	104,204	114,311	10,106	9.7
Brantford	102,305	109,805	7,501	7.3
Peterborough	101,198	105,572	4,374	4.3
Belleville	100,293	107,645	7,352	7.3
Sault Ste. Marie	91,419	100,714	9,295	10.2
Nanaimo	89,337	112,492	23,155	25.9
Sarnia-Clearwater	88,918	90,128	1,210	1.4
Kamloops	80,194	99,456	19,262	24.0
Prince George	77,108	89,048	11,940	15.5
Saint-Jean-sur-Richelieu	76,994	90,129	13,136	17.1
Fredericton	76,524	83,878	7,354	9.6

TABLE 5 (CONT'D)

Chilliwack	74,089	95,021	20,931	28.3
North Bay	66,637	72,132	5,496	8.2
Lethbridge	66,215	74,277	8,062	12.2
Granby	64,175	71,530	7,356	11.5
Drummondville	63,943	69,885	5,943	9.3
Red Deer	63,354	71,240	7,886	12.4
Shawinigan	61,949	62,109	159	0.3
Charlottetown	60,668	65,607	4,939	8.1
Saint-Jérôme	59,981	71,779	11,799	19.7
Medicine Hat	58,355	67,141	8,786	15.1
Cornwall	55,748	58,592	2,844	5.1
Saint-Hyacinthe	51,139	52,383	1,243	2.4
Sub-Total	20,272,862	22,268,828	1,995,966	9.8
All Other	8,760,595	9,357,638	597,043	6.8
Canada	29,033,457	31,626,466	2,593,009	8.9

CANADA'S LABOUR FORCE GROWTH BY AGE AND GENDER FROM 1996 TO 2006

LABOUR FORCE PARTICIPATION INITIALLY INCREASES WITH AGE and then declines with age (an inverted U-shaped relationship). Therefore, we project that between 1996-2006 (and beyond to 2021) overall participation rates will decline. Participation rates by gender exhibit a different pattern. In general terms the rates for females over 35 will increase while the rates for men over 35 will decrease. This reflects the later entry of females into the paid labour force during the postwar period and male dominance of jobs in the primary and secondary sectors where substantial corporate "downsizing" has taken place.

Between 1981 and 1991 the labour force participation rate in Canada increased from 65.3 percent to 66.7 percent. However, given poor job prospects over the last five years, it fell to 64.8 percent, or below its rate in 1981. The decline occurred among males of all age groups and among females under 35. Interestingly, rates among females over 35 continued to climb during the recession.

In the future we expect the following participation rate trends to emerge:

- over the next five years we expect some cyclical recovery in the rates among males under 35 and among females under 25;

- beyond 2001 we expect rates among both males and females 15 to 19 to hold steady, while those among males 20 to 34 and among females 20 to 24 should resume their pre-recession long term rates of decline;
- among males over 35 we expect the pre-recession long term decline to continue, but at a reduced rate of decline;
- among females over 35 we expect rates to continue to climb; as their rates reach those of males in the same age group, however, we expect them to decline in tandem.

As a result of these shifts the total participation rate in Canada will increase from 64.8 percent currently to 65.2 percent by 2001, then gradually decline to 63.9 percent by 2006 (and to 59.2 percent by 2021), a trend consistent with the predicted aging of Canada's population.

These participation rate changes in conjunction with the changes in population by age and gender discussed earlier will result in the following labour force trends:

- over the next decade the labour force among males under 25 years of age and among females of the same age group will increase by only about 100,000 persons for each gender; over the last decade these two groups declined significantly; over the period from 2006 to 2016 this labour force age group is not expected to grow at all;
- over each of the next two decades neither the males 25 to 44 nor the females 25 to 44 age group are expected to contribute to Canada's labour force growth, in sharp contrast to the last ten-year period during which they were among the main contributors;
- over the next decade — from 1996 to 2006 — both males and females over 45 will be almost the only contributors to labour force growth; beyond 2006, however, their contribution will drop significantly (although they will still be the only overall contributors, with females in this age bracket contributing most of all).

The trends for the next ten years demonstrate, once again, the impact of the aging of the baby boom, bust, and echo generations. Lower labour force growth for persons under 45 is linked to the predominance of the bust and echo generations in this age category. The higher growth rate in the 45 and over category illustrates the predominance of the baby boom, especially its large front end and peak cohorts. So as Canada's population ages, its labour force ages in lockstep, with trends in growth and participation rates reflecting the impact of aging.

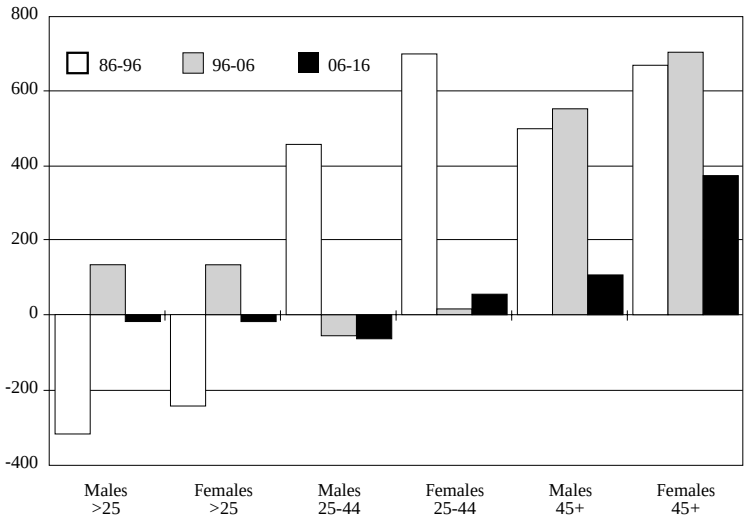
TABLE 6

PARTICIPATION RATES BY AGE AND GENDER, 1981-2021

	1981	1986	1991	1996	2001	2006	2011	2016	2021
Males 15-19	58.4	56.1	55.9	50.0	55.0	55.0	55.0	55.0	55.0
Males 20-24	86.6	84.8	81.5	78.6	80.3	78.8	77.3	75.8	74.3
Males 25-34	95.3	94.3	92.6	91.0	92.7	92.0	91.4	90.7	90.1
Males 35-44	96.0	94.9	93.7	92.1	93.7	93.0	92.4	91.7	91.1
Males 45-54	92.7	91.6	90.6	89.4	88.6	87.8	86.9	86.1	85.3
Males 55-59	83.1	79.2	76.1	72.7	72.5	71.4	70.3	69.2	68.2
Males 60-64	65.5	56.8	48.2	44.0	40.0	36.0	32.1	28.1	24.1
Males 65-69	21.8	18.6	17.6	17.1	16.6	16.2	15.7	15.3	14.8
Males 70 +	9.0	7.6	7.4	6.1	5.6	5.1	4.5	4.0	3.5
Females 15-19	53.4	53.1	54.0	48.0	53.0	53.0	53.0	53.0	53.0
Females 20-24	73.9	77.2	75.9	72.4	74.8	73.2	71.7	70.1	68.5
Females 25-34	66.4	74.0	77.5	76.7	78.8	79.8	80.8	81.8	82.8
Females 35-44	64.7	72.4	78.4	78.4	80.3	81.3	82.3	83.3	84.3
Females 45-54	55.6	60.8	70.0	72.6	75.8	79.1	82.4	85.6	85.3
Females 55-59	40.1	42.3	46.5	48.8	51.0	53.2	55.5	57.7	59.9
Females 60-64	26.2	24.3	24.5	23.3	22.1	20.9	19.7	18.5	17.3
Females 65-69	7.9	7.2	7.0	7.4	7.5	7.7	7.9	8.0	8.2
Females 70 +	2.5	1.9	1.7	1.5	1.3	1.1	0.9	0.7	0.5
Men	78.7	77.1	75.1	72.4	72.2	70.0	67.7	65.4	63.3
Women	52.3	55.8	58.5	57.5	58.4	57.9	57.2	56.5	55.3
Total	65.3	66.3	66.7	64.8	65.2	63.9	62.3	60.8	59.2

FIGURE 4

LABOUR FORCE GROWTH IN CANADA, 1986-2016
TEN-YEAR CHANGE IN THOUSANDS



CANADA'S EMPLOYMENT GROWTH BY INDUSTRY FROM 1996 TO 2006

ONE IMPORTANT ECONOMIC TREND UNDERWAY IN CANADA is the changing profile of job creation. In the ten-year period ending in 1995 the number of jobs in Canada increased by 1,764,000. The primary sector – which includes agriculture, fishing, and forestry – lost 53,000 jobs over this period while the manufacturing sector lost 3,000, and public administration lost 20,000. These losses, however, were more than offset by major gains in the services, trade, finance, construction, and utilities sectors. These trends in job growth by industry are expected to continue into the foreseeable future.

TABLE 7

EMPLOYMENT GROWTH IN CANADA BY INDUSTRY, 1985-1995
THOUSANDS OF PERSONS

	1985	1995	Change 85-95	% Change 85-95	% Change 1995
All Industries	11,742	13,506	1,764	15.0	100.0
Primary	1,074	1,022	-53	-4.9	7.6
Manufacturing	2,064	2,061	-3	-0.1	15.3
Construction	608	724	115	19.0	5.4
Utilities	919	1,033	114	12.4	7.6
Trade	2,088	2,307	219	10.5	17.1
Finance	660	809	149	22.6	6.0
Services	3,795	5,036	1,241	32.7	37.3
Business services	527	867	340	64.4	6.4
Educational services	768	944	176	23.0	7.0
Health and social services	1,012	1,340	328	32.4	9.9
Accommodation, food, beverages	664	861	197	29.6	6.4
Other service industries	825	1,025	200	24.3	7.6
Government	830	810	-20	-2.4	6.0

TABLE 8

EMPLOYMENT GROWTH IN CANADA BY INDUSTRY, 1996-2006

	1996	2006	Change 96-06	% Change 96-06
Primary	760,948	792,632	31,684	4.2
Manufacturing	2,070,587	1,865,013	-205,574	-9.9
Construction	764,451	959,568	195,117	25.5
Utilities	1,029,566	1,106,875	77,309	7.5
Trade	2,313,934	2,408,197	94,264	4.1
Finance	818,675	1,019,955	201,280	24.6
Services	5,120,863	6,193,025	1,072,163	20.9
Government	785,718	800,235	14,517	1.8
Total	13,664,741	15,145,501	1,480,759	10.8

APPLYING THE TEMPLATE

THE UNDERLYING ASSUMPTIONS REGARDING THE APPLICATION of the template are that "every year each person gets a year older" and that "people tend to act their age". The first assumption is almost a tautology (i.e., a few people do not make it to the next year) and it is linked to Canada's population structure. The baby boom generation accounts for about one-third of the current population, the bust generation is 45 percent smaller, and the echo, while larger than the bust, is only 70 percent of the boom cohort. In combination the three generations represent almost three-quarters of Canada's population.

To understand the impact of demographics it is important to position the age range of the members of the three cohorts in a given period. For example, in 1996 the baby boom ranges in age from 30 to 49 years; the bust generation from 17 to 29 years; and the echo from birth to 14 years. This observation brings into play the second assumption about "acting your age" or that age is the most important determinant of economic behaviour.

Are the recreational or educational or housing needs of the three cohorts the same? Are the members of one cohort more inclined to save or to spend money? If the largest cohort, the boom generation, ranges from 30 to 49 years in age what is the future of activities such as tourism, major league sports, or the opera?

SUPPLY FACTORS

Youth Employment

Traditionally the youth employment market has been described in relation to the 15-24 years cohort. More recently, the youth cohort has sometimes been analysed in terms of the 15-29 years cohort. This re-definition of the age boundaries of the youth cohort reflects the reality that more youth are obtaining higher education up to the graduate level of study, a phenomenon attributable in part to the poor economic conditions (and hence poor prospects for full-time employment) in Canada during this decade.

"Generation X" should also be considered as part of the youth market. This is the cohort that represents the last quarter of the baby boom (just under 27 percent); it is not the "twenty something" generation popularly depicted in the media. "Generation X" merits inclusion in a demographic analysis of youth employment because it is the generation that has been hardest hit by the demographic and economic realities of the last fifteen years. Members of this cohort entered the labour force in the late 1970s and were victimised by the recession of the early 1980s. In addition, they have been the prime victims of the sub-

stantial downsizing of government and business organisations that has taken place during the 1990s. The pernicious impact of downsizing is most evident where seniority, not merit, is the primary basis of employment tenure (for example, the recent laying off of young primary and secondary teachers in Ontario as a result of reductions in provincial government transfers).

In 1981 the distribution of the Canadian population in the prime labour force participation years (i.e., 15-64 years) exhibited the triangular shape that has been evident since 1921. A triangular distribution means there is a broad base of younger workers that gradually tapers at the top to a smaller group of older workers who are on the cusp of retirement. The year 1981 is a good proxy for the period when the bulk of the baby boom was entrenched in the labour force.

Our projection of the Canadian population in 2006 shows that compared to 1981 there will be substantially fewer people under the age of 35 years and more over the age of 35 years. The deficit in the under 35 years cohort exists even with substantial immigration and the continuing entry of the echo generation into the labour force. Some of the deficit in the under 35 age cohort will be absorbed by the greater use of technology, a trend that has been evident in large manufacturing companies (for example, the automobile manufacturers) for some time. However, is technology as a substitute for labour the answer in the much larger and faster growing (in terms of employment) services sector? If technology is an inappropriate substitute for labour in the services sector, there will be a high demand for young workers in a market where they will be in shorter supply.

In small and medium-sized manufacturing firms, the construction industry, and the primary sector there is a potential shortage of tradespersons. During the post-war period, the youth cohort has supplied the candidates for apprenticeship and immigrants, mostly from Europe, have supplemented the ranks of journeypersons. Both of these groups will be in short supply in the future. Demographic studies of selected trades in the Ontario construction industry have revealed a labour force that is currently older than the population at large. Two independent studies have raised this issue in relation to firms in the Hamilton, Ontario labour market. TransSkills, a training broker in Hamilton-Wentworth region, reported that demographic factors will create a shortage of skilled workers by 2005. A survey by the Hamilton YWCA Employment Services of the area's small- and medium-sized enterprise (SME) sector observed that skilled jobs were available in 26.5 percent of the 170 firms contacted.

Self-employment

Between 1976 and 1987 the number of self-employed persons in the labour force increased from 1 million to 1.6 million, a growth rate of 60 percent. In 1987 about 54 percent of the self-employed were own-account workers, i.e.,

they did not usually employ paid staff. By 1995 the ranks of the self-employed had swelled to 2.1 million.

These data are derived from studies on self-employment conducted by Statistics Canada. The studies also establish the fact that the older the worker, the more likely she or he is to leave corporate employment and go into business for themselves. In 1987 some 20 percent of workers aged 45 to 64 were self-employed compared to 13 percent of workers aged 25 to 44 and only 5 percent of those aged 15 to 24. This relationship was also detected in the 1995 data. The direct link between age and self-employment reflects the differentials in experience, skills, resources, and opportunities between older and younger workers.

The front end of the baby boom reached the age of 40 in 1987. With the peak of the baby boom at age 36 in 1996, the largest group within the "big generation" has not arrived at its peak self-employment years. Furthermore, this trend towards self-employment is accelerated by the rash of downsizing in both the public and private sectors.

However, not all the casualties of downsizing are well positioned to become self-employed. Workers under the age of 35 are at a disadvantage compared to those in their 50s or 60s who are likely leaving corporate or institutional employment with a substantial severance package including transitional assistance.

Computer Literacy

Longitudinal data available from Statistics Canada show that computer literacy is related directly to household income (i.e., the greater the income, the higher the literacy) and inversely to age (i.e., the older you are, the lower your literacy level). A 1989 study revealed a substantial drop in literacy levels for persons age 45 and over. A similar study in 1994 found that the drop off point had shifted to age 55 but only 55 percent of respondents aged 45 to 54 could use computers (38 percent in 1989).

A 1996 Statistics Canada survey by Paul Dickinson, an economist at McGill University, and George Sciadas, an employee of the agency, shows that the penetration rate of computers has increased from 19 percent of Canadian households in 1991 to 28.8 percent in 1995 (25 percent in 1994). They also identify how penetration rates vary by region within Canada. About one-third of households in Alberta, British Columbia, and Ontario have computers compared to one-quarter of households in Quebec, Saskatchewan, Manitoba, and Nova Scotia and one-fifth of households in Newfoundland and New Brunswick. Prince Edward Island at 16 percent has the lowest rate.

An indication of whether Canadians are using the Internet is provided by a survey conducted by Gallup Canada and Goldfarb Consultants for Andersen Consulting Canada. The most recent annual survey obtained the views of 1,337 people. The results show that more people are hooked up (29 percent in

1996 versus 12 percent in 1995) and that the Internet is used mostly for transactions. However, there is a reluctance to purchase goods that the potential customer can not inspect.

Another survey conducted this year gives a glimpse of how businesses are using the Internet. A Compas Inc. survey for the Toronto consulting firm A. T. Kearney Inc. polled senior executives of 412 companies from across Canada and representing various sectors and firm sizes. Forty (40) percent of the firms polled are hooked up to the Internet (compared to 20 percent six months ago) and the share is expected to reach 80 percent within 12 months. Twenty-two (22) percent of the hooked-up firms have Web sites and the share is expected to reach 60 percent within 12 months. Eighty (80) percent express either strong or moderate support for the Internet as an important business tool while only 12 percent regard it as a "fad" (8 percent are undecided). Finally, the degree to which a firm's workers are on-line varies:

under 10 employees:	36% of firms
10-25:	21%
26-50:	24%
51-75:	8%
over 75:	8%
Don't know:	2%

In the opinion of Jeffrey Gilchrist of A. T. Kearney, Canadian firms on average are at the end of the first stage of implementing the Internet, i.e., information retrieval. The stages yet to be completed are information provision to customers and transactions (for example, making reservations or filling out forms). Nadir Desai, president of the Canadian subsidiary of PSINet Inc., the world's largest provider of Internet access to corporations, observes that at this point companies use the Internet primarily to communicate with each other. In his view it will be a long time before the Internet emerges as an electronic shopping centre. This is because people are reluctant to buy what they cannot see. An exception to this trend may be cheap items (for example, a song from a CD for $1.00). Stephen Kiar, a partner in A. T. Kearney, believes the obstacles to increased business use are not costs, privacy, or unclear economic benefits but rather the complexity of the technology. Therefore, proponents of the "Net" should focus on education.

The banking industry is the best example within the service industry of the deployment of computer technology. Furthermore, it is being implemented in a downsizing context. Braxton Associates (Deloitte & Touche) in a 1995 survey of 200 banks in Canada, the United States, Great Britain, and Europe found that technology will reduce branches by one-half and employees by one-quarter over the next decade. In the U.S. 450,000 jobs will disappear. A similar trend is evident in Canada – staff at the "big six" banks has been decreasing by 2.5-3.0 percent per year during the last three years. The predominant notion is

that technology will handle routine transactions and staff will be oriented to sales and customer service for those who can afford personal financial services.

A recent survey by Payment Systems Inc., a banking industry market research firm in Tampa, Florida, found that while one-third of households own a computer and a majority of those have a modem, just 1 percent of consumers currently use computer banking and only 18 percent would use it if it were available. Of the 2,590 people surveyed, 63 percent were not even aware if their financial institutions offered it. Respondents who are not likely to use computer banking did not see a need for it or lacked confidence in it. Almost one-quarter had concerns about security and privacy. In addition, although 78 percent of respondents owned personal financial management software, only 46 percent to 59 percent actually use it.

In Canada, Canada Trust's CTConnect is currently the only national computer banking program. Royal Bank research shows that 20 percent of its customers would like to use the service. Canadian banks have also found that automatic teller machine (ATM) use is declining due to the use of debit cards, telephone banking, and credit card rewards programs. Other research has shown that older customers do not use ATMs to any great extent. The bank's response has been to make more services available through ATMs in the hope of attracting more customers.

One observer of the American banking scene suggests that the move towards technology will not be easy. A. Christian Frederick, managing director of Dove Associates Inc. in Boston states:

> PC home banking is going to be a very difficult selling job for financial institutions. Getting consumers to change how they bank and pay their bills is going to be a tremendous challenge and it will take an effective marketing campaign.

We put forward two hypotheses about the impact of age on computer literacy (and technological literacy in general). The first hypothesis is in line with the findings of the Statistics Canada studies that over the past ten years have shown a consistent inverse relationship between the ability to use a computer and age. Under this hypothesis individuals do not continue to develop computer skills acquired at an earlier age. Instead those skills, so formidable when one was a twenty-five year old graduate student, are “congealed” in your 40s and 50s as other activities make demands on your scarce time, anything from a greater interest in travel to taking care of your ailing mother who lives in another community. From this perspective the seventy-three year old computer illiterate of today was probably (and still is) most adept with the information technology of the 1960s. Another aspect of this hypothesis is the emphasis on quality and service by the older customer or client. In this regard it is our contention that quality and service are better dispensed by a well-trained person on the front line than information conveyed by a computer screen or voice

on the front line than information conveyed by a computer screen or voice messaging system.

The second hypothesis focuses on the penetration rates of computer technology. Several of the surveys mentioned earlier provide an indication of how far computers have been woven into the fabric of everyday life for both individuals and businesses. Under this hypothesis the penetration rates for computers are compared with those of other forms of technology (for example, microwaves or compact disk players) to judge when they will be used on a widespread basis. This hypothesis assumes that you carry forward your level of computer literacy (if not increase it) and that computers, like other forms of technology that are now commonplace, will become increasingly "user friendly".

Indeed, the imperative of user friendliness is a bridge between the two hypotheses. However, the penetration hypothesis assumes that this happens over time while the congealment hypothesis assumes, at least implicitly, that it does not to any sufficient extent.

Education and Training

Given that children are required by law to attend school until the age of 16 years, demographics can project school enrolments with great accuracy. Appropriate adjustments can be made for projections of enrolment beyond the mandatory age.

One approach to projecting the future demand for education services is to determine at any point which cohort is moving through which level of the education system. During the next ten years the children entering primary school will be the back end of the echo generation and the "millennium kids". These cohorts are relatively small. The echo component is essentially the kids born after the peak in births in 1990; the millennium kids are the children of the baby bust generation. The need for new facilities and teachers will decrease, especially in those provinces where the echo generation is less pronounced.

The peak and back end of the echo generation move through the secondary system during the 1996-2006 period. This will put pressure on the supply of facilities and staff, particularly in Ontario and the western provinces.

The post-secondary system is a unique case in that it will attract clients from all age groups to meet the labour force re-training and leisure needs of an aging population. Furthermore, corporate downsizing magnifies both needs in two ways. First, the "survivors" of downsizing will require higher and continuous levels of training and education to maintain productivity, especially as the technological component of their work increases. Second, depending on the exit path chosen, the "victims" of downsizing will be prime consumers of education and training services. Some will need new skills to take up positions with new employers or to pursue self-employment; others will seek knowledge in line with retirement goals.

The key question is whether colleges and universities are positioned in terms of their learning methodologies and administrative policies to cater to an adult learner who will demand a level of quality and service much different than that of a nineteen year old undergraduate? The front end of the echo generation begins to enter the post-secondary system in the late 1990s. Will institutions respond instinctively and traditionally to this enrolment blip and leave the potentially more lucrative adult education market to the private sector?

Demographic change also creates challenges for industry-based training. Compared to their counterparts in countries such as Germany or Japan, Canadian employers have been reluctant to invest in their employees to the same or greater extent that they invest in machines and equipment. This is a problem that some have described as the absence of a "training culture". The Ontario studies referred to earlier (see Youth Employment section) highlight this issue in relation to skilled trades jobs. It is also an issue for corporations in the service sector that emphasise cost containment in their restructuring strategies.

Corporate Restructuring and Career Paths

In relating demographics and public sector labour force trends, four types of generic career paths should be identified: steady state, linear, spiral, and transitory. One of the implications of current demographic trends in Canada is the transition from linear to spiral and transitory career paths. However, the current emphasis on downsizing – the stripping of jobs to enhance short-term profitability or reduce the deficit – is creating a situation of demographic imbalance within public and private corporate structures that will reduce long-term productivity and profitability.

The steady state career is characterised by little or no movement because the worker essentially holds one occupation during her or his working life. University professor is a good example of this career path. The type of organisation corresponding to the steady state career is a flat, almost rectangular, structure. There is a hierarchy but it pales before that found in government departments or major business corporations. There are few opportunities for advancement and the reward system favours employment security initially and compensation levels once security is achieved.

The linear career path emphasises upward movement through the numerous levels of a hierarchical ("triangular") organisation. Individuals pursuing this career path may ultimately have two occupations, one on the service delivery side of the organisation and the other in senior management. The reward system is based on the progressive accumulation of both authority and compensation through promotion. A career within the police service or the military illustrates the linear conception well, but so do the careers of the thousands of workers who are employed in government agencies or large private corporations. During much of the postwar period, successive waves of workers have expected to pursue linear careers within triangular structures.

The spiral career path is characterised by both upward and lateral organisational movement. Individuals who pursue this career path can expect to have several occupations during their working years. One may start out as an accountant and then be promoted eventually to the position of director of financial services, i.e., the first rung of the senior management level. At this point the next occupation may involve a lateral move to become the director of program evaluation. In sum, over time one progresses within the organisation through a series of vertical and lateral moves.

A spiral path requires a substantially different organisational structure and reward system than that of the linear path. The organisation is still a triangle but it is much flatter in shape. Individuals are not motivated by the continual prospect of promotions but by the challenges of different occupations and the opportunities associated with re-education and re-training.

The transitory career path emphasises lateral movement among different projects either within one organisation or among several. Individuals pursuing this path will have many occupations during their career. The concept of the temporary team is the organisational structure that fits best with the transitory career path. Independence, variety, and a flexible work schedule are the rewards; the absence of security and a fixed level of compensation are the constraints. Own-account workers within the ranks of the self-employed in Canada illustrate this career path.

The baby boom represents a twenty-year "rectangle" of workers moving through a triangular corporate world. The central issue is that the boom generation challenges the leaders of traditionally-structured organisations, where linear careers are the norm, to "push a rectangle up a triangle". The problem is "plateauing" or career blockage for large groups of workers conditioned to regard upward mobility as the signpost of success. The response is delayering and reengineering to strip out unnecessary levels of management and work processes and create a flat and responsive organisation. However, in too many cases another step has been taken – the downsizing of staff to contain financial costs. From the perspective of demographics plateauing, reengineering, and delayering, but not downsizing, are "inevitable surprises".

The impact of demographics on organisational structure and career paths is not simply an issue of the 1990s. This issue will become increasingly problematic over the next ten years. In 1981, as the last of the baby boom generation began to enter the labour force (defined as workers between 15-64), the distribution of the working age population still exhibited its traditional triangular shape, i.e., a mass of younger workers at the base and increasingly fewer and older workers as the ranks approach the apex. By 2006 the baby boom will range in age from 40-59 with the peak at 46. Projections show this cohort as the broad top end of a barrel-shaped labour force. The bottom levels of the old triangular labour force (i.e., workers under 35) will be less occupied than in the past. Downsizing, as currently practised, accelerates this natural trend.

Federal government employment data for 1995-1996 lend further support to the thesis that the baby boom dominates organisational ranks. During 1995-1996 the federal public service was reduced by just under 8 percent. Notwithstanding absolute drops in all major age cohorts, the proportion of workers under age 35 fell by more than 2 percent and the proportion of workers 35 and over increased by more than 2 percent. The increased share for "older" workers favoured the baby boom generation. Boomers increased their share by about 2.5 percent. Furthermore, the older front end and peak boomers (age 35-49) fared the best with an increase of well over 3 percent. "Generation X" declined slightly.

The juxtaposition of the huge baby boom generation with the management strategy of downsizing raises a number of important questions for Canada's governments and corporations. How should organisations adjust their structures, policies, and procedures to manage the transition of the boomers (and pre-boomers) from linear to spiral and transitory career paths? How important will workplace training become as a means of maintaining morale and productivity? What are the longer-term economic and social consequences of the blunt instrument of downsizing?

Downsizing, either in place of or in conjunction with reengineering, represents the conventional wisdom on how governments (and businesses) can escape their financial woes. As ministers face citizens' wrath over excessive levels of deficit spending and public debt, the reflex response to this pressure is to implement a scheme that works, at best, in the short term.

Downsizing as the preferred "short term solution" typically involves three elements:

1. cutting staff usually across the board or on the basis of seniority;
2. organisational restructuring that emphasises greater centralisation of senior management authority; and
3. substituting technology for people nominally to improve service delivery.

Although there may be short-term financial benefits, the long-term problems created by downsizing outweigh the benefits (our discussion of these problems parallels the 1993 study conducted by The Wyatt Company in the United States). The first problem is that the survivors of the corporate bloodletting are often left in a demoralised and less productive state. In addition, "corporate loyalty" often evaporates in the aftermath of downsizing.

There are other negative consequences associated with downsizing. Where younger workers (under 35) are the prime victims of cuts, governments and businesses run the risk of having a less computer-literate work force. Longitudinal studies undertaken by Statistics Canada have consistently demonstrated the inverse relationship between computer literacy and age (i.e., the younger the worker, the higher the literacy level). The tendency in downsizing scenarios to replace people with technology (although some critics contend that downsizing is more focused on the short-term cost reduction obtained

through cutting jobs, not strategic investment in technology), fails to recognise that technological solutions are potentially ineffective in an aging society, both for the client and service provider. At this point machines are not an appropriate replacement for front line staff. Technology must become extremely "user friendly" to have the desired impact on effectiveness. Moreover, technology does not replace everybody, therefore, substantial training expenditures will be required to develop the skills of the workers who must use the technology. Training costs will be higher for the older work force left in the wake of downsizing compared to one that is demographically balanced.

Downsizing also indiscriminately liberates some of an organisation's best employees. This observation reflects the hypothesis that two categories of workers tend to exit as a result of downsizing, i.e., the "young" (under 35) who have limited seniority but high potential and high computer literacy and the "old" (over 50) who have the experience and knowledge. Furthermore, it is our view (based on anecdotal evidence) that, regardless of age, those who depart are the government's most entrepreneurial and creative people – the people who feel that they can make it on their own particularly with or without the assistance of an attractive severance package.

The exodus of "good people" creates a number of "organisational deficits". An organisation without a significant youth cohort runs the risk of exhibiting low levels of "energy", client responsiveness, and computer literacy. In this regard governments and businesses will not only face a competitive future market for workers under the age of 35, but they will also face an even more competitive market for the best workers. At the older end of the employee spectrum the exit of "good people" means the loss of strategic expertise and "institutional memory", deficits that often lead to inefficiency and ineffectiveness. Recent press reports from Alberta indicate that the cumulative impact of years of wage decreases and reductions in operational resources is inducing senior civil servants to seek (and obtain) higher salaries in the private sector. There is now concern that the Alberta Government is losing strategic expertise and its most innovative managers.

Unfortunately, for many organisations the "good people" liberated by downsizing are probably not coming back. Those with professional and management backgrounds are swelling the ranks of the self-employed and will be available as consultants. They will not form part of the "core" employee group that the senior executives of downsized organisations suggest is sufficient to reach even higher levels of productivity. They will revel in the variety and flexibility of their transitory careers and continue to make an important contribution to the economy as a whole.

Indeed, many governments make it relatively easy for the "good people" to leave. The case of the federal government is instructive. During the 1995-96 fiscal year, just under 77 percent of the separations were under various incentive programs, particularly the Early Retirement Incentive (29 percent), Civilian Reduction Program (20 percent), and Early Departure Incentive (18 percent).

The Early Departure Incentive (EDI) is potentially lucrative – depending on years of service and age it could pay out up to 90 weeks of salary and $7,000 for counselling and re-training. The federal government initially estimated that about 4,000 of the 50,000 eligible employees would take up the EDI. In 1995-96 3,557 federal employees accepted the EDI. The "job swap" program is also both popular and an indicator of the desire of some civil servants to start new careers. In 1995 it was reported that the ratio of swaps for members of the Professional Institute of the Public Service was 2:1 in favour of exit.

In sum, by the 1980s the sheer size of the baby boom generation began to put pressure on the vertical structure and linear career paths characteristic of large-scale public and private sector organisations, thereby making the transition to flatter corporate structures with spiral and transitory career paths inevitable. By the 1990s economic factors, some global in origin, increased the pressure on government and business leaders to improve short-term financial performance. Downsizing, with its emphasis on containing costs through job cuts and related measures, meets this goal but it creates longer-term problems that will be accelerated by demographic trends.

The alternative to downsizing is to "flatten the triangle" and humanely and creatively move displaced staff from linear to spiral and transitory career paths. Downsizing flattens corporate structures but it also sheds employees in the name of short-term financial benefit. Our perspective assumes that demographic balance within organisations is a key ingredient for long-term productivity and financial health. Also, it calls for much more flexibility in the workplace. One approach would be to offer the front end of the boom the option of a 20 percent reduction in compensation in return for a 20 percent reduction in workload. In addition, their employers must guarantee them job security based on performance. This option must be voluntary and requires flexible, individualised career plans (and generates the type of creative work that human resource management staff should be doing). The savings generated can be allocated to both the "bottom line" and the careers of "Generation X" and today's "twenty somethings". Adopting this option would reflect an uncharacteristic long-term perspective on productivity in government and business operations.

DEMAND FACTORS: PRIVATE SECTOR

Primary, Secondary, and Tertiary Economic Activities

The consumption of a "younger" population (under 50 years) is mostly focused on the output of the primary and secondary sectors of the economy. Therefore, the demand for durable goods such as houses, automobiles, and refrigerators as well as for food and alcoholic beverages is high. The front end of the baby boom is about to enter a period when saving for retirement and the consumption of particular types of services (for example, leisure or health services) will

be paramount. Therefore, the “service economy”, already well entrenched in Canada, will become an even more salient description of our marketplace.

Given the impact of aging on consumption (primarily the shift from durable goods to services), what Canada imports and exports will change. Assuming that industry productivity levels can be maintained or increased, Canada will export manufactured goods to the parts of the world with younger, goods-consuming populations. Domestically the consumption of services, particularly in areas such as health, travel, and financial planning will drive the economy.

The application of technology and the upgrading of the skills of workers who will use the technology continues to hold out the prospect of productivity gains in the primary and secondary sectors. However, where technology is a factor older workers will likely be less productive than younger workers who tend to be more literate. The relative productivity of older and younger workers may be further affected by differences in educational attainment and attitudes towards training. For example, studies of various trades in Ontario's construction industry have shown that a worker's level of formal education and interest in training programs are inversely related to age. This development means that employers will have to balance two issues – the need to provide continuous training for older workers, who have lower literacy and interest levels, and the need to recruit younger workers, who have higher literacy and interest levels, in a market where their supply will be tight.

In the services sector we have raised the question of whether technology is always an appropriate substitute for labour. The alternative is the development of highly skilled, flexible workers. Notwithstanding these implications, some service sector industries, most notably the banks and government, are travelling down the “technology for people” route. The surface rationale for the increased use of technology is improved service to the customer or citizen. The underlying purpose is profitability for business and cost reduction for government. However, the main obstacle for service industries attempting to meet financial objectives through the deployment of technology will be the older consumer's emphasis on quality and service. The technology option assumes that a machine can provide a higher level of quality and service in a nursing home, government employment office, or bank.

Quality and Service

As the baby boom ages into its 50s and 40s during the next ten years, the marketplace will be serving a consumer that places greater value on quality and service. This trend reflects the observation that the older consumer increasingly has the discretionary income but not the time to conduct a comprehensive search for the best combination of price, quality, and service. Data provided by Statistics Canada show that household income, consumption, and savings peak about the age of 54. However, although the mortgage may be paid off and

saving for retirement is a new priority, household heads in their 50s may still face a scenario in which their well-educated but underemployed “Generation X” children live at home to cut costs and “eighty something” parents are less able to care for themselves. When career pressures are added to personal ones, the net result is too little time to meet everybody's needs.

With the front end of the baby boom approaching 50, there is some evidence to support our hypothesis in the results of a March 1996 survey of 8,800 Canadians conducted by A.C. Nielson for the Consumers' Association of Canada and the National Quality Institute. The survey is the first of its kind to be conducted in Canada. Nearly all respondents stated that quality is important and two-thirds are willing to pay more to obtain better goods and services. The highest marks were awarded to pharmacies (93 percent), credit unions, and small retailers; government departments, cable TV companies, and Canada Post received the lowest marks. Two factors associated with higher levels of consumer satisfaction appear to be small scale of operation and the intensity of human interaction at the front line service. Moreover, about 70 percent of respondents said they were unhappy obtaining assistance through a voice-mail system, an approach more likely to be adopted by large-scale organisations in both the public and private sectors.

Notwithstanding these survey findings, both large and small businesses have the potential to provide quality and service to their customers. However, they face different constraints. Downsizing by Canada's corporate giants is accelerating the trend towards substituting technology for people, even at the front line (for example, automatic teller machines or voice mail). The small business sector is less reliant on technology and more labour-intensive but it is generally reluctant to invest in staff training, including customer service training. If the constraints can be overcome, both types of business will be better positioned to cater to the quality and service demands of the older consumer that will soon rule the marketplace.

Retail Trade

A young population that is focused on the consumption of essential goods and services and that is in debt to finance this consumption is concerned with price. An older population that is less burdened with debt and has more discretionary income can be more concerned with quality and service. The concern with quality and service reflects the time squeeze attributable to career and personal demands as well as the “retail wisdom” of the older consumer. How will the retail sector adjust to the fact that the largest segment of the market is consuming fewer durable goods and more services and that what older consumers value most is quality and service? In our view neighbourhood specialty stores where “everybody knows your name” are better positioned to face the more demanding consumer of the future than “big box” retailers that keep prices down through volume purchase of standardised goods, the minimal deployment

of staff with limited expertise and training, and spartan facilities. Moreover, in the future the customers of “big box” retailers will be less willing to accept the “bulk purchase” imperative (i.e., one can buy eight tins of the same soup but not two tins or eight tins of several different soups) that is appropriate for younger households with children but less so for the one- and two-person households characteristic of an older population.

A second implication of demographic trends for retailing is the specific goods and services that will be favoured by an aging population. Our previous research for Industry Canada's Office of Consumer Affairs has identified a list of “winners” and “losers” during two projected time periods: 1996-2006 and 2006-2016. The results were arrived at by two methods of analysis. The first assumes that age is the most important driver of consumer spending; the benchmark of market success is whether projected expenditures on a good or service will grow at a rate that exceeds the average annual rate of household growth. Over 400 individual goods and services were analysed to determine the projected consumer preferences of Canada's aging population. Secondly, some 130 items were analysed on the assumption that the key driver is real disposable (after-tax) household income growth; the benchmark is whether a good or service is growing faster or slower than the average annual rate of income growth. In bringing income into our analysis, our earlier observations about the linkage between household consumption, income, and saving and age should be kept in mind.

Projecting consumer spending on the basis of age and household income, respectively, does produce to some extent different lists of specific goods and services that are “winners” and “losers” during the next ten to twenty years. However, the broad trend associated with population aging is upheld, i.e., the shift in consumption from durable goods and related services to specialty goods and services, particularly related to travel, health, and recreation. The results of this research are integrated into our discussion of the remaining demand factors in both the private and public sectors. Emphasis is placed on the age-driven winners and losers.

Food and Beverage Consumption

People in their 20s, 30s, and 40s not only consume more food and drink than those in their 50s and 60s but their income often determines the quality of the products that they purchase and where consumption primarily takes place. Therefore, the beer ads had it right during the 1970s and the 1980s when they focused the need of “twenty somethings” to wash down their burgers with mass quantities of inexpensive lager and ale. This was the period when the front end to the peak of the baby boom was traversing its prime beer consumption years!

The 1989 *National Alcohol and Other Drugs Survey* conducted by Statistics Canada on behalf of Health and Welfare Canada pointed out that the proportion of current drinkers in the Canadian population peaked at the ages of 20 to

24 (88 percent) and 25 to 34 (87 percent) and declined in successively older age groups (for example, 54 percent of people aged 65 and over are current drinkers). Consumption (measured in terms of the average weekly number of drinks) follows a similar pattern, although the rate of decline through the older age groups is less. Men are more likely to consume alcohol than women and they consume more on a weekly basis. However, consumption peaks at different ages for men and women. Alcohol consumption is highest for men aged 20 to 24 and for women aged 45 to 54 (at a level less than half that of men in the same age group).

Our research confirms the finding that alcohol consumption will decline as a result of the aging of Canada's population during the next ten years and beyond. We project that the purchase of alcoholic beverages at licensed premises will be less favoured and that the purchase at stores will grow at the same pace as households generally. There will also be shift in what type of alcoholic beverage is consumed. Beer consumption is not favoured, wine consumption will keep up with household growth, and liquor consumption (store purchases more so than licensed premises) will increase at a rate well above household growth.

The aging of the population will also have an impact on what Canadians eat. Data from Statistics Canada show that over the past several decades:

- the consumption of red meat (mostly beef), eggs, standard milk, and butter is on a downward track;
- the consumption of poultry, fish, 2 percent milk, fresh vegetables, and cereals is on an upward track.

We expect these trends to continue during the next ten years.

The inclination of Canadians to eat out will be impacted by population aging. A 1988 Gallup Canada Inc. survey revealed an inverse relationship between eating out (defined as the proportion of the population who ate out during the past three days) and age. Participation in this type of social activity declines steadily from 63 percent of people aged 18 to 24 to 27 percent of those aged 65 and over.

Our projections confirm this trend. The aging of the population means that food purchased from stores will grow faster than food purchased from restaurants. However, food purchases, from either restaurants or stores, will grow at a rate exceeding that of households when made in conjunction with overnight or longer travel. Food purchased from restaurants while at work or school and between meals purchases will grow very slowly.

Housing

The baby boom generation tore through the rental market in the 1970s and the housing market during the 1980s to the delight of landlords and home builders,

respectively. However, the baby boom is now largely housed, although there will be some activity in the trade-up and renovation markets as it faces the potential reality of dealing with teenagers, a live-in parent, and a home business under the same roof. The cohort entering the housing market over the next ten years is the much smaller baby bust generation; the bust generation and front end of the echo generation will move into the rental market.

Our projections show that significant increases in household formation will occur in age groups 45 and older. In terms of household type the greatest increases will be in couples (42 percent) and single persons (40 percent). Both the absolute number of households and household size will decline in response to population aging.

Between 1996-2006 we project that both rented and owned shelter expenditures will grow less quickly than households. The gap will be largest for rented shelter. Spending on shelter other than the primary residence will grow considerably faster than households, particularly in the vacation home and motel categories.

Commercial, Industrial, and Institutional Property Development

Property development in the "ICI" sector flourished during the 1970s and 1980s as the large baby boom generation entered the labour force. However, since the mid-1980s, the bust generation is the cohort that has entered the labour force and it will be followed by the echo generation at the turn of the century. Given this demographic reality, the downturn during the 1990s in this market sector was predictable and so is the modest rebound in the first decade of the next century (although demand will likely be absorbed by the existing building stock).

The ICI sector is also affected by the interrelated factors of corporate downsizing, technology, and the "home work" phenomenon. Downsized staff are increasingly turning to self-employment as a career option and the affordability of information technology, particularly the fax machine and the computer, makes the home office a cost-effective alternative to one in a strip mall or downtown corporate tower. According to Statistics Canada, by 1991 743,000 non-farm workers worked at home. Two-thirds were "tele-commuters" (and therefore likely employed by a large corporation) and one-third were self-employed. Although most of the home workers were men, woman had embraced this option at a faster rate between 1981-1991 (69 versus 29 percent).

Financial Services

Individuals in their 20s and 30s typically incur debt to finance higher education, a car, furniture, or a house. Once the children leave home and the mortgage is paid, discretionary income increases (recall our earlier observation that household savings increase with age and peak around the age of 54 years). The front

end of the baby boom is poised to turn 50. Boomers are reaching their prime savings years and looking ahead to retirement. This observation is reflected in the results of a survey conducted in 1996 by Gallup Canada Inc. for Investors Group Inc., a mutual fund company. Just under 56 percent of respondents had an RRSP or RRIF. The distribution by age shows the high interest of the baby boom generation in an investment vehicle developed and promoted during the post-war period:

18-29 years	43.9%
30-39	69.0%
40-49	64.2%
50-64	59.9%
65+	43.2%

The data also indicate that the amount invested generally increases with age. For example, about 40 percent of persons in their 40s had invested $50,000 – 100,000 compared to about 5 percent of those in their 30s; just over 15 percent of persons in their 50s had invested over $100,000 compared to just over 6 percent of those in their 40s.

The aging of the baby boom over the next ten years and beyond will be a boon for the financial services industry. Banks and trust companies will reap less through interest payments as debt is paid down and more through charges on routine transactions and the provision of financial planning advice. Brokerage and mutual fund companies are also positioned to do well in an environment in which a higher savings level will track interest rates downward and force investors to seek out better rates of return in the stock market.

DEMAND FACTORS: PUBLIC SECTOR

Transportation

Data from the Ontario Ministry of Transportation on travel within the Greater Toronto area in 1986 suggest that peak car utilisation (measured in trips per day) occurs when drivers reach the age of 40. Transit trips, on the other hand, peak in the late teenage years and decline gradually to the 70+ years group. Data from the 1986 General Social Survey on commuting lends support to the observation that automobile travel peaks around age 40. Commuting, the largest component of travel time (28 percent), peaks in the 35-44 age group (52 percent).

With the peak of the baby boom at age 36, the current problems of traffic congestion and money-losing transit systems in our major urban centres will persist during the next ten years. There will, however, be an upturn for public transit as the echo generation enters its prime transit utilisation years. However, our projections also show a greater emphasis on inter-city air and bus services as an aging population increasingly seeks leisure travel experiences.

Crime

From the perspective of demographics, most of the crimes that the citizenry worries about such as homicide, break and enter, and vehicle theft are perpetrated by people in their teens and 20s. On the other hand, a crime such as fraud is more likely to be carried out by someone in their 30s and 40s. In the 1990s both reported crimes and crime rates (measured on the basis of crimes per 100,000 population) have been on a downward track for violent, property, and other criminal code offences. This reflects the aging of the baby boom into its 30s and 40s and the passage of the smaller baby bust generation through its crime-prone years.

Data from the 1995 *Uniform Crime Reporting Incident-based Research File*, collected by the Canadian Centre for Justice Statistics and representing 46 percent of the national volume of reported crime, illustrate these generalisations. The median ages for persons charged with major Criminal Code offences range from 19 for break and enter and motor vehicle theft to 34 for impaired driving. The lowest median age (24) is in the property crime category, however, the median age for fraud (29) shows that it is a crime committed by a more experienced perpetrator. The median age for violent crime is 29. Within this category, the younger offender is likely to be charged with robbery (22), attempted homicide (26), or homicide (28); the older offender with assault (30), abduction (31), sexual assault (32), or other sexual offences (34). The median age for impaired driving is 34. Possession of cannabis has a median of 22 but trafficking is the preserve of an older offender (26). Both the possession and trafficking of cocaine are the illicit activities of older offenders (median age of 29).

In 1996 the baby boom generation ranges in age from 30-49. This positions the boomers in an age category where crimes such as fraud, assault, and impaired driving are likely to increase and crimes such as homicide, break and enter, and motor vehicle theft are likely to decrease. This is reinforced by the presence of the bust generation in its most crime-prone period (i.e., 17-29 years). Looking ahead the echo generation is poised to enter its high crime years. It currently ranges from 2-16 and by 2006 it will range from 12-26. If the current relationship between age and crime holds, police services can expect a continuing decline in per capita crime rates, especially those pertaining to violence and property.

Social and Health Services

Demographics have a profound impact on the structure of the family and hence social policies. The number of marriages in Canada has been on a downward trend since 1972. In 1992 the average age of first marriage was 27 for women and 29 for men, an increase of four years for both sexes from the averages that prevailed in the 1970s. Not only are marriages fewer and later but they are not lasting as long. The average duration of a marriage that ends in divorce has

gradually fallen from 11.5 years in 1980 to 10.8 years in 1993. In addition, 30.5 percent of those divorced in 1993 had been married five or fewer years (24.2 percent in 1980). Furthermore, the proportion of marriages where one spouse has been married previously increased from 12.3 percent to 32.9 percent between 1967 and 1993.

The drop in fertility means fewer children per family and the aging trend results in a gradual decline in household size. Therefore, demographics impacts on a whole range of social policies from child care to pensions. The prospects for child care are framed by the fact that the potential clients come from the last years of the echo generation and the "millennium kids", a small cohort. The issue of public pensions will be a problematic one if changes are not made to accommodate the "big generation" when it reaches the traditional age of retirement in 2012. However, given the projection time frame of this paper, the implications of the retirement of the baby boom are beyond our scope of analysis (i.e., a 25-year time frame).

The consumption of health services is clearly linked with age. Starting at age 50, when one is more likely to die of a heart attack or cancer, the trend in consumption of health services such as those provided by doctors and hospitals is steadily upward and reaches a peak in the retirement years, especially the last six months of life. The bad news for this costly area of public policy is that the baby boom generation will consume increasing amounts of health care and will expect quality and service in its delivery. The good news is that the first boomers do not enter the "senior" years for another fifteen years.

John Kettle observes that more than half of the social benefits that an individual receives over a lifetime come after the age of 56. On average, persons aged 35 to 39 are the least costly age group since they require low health, education, and welfare expenditures and do not have a pension. Education expenditures are highest for the 5-19 group; health expenditures begin a steady upward climb after the age of 50. By 2006 the front end of the baby boom will be well into its higher health spending period but 10 to 20 years away from the dramatic increases that occur in the 70+ years group. The bust generation will be moving through the low social expenditure years and the echo generation and "millennium kids" will be firmly entrenched in the educational system.

Volunteering and Charitable Donations

The giving of donations to charities, and gift giving generally, increases with age. According to Statistics Canada, the average age of donors filing tax returns in 1990 was 47 years and the inclination to donate and average contributions increased with age. Nine (9) percent of individuals under 25 made donations compared to 33 percent of those aged 35 to 44. The average donation of the 15-24 group was $166 compared to $800 for the 55 and over group. Our projection for charitable donations shows that this form of consumer spending will grow at a rate that is well in excess of the growth rate for households.

Volunteering is another activity that increases with age, particularly as discretionary time increases in the pre-retirement and retirement age groups. A key consequence of a greater supply of volunteers in the future is the flow of strategic human resources and funds into the not-for-profit sector. The public sector may also benefit if the concept of coproduction of services takes hold.

By 2006 the baby boom generation will be well into the period during which volunteerism and charitable donations will be important and growing social activities.

Leisure, Recreation, and Culture

Recent research has debunked the myth that the boomers are more fit than their parents' generation. Notwithstanding one's health and fitness levels, with aging comes an inevitable slowing of physical activity and performance. An aging society will shift from spectator sports (where the seats aggravate already sore backs) and direct participation in sports to more passive recreational, leisure, and cultural pursuits ranging from resting to birding and from attending the opera to gardening. In addition, international travel is an activity that shows up prominently in our projections for consumer spending.

The impact of demographic trends on this composite area has implications for both public and private sector service providers. For example, the need for public amateur sports facilities such as arenas or soccer fields will be lower as the echo generation and “millennium kids” dominate the youth sports scene. However, with the baby boom in its 40s and 50s the demand for walking trails and conservation areas will likely increase. Private sector entrepreneurs will face the pressure to deliver services that exhibit quality and service (for example, the difference between a narrow, plastic seat in the Toronto's SkyDome and a spacious, ergonomically-designed pew in the new concert hall). The sale of gardening tools and supplies will far exceed the sales of power tools or health club memberships.

CONCLUSIONS

Our analysis of the implications of demographic trends for the products and services provided by the public and private sectors emphasises the primacy of age as an explanatory variable. The utility of the age variable is linked to a population distribution that is a consequence of an extended (and continuing) period of low fertility and increasing life expectancy. Thus, the absolute and relative sizes of baby boom generation and the smaller bust and echo generations behind it have a discernible impact on economic behaviour throughout the life cycle.

Although other factors affect economic behaviour (for example, real disposable income, interest rates, or relative prices, particularly in the short-term), demographic projections based on assumptions tied to the age variable yield robust results regarding relative product and service growth rates over medium- and long-term time frames.

Notwithstanding the explanatory power of demographics, leaders in both government and business have generally eschewed its use in their planning and decision-making processes. This tendency may reflect either a low level of knowledge regarding demographic trends and their implications or a preference for a short-term perspective. Whatever the reason for this neglect, our general prescription is that Canada's government and business leaders must pay greater heed to demographic analysis as they develop policies during the next ten years and beyond.

NOTES

1 This paper was researched and written by the three partners of the Madison Avenue Demographics Group – David K. Foot, Richard A. Loreto, and Tom McCormack. The Madison Avenue Demographics Group is a consulting partnership committed to the competent and continuing use of demographic information in both the private and public sector planning and decision making.

2 Readers will note that 1996 population estimates in this paper differ slightly from recent reports in the popular media. This difference is explained as follows:
Population by age and sex are sourced from the Census of Canada for each of 1981, 1986, and 1991. No attempt has been made to revise these figures to reflect national estimates produced by Statistics Canada to reflect estimates of the census undercount by age and sex or for shifting the annual date of estimation from June 1st to July 1st. Figures for the inter-censal years (1982 to 1985 and 1987 to 1990) are interpolated by Strategic Projections Inc. Figures for 1992 to 1995 are estimated by Strategic Projections Inc. tied to national post-censal estimates of population growth published by Statistics Canada based on administrative files. Figures for 1996 to 2021 are as projected by Strategic Projections Inc.

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