The retirement wave

Andrew MacKenzie and Heather Dryburgh

As in many other industrialized nations, Canada's population is relentlessly aging, raising a range of individual, organizational and societal challenges. One of the key challenges for employers will be the availability of qualified workers as the baby boom generation, about half of Canada's labour force, enters retirement.

The baby boom began just after World War II and lasted until the mid 1960s, when the broad availability of the pill and increasing participation in postsecondary education signalled the beginning of the baby bust. Today, the oldest of the boomers are 55 and eligible for retirement benefits in many private pension plans. They are the beginning of a rising wave of retirements that should reach its peak about the time the largest birth cohorts (1960 and 1961) hit the median retirement age (about 61) in the early 2020s. This retirement wave will wash a substantial amount of talent and experience out of the workforce. Although awareness of the impending loss is widespread (Bolch 2001; Bovbjerg 2001; Kotlikoff, Smetters and Walliser 2001; McEvoy and Blahna 2001; Regets 2001), until recently, little empirical analysis has been done to examine the industries and occupations that will be most affected.

The retirement of the baby boom generation represents a challenge for workplaces to replace the outgoing talent and experience (Foot 1998). Just as the baby boomers entered the workforce in large numbers, companies must also be prepared for their mass retirement. The Workplace and Employee Survey (WES) combines information on both employers and employees. This unique database provides some signals as to which industries and occupations are likely to feel the effects sooner than others (see *Data source and definitions*).

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Data source and definitions

The data are from the first year (1999) of the **Workplace and Employee Survey** (WES). Covering both workplaces and employees, the survey provides a link between workplace changes and the effects on workers. Workplaces were sampled from Statistics Canada's Business Register, and employees were then sampled from the selected companies.

Three separate baby-boomer age groups were studied: 34 to 39; 40 to 45; and 46 to 52.

Fourteen industry and six occupation groups were used.

WES does not survey workplaces in crop and animal production; fishing, hunting and trapping; private households; and public administration. The last omission is noteworthy. Preliminary demographic data from other sources (including data on the staff of Statistics Canada) suggest that public administration has an older demographic structure and may encounter replacement stress earlier than some other industries as the baby boom generation retires.

This paper looks at age distributions and highlights industries with older workforces and relatively young retirement ages. Then, age differences among occupational groups are used as pointers to succession issues within industries. Finally, current measures of turnover and unfilled vacancies are used to determine whether aging is already affecting some sectors of the economy.

Employee age and retirement patterns

Retirement is not simply a matter of turning 65, getting a gold watch, and saying goodbye to the workplace. Retirement is a complex process related to financial considerations, family situation, social norms, and contractual arrangements (see, for example, Pyper and Giles 2002). However, retirement patterns do vary systematically across industries in a predictable manner; those industries and occupations characterized by more generous private pension plans tend to have a lower retirement age. Predictable replacement pressures will arise where employers have both a low average age of retirement and an older workforce. These workplaces are, in effect, being squeezed from two directions. Industries and occupations where the squeeze is most imminent can already be identified.

Education and health care: high median ages, low retirement ages

In the education and health-care sector, 64% of men and 63% of women were 40 years of age or older in 1999 (Table 1). The average age of employees in this sector was the highest of all industries at 42.7 (Chart A). The education workforce was roughly two years older than health care, 44.3 versus 42.0. According to the Labour Force Survey, the median retirement age in 1999 was 56.4 for employees in educational services and 61.8 in health care. Thus, in education, only 12 years separated the median age of employees from the median retirement age; in health care, 20.

Several factors have contributed to the high average age in education and health care. Both industries felt the sting of budgetary cutbacks in the 1990s, as all levels of government wrestled with deficit problems. Demographics also contributed to some slackening of demand for elementary and high school teachers. As well, both industries have relatively high educational requirements, so their entrants are older than entrants in most other industries.

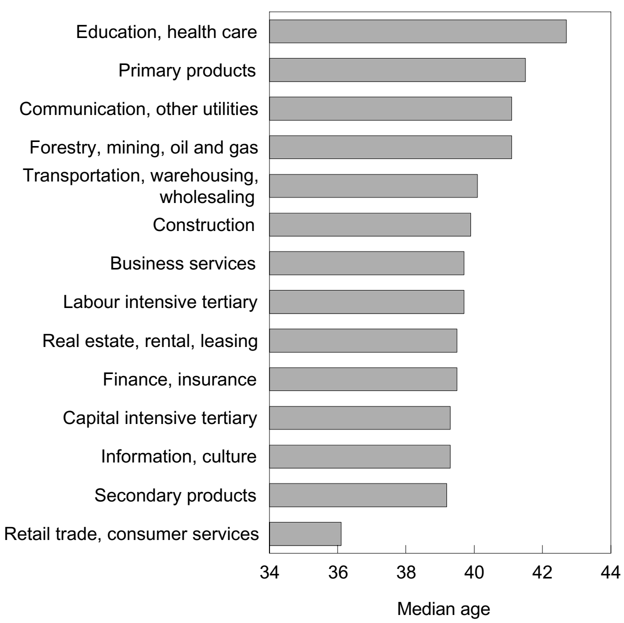
However, education and health care are not alone in facing an aging workforce. Forestry, mining,and oil and gas; and communication and other utilities also have older workforces. Some 58% of forestry, mining, and oil and gas workers were 40 or older, as were 58% of men and 54% of women in communication and other utilities. The average age for both these industries was 41.1, comparable to health care. Within these sectors, utilities stands out as having a low median retirement age—57.8 in 1999.

Table 1: Industry employment by age and sex

	Age							
	<25	25-29	30-33	34-39	40-45	46-52	53-59	60+
	%							
Forestry, mining, oil and gas								
Men	4	10	5	24	20	22	13	2
Women	6	8	8	20	28	25	2	3
Manufacturing								
Primary products								
Men	5	7	6	22	24	21	12	3
Women	6	14	6	20	21	20	11	1
Secondary products								
Men	8	12	8	19	27	12	11	3
Women	7	12	9	26	18	18	8	1
Capital-intensive tertiary								
Men	4	11	16	25	16	14	11	2
Women	4	13	11	26	18	16	9	3
Labour-intensive tertiary								
Men	12	15	6	20	19	17	7	4
Women	6	10	7	25	17	21	12	2
Construction								
Men	8	10	9	24	20	16	11	3
Women	5	7	6	28	26	15	12	2E
Transportation, warehousing, wholesaling								
Men	7	8	9	25	22	13	12	4
Women	8	15	8	23	18	17	7	5
Communication, other utilities								
Men	4	8	8	22	21	25	9	3
Women	5	7	9	25	21	24	8E	1E
Retail trade, consumer services								
Men	21	11	8	17	14	15	9	5
Women	26	10	7	19	14	14	7	3
Finance, insurance								
Men	4	9	11	26	21	18	8	3
Women	5	11	9	28	23	16	7	2
Real estate, rental, leasing								
Men	7	9	6	32	12	18	9	8
Women	12	18	9	17	15	15	10	5
Business services								
Men	6	11	10	25	18	21	8	3
Women	6	13	9	26	15	19	8	4
Education, health care								
Men	4	9	4	19	21	23	15	5
Women	3	8	4	23	21	26	14	2
Information, culture								
Men	5	13	8	24	18	26	4	2
Women	10	13	6	22	19	20	9	1

Source: Workplace and Employee Survey, 1999

Chart A: Half the employees in education and health care were 43 or older.



Source: Workplace and Employee Survey, 1999

Retail trade and consumer services occupied the opposite end of the age spectrum; 32% of men and 36% of women were less than 30 years old, with an average age of 36.1. The large proportion of youth in retail trade was primarily the result of young employees working part time.

Based on age alone, education and health care; forestry, mining, and oil and gas; and communication and other utilities appeared the most vulnerable to incipient retirement. However, when both age and industry retirement patterns were considered, education and utilities stood apart.

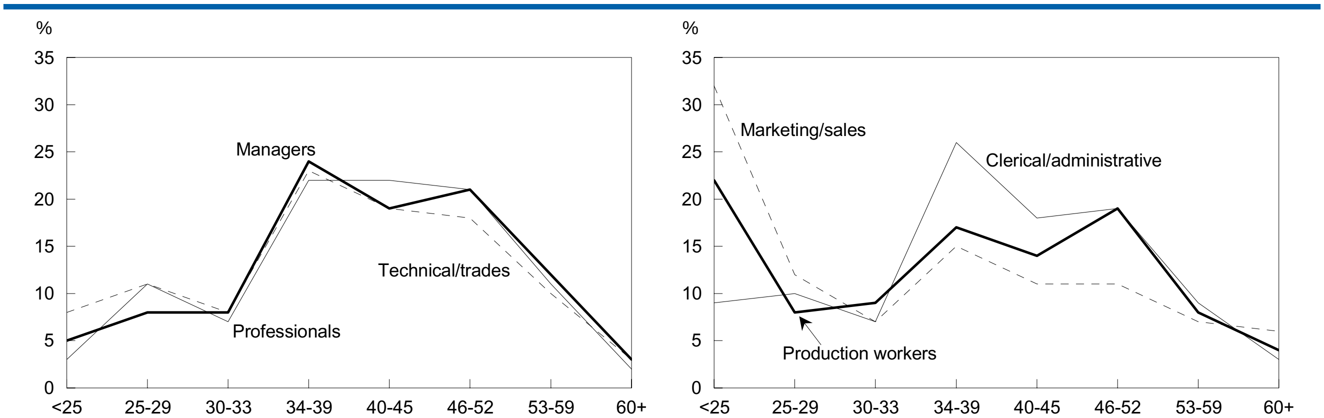
However, industries do not necessarily represent homogenous groups of employees. Occupational hierarchies exist within all industries, with the general pattern that people rise through the hierarchy as they gain experience. Thus managers and others near the top are typically older than those lower down and therefore more susceptible to the retirement crunch.

Management and professional occupations lead the retirement wave

Managers do, in fact, comprise the oldest, most experienced group of employees. Fully 90% of managers had 10 years or more of experience, and 55% were 40 years of age or older. In comparison, just over a third (35%) of marketing and sales employees had reached age 40 (Chart B).

A look at occupations within industries shows that managers and professionals in the more vulnerable industries will be leading the retirement wave. The average age of a manager in education was 47.6, just 8.8 years shy of the median retirement age. Health care managers were 3.7 years younger on average than those in education, and 17.9 years away from their median retirement age. The age structure for professional occupations was identical in education and health care,

Chart B: Occupations requiring more education or experience tended to have an older age structure.



Source: Workplace and Employee Survey, 1999

and much older on average than in other industries. Managers and professionals in forestry, mining, and oil and gas were also somewhat older than those in most other occupations, but not as old as those in education and health care. Production workers, who likely perform the physical labour associated with forestry, mining, and oil and gas were in the middle in terms of their age distribution (Table 2).

Table 2: Average ages by industry and occupation

	Mean	Median		Mean	Median
Forestry, mining, oil and gas			**Communication, other utilities**		
Managers	44.5^{E}	45^{E}	Managers	42.6	43
Professionals	42.7	40	Professionals	40.8	40
Technical/trades	41.0	41	Technical/trades	41.4	42
Marketing/sales	F	F	Marketing/sales	F	F
Clerical/administrative	37.6	36	Clerical/administrative	40.8	41
Production workers	37.3	37	Production workers	37.2	40
Primary product manufacturing			**Retail trade, consumer services**		
Managers	42.0	42	Managers	38.6	38
Professionals	38.2	38	Professionals	40.0	39
Technical/trades	42.2	43	Technical/trades	37.1	37
Marketing/sales	F	F	Marketing/sales	33.7	31
Clerical/administrative	40.8	41	Clerical/administrative	38.0	38
Production workers	40.0	40	Production workers	32.0	24
Secondary product manufacturing			**Finance, insurance**		
Managers	41.5	41	Managers	41.3	42
Professionals	38.4	37	Professionals	38.2	39
Technical/trades	39.1	40	Technical/trades	40.0	38
Marketing/sales	F	F	Marketing/sales	39.7	39
Clerical/administrative	40.4	40	Clerical/administrative	38.9	38
Production workers	37.1	38	Production workers	F	F
Capital-intensive tertiary manufacturing			**Real estate, rental, leasing**		
Managers	40.2	39	Managers	41.5	43
Professionals	36.9	37	Professionals	39.9	39
Technical/trades	40.4	39	Technical/trades	40.9	39
Marketing/sales	..	..	Marketing/sales	34.0	31
Clerical/administrative	39.6	38	Clerical/administrative	39.6	40
Production workers	36.6	31	Production workers	37.8	38
Labour-intensive tertiary manufacturing			**Business services**		
Managers	43.5	44	Managers	41.6	40
Professionals	34.4	31	Professionals	38.3	37
Technical/trades	40.2	40	Technical/trades	38.0	38
Marketing/sales	38.6	37	Marketing/sales	41.2	38
Clerical/administrative	36.2	35	Clerical/administrative	40.8	39
Production workers	40.7	39	Production workers	39.7	38
Construction			**Education, health care**		
Managers	43.4	43	Managers	46.2	48
Professionals	37.6	39	Professionals	43.1	44
Technical/trades	39.7	39	Technical/trades	41.9	42
Marketing/sales	F	F	Marketing/sales	F	F
Clerical/administrative	39.0	39	Clerical/administrative	41.6	42
Production workers	36.1	34	Production workers	42.6	44
Transportation, warehousing, wholesaling			**Information and culture**		
Managers	43.3	43	Managers	39.5	39
Professionals	38.7	39	Professionals	40.2	40
Technical/trades	39.6	39	Technical/trades	38.6	39
Marketing/sales	40.3	42	Marketing/sales	38.4	37
Clerical/administrative	39.1	39	Clerical/administrative	38.3	40
Production workers	38.2	39	Production workers	43.1	52

Source: Workplace and Employee Survey, 1999

Education and experience are clearly not the only explanations for the age structure of managers and professionals. Managers and professionals in other industries with high educational requirements were at least 4.6 and 4.8 years younger than those in education and health care. The story was somewhat different in communication and other utilities, which lacked the stark contrast in ages between the different occupations. In fact, only three years separated the median ages of all occupations except marketing and sales.

The younger industries showed considerably more variation in age by occupation. The clearest example was retail trade and consumer services, where the median age of managers was 38 compared with 24 for production workers. Again, this is likely due to the large number of part-time employees and lower education requirements in the latter occupational group.

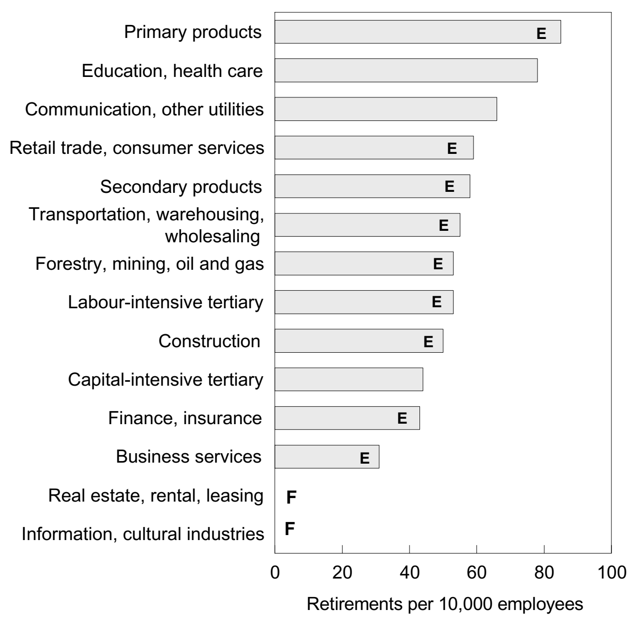
In general, managerial occupations appeared most vulnerable to baby boomer retirement since the average age of managers was under 40 in only 2 of the 14 sectors surveyed. However, several other industries will also experience considerable losses—especially in professional occupations, although technical/trades and clerical/administrative occupations will also be affected. Only marketing/sales positions and non-skilled production workers appeared to have relatively youthful age distributions.

To sum up, education and health care; forestry, mining, and oil and gas; and communications and other utilities sectors appear vulnerable because of their older age structures—particularly education and health care. While communications and other utilities had an older age distribution across all occupations, the distribution was more concentrated in managerial and professional occupations in education and health care; and forestry, mining, and oil and gas. This is especially important in education and health care, which had a higher proportion of managers and professionals. Secondly, it is not surprising that managers and professionals had the oldest age structures given the increased experience required of managers and the high level of education expected from professionals.

Current retirement patterns

While the crest of the retirement wave is at least 8 to 10 years away—even in the most vulnerable industries— it may be instructive to look at the current situation. How closely do industrial patterns of retirements in 1999 (Chart C) align to the demographic factors noted above?

Chart C: Retirement rates varied considerably by industry.



Source: Workplace and Employee Survey, 1999

Highest retirement rate in education sector

Education stands out as the industry with the highest rate of retirement in 1999 and the clearest indications of a rising retirement trend in the near future. Education had a estimated retirement rate of 121 per 10,000 employees in 1999—more than double the all-industry average and 42% higher than the next highest industry. Furthermore, demographic analyses indicate that approximately half the employees in this industry will retire within 12 years—half the managers within 9 years. Clearly, Canada's educational systems are fertile ground for human resource planning and development.

Primary product manufacturing had the next highest retirement rate in 1999, at 85 per 10,000 employees. This industry also had an older-than-average age distribution, but manufacturing industries in general had retirement ages close to the all-industry median. So replacement pressures are not looming as ominously as in the education sector.

Other industries with older workforces had relatively low retirement rates in 1999. Business services had the lowest rate—good news considering its older age structure and high educational requirements. While health care was also among the sectors with older workforces, its retirement rate of 56 per 10,000 in 1999 barely exceeded the all-industry average of 54.

On the flip side, the higher-than-average retirement rate in retail trade and consumer services was somewhat unexpected given its very youthful age structure. However, managers and professionals in this sector did not differ greatly in age from those in many other industries.

Vacancy rates

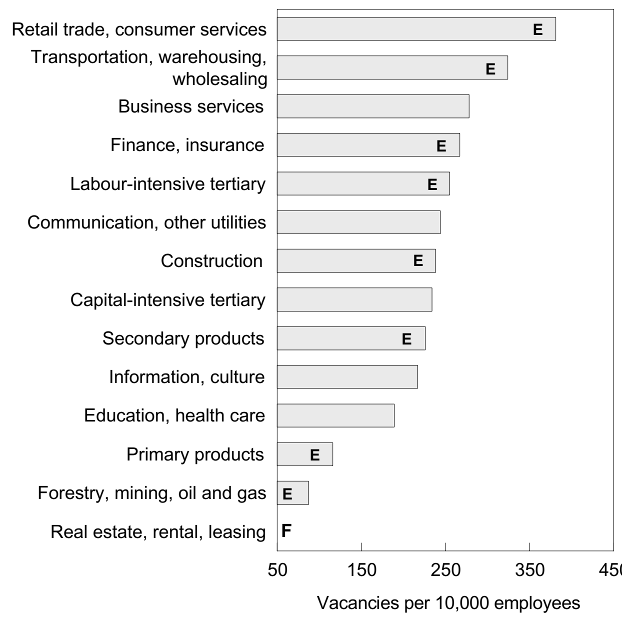
Workforce demographics—age, education and experience—are attributes of the labour supply. The other major force acting on labour markets—the human resource requirements of employers—is labour demand. Unmet labour demand is measured by vacancies—jobs that remain unfilled despite active recruitment. It is possible that labour supply constrictions may be altered by trends such as changing demand for different types of products and services, or the substitution of capital (machinery and equipment) for labour.

Although it is beyond the scope of this paper to forecast sectoral labour demand, the Workplace and Employee Survey does collect information on current vacancies. Vacancy rates by industry may help to determine whether aging is already affecting some sectors. Note that these vacancies were measured in 1999 and were subject to the cyclical and demographic conditions of that year: growing GDP and employment.

Highest vacancy rate in retail trade and consumer services

Vacancies per 10,000 employees were used to examine the degree to which various industries were having difficulty finding employees in 1999 (Chart D). Retail trade and consumer services had the highest vacancy rate at 381 vacancies per 10,000 employees; transportation, warehousing, and wholesale trade had 324. Business services, with an age distribution toward the upper end of the average and high educational requirements, also had a relatively high vacancy rate (278). Primary product manufacturing had one of the lowest vacancy rates, just 116. The news was mixed for education and health care; education had a vacancy rate of just 137, compared with 214 for health care. Forestry, mining, and oil and gas had just 87 vacancies per 10,000 employees, again likely because of the decreased employment in this sector.

Chart D: Retail trade and consumer services had the most difficulty finding employees.



Source: Workplace and Employee Survey, 1999

In general, vacancies were relatively low in those sectors identified with some demographic vulnerabilities. If anything, vacancies tended to be higher in industries with younger workforces and lower wages. Thus the job shopping and sorting associated with younger workers currently overshadows the still early effects of boomer retirement, at least in terms of recently reported vacancies.

Conclusion

Although the retirement effects of an aging population will eventually be felt in all sectors, some industries will feel the pinch earlier than others. The education sector stands out with a high average workforce age, particularly for managers, and a low median retirement age. Rough estimates indicate that about half the education workforce is likely to retire within 12 years—9 years for managers. Furthermore, the retirement rate in the education sector was already more than double the economy-wide average in 1999. On the positive side, the vacancy rate in education was relatively low in 1999.

Health care also had an older workforce, but the median retirement age was about five years later than in education. Health care's current retirement and vacancy rates were also near the middle of the pack. However, several factors make a case for vigilance in this industry. First, an aging population is likely to increase the demand for health-care services, thereby putting pressure for growth on the workforce as its retirement rate increases. Second, it takes a long time to educate health professionals, increasing the imperative for long-range planning. Finally, health care consistently tops the list of policy issues most important to Canadians, so whatever measures are taken will be closely scrutinized.

Among other industries, only the utilities sector had an older than average workforce and median retirement age less than 60 in 1999. For most private-sector industries, turnover for reasons other than retirement will command more attention in the immediate future. Typically, turnover tends to be highest in sectors that pay relatively low wages and employ a high proportion of younger workers, particularly part-time workers. However, even some high-wage, high-skill industries (notably finance and insurance, and business services) had relatively high vacancy rates in 1999. Although these vacancy rates may have been caused primarily by strong economic growth in that year, they may also hint at a growing relative demand for more highly skilled workers.

One demographic factor common to nearly all industries was the older age of the managerial ranks. This is to be expected, since it generally requires some time to acquire the experience and skills required to manage. However, this demographic pattern highlights the fundamental necessity of succession planning within most organizations. In the coming years, management succession planning will be complicated—at various times in various industries—by retirements in mid-level jobs, which normally provide the recruiting pools for management. And, since managerial skills (and indeed many other skills) are transferable across sectors, it is not realistic to expect retirement pressures to be isolated within industry stovepipes. Replacement demands in any industry will likely have a ripple effect throughout the economy.

Perspectives

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