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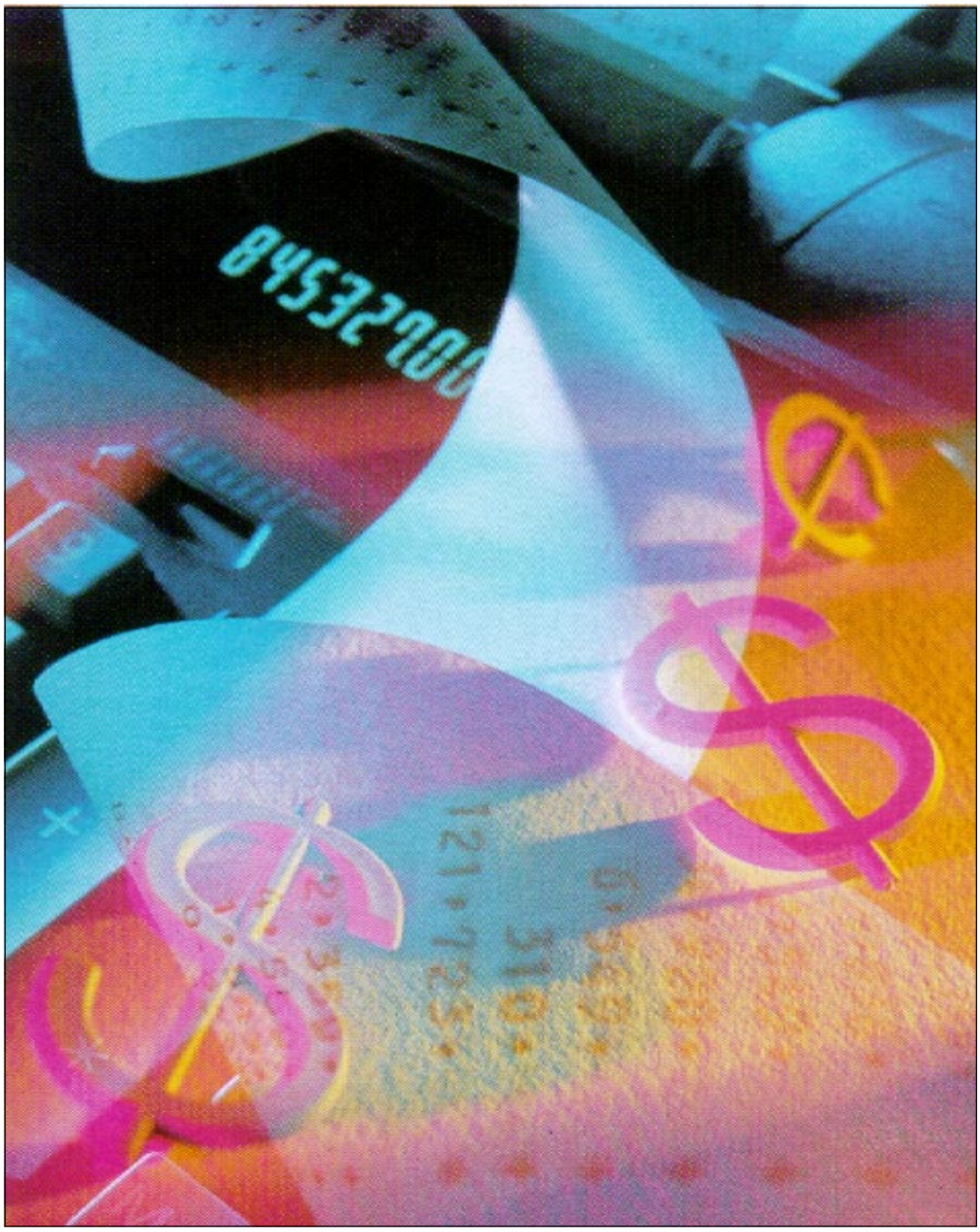
- EARLY RETIREMENT TRENDS
- EVOLUTION OF THE CANADIAN WORKPLACE: WORK FROM HOME



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.	figures not available
…	figures not appropriate or not applicable
--	amount too small to be expressed
p	preliminary figures
r	revised figures
x	confidential to meet secrecy requirements of the Statistics Act

Highlights

In this issue

Early retirement trends

- Early retirement is now more common than a decade ago. Between 1987 and 1990, only 29% of people who recently retired did so before the age of 60. Between 1997 and 2000, that rate grew to 43%.
- The early retirement rate was much higher in the public sector than in the private sector. The most popular retirement age for public-sector employees was 55. Most private sector workers still retired at age 65 while the majority of self-employed retired even later.
- The Atlantic provinces had the highest early retirement rates, while the western provinces had the lowest. The many early retirements in the Atlantic provinces may be related to their higher unemployment rates.
- More women than men retire early. Two factors may be involved—the greater number of women in public-sector jobs and the two-year age difference between spouses.
- Early retirement was popular among people with higher levels of education and those with higher incomes. The early retirement rate was also high in industries with workers in utilities, public administration and educational services.
- People in the agriculture sector are the least likely to retire early. Workers in this industry are primarily self-employed. Also, many farmers do not earn high incomes and postpone retirement until they can collect Canada or Quebec Pension Plan benefits.

Evolution of the Canadian workplace: work from home

- In the year 2000, approximately 2.8 million (17%) Canadian workers (1.4 million or 10% of employees, and 1.4 million or 50% of the self-employed) did some or all of their work from home, up from 2.1 million (16%) in 1995.
- In 2000, work from home was slightly more common among male employees than among their female counterparts (10.6% versus 9.8%), and among part-time employees than full-timers (13.4% versus 12.8%). Higher-than-average incidences were also found among core-age (25-54) employees (12.0%), those with university degrees (22.7%, reflecting in part their occupations), and workers with pre school-age children (14.8%). Very low incidences were recorded among youths (4.6%), and employees with less than high-school education (3.9%).
- Because of operational considerations, the practice is more common among social science and educational workers, and least common among processing and manufacturing; construction; accommodation and food service; trades, transport and equipment-operating; and health workers.
- A large majority of home-based employees put in only a few hours of work at home each week—about 65% worked between one and 10 hours. Less than 3% put in more than 40 hours.
- Innovations in information technology in the past decade or two appear to have affected home-based workers more strongly. In 2000, use of the computer, e-mail, Internet and telephone for work purposes was much higher among home-based workers than among those who worked completely outside the home.

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Early retirement trends

Patrick Kieran

In the early 1970s, one in five Canadians was 50 or older. By 2008, one in three will fall into this age group. This reality has led many researchers to focus on the potential consequences of large-scale retirement from the workforce. Important questions about the future of the labour market abound. Will there be enough workers to ensure continued economic and social development? Will retirees be able to support themselves financially? Will there be enough taxpayers to support the full range of government services available today? The need for information on the aging workforce has never been stronger and will most likely continue to grow in the years to come.

The demographic reality facing the labour market is compounded by a trend towards earlier retirement (see *What is early retirement?*). Since 1976, the median retirement age has fallen from 65 to close to 60 as more and more Canadians are choosing retirement at a younger age. As the oldest members of the baby boom generation turn 54 in 2001, the expected large-scale exit of older workers from the labour market could soon begin.

This article paints a portrait of those currently retiring before the age of 60. Early retirement rates are presented by class of worker, sex, level of education, industry, province, and job status.

Canadians are retiring earlier

Compared with the late 1980s, early retirement in Canada is now more common. Between 1987 and 1990, only 29% of people who recently retired did so before the age of 60. In the 1997-to-2000 period, which had similar economic growth, the proportion grew to 43%. As the early retirement rate has risen, 65 has become a less popular age at which to retire, yet it still remains the most common (Chart A). Between 1987 and 1990, 19% of recent retirees left work at age 65. The proportion dropped to a 12% average for 1997 to 2000.

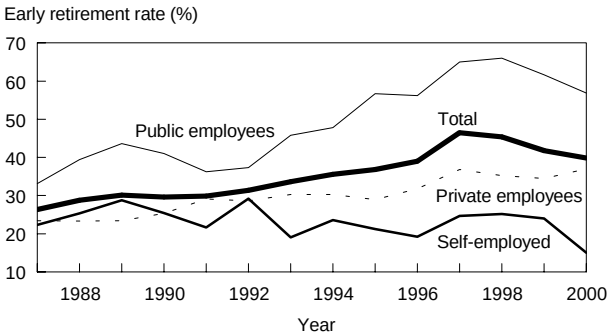
From 1998 to 2000, the early retirement rate fell, although early retirement was still much more common than a decade earlier. Early retirement in the public sector drove the overall trend (Chart B).

Patrick Kieran was with the Labour Statistics Division. For further information about this article, contact Geoff Bowlby at (613) 951-3325 or geoff.bowlby@statcan.ca.

Chart A: Canadians are retiring earlier

Source: Labour Force Survey

Chart B: Public sector drives the early retirement rate trend



Source: Labour Force Survey

What is early retirement?

Defining retirement is not straightforward (Gower, 1997). For purposes of this study, a very restrictive approach has been used. The Labour Force Survey (LFS) asks everyone who is not employed, but who had a job within the last 12 months, the reason for leaving their last job. Retirement is one possible answer. Some of these 'retirees' may in fact still be looking for work and others may re-enter the labour force some time in the future. All that is known for certain is that they are currently without a job and that they 'retired' from their last job.

Recent retirees are persons who worked within the previous 12 months and left their job because of retirement. Persons who retired before the 12-month limit are not included.

Early retirees are recent retirees under the age of 60.

The **early retirement rate** is the number of early retirees as a percentage of recent retirees.

Although Canada has no statutory retirement age, 60 was chosen because it probably meets normal expectations of 'early retirement', and is the minimum age at which Canada/Quebec Pension Plan benefits (other than for disability) are payable. Workers who begin collecting benefits between 60 and 64 are penalized 0.5% on their monthly benefits for each month before their 65th birthday that the pension begins. Retirees who begin receiving payments at 65 are eligible for full pension benefits. Old Age Security and the Guaranteed Income Supplement are additional retirement income systems that help to support Canadians 65 and over.

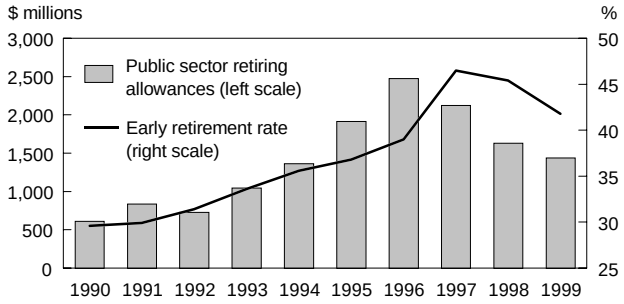
Government downsizing during the mid 1990s prompted many older workers to take early retirement packages, pushing the early retirement rate in the public sector up to 65% in 1997. The overall rate peaked in this year, hitting 46%. Since then, however, the rate has fallen, reaching 40% in 2000. Still, the proportion of recent retirees leaving work before 60 remained about 10 percentage points higher than at the beginning of the 1990s.

Retiring allowance[1] data confirm the effect of government downsizing on retirement (Chart C). From 1990 to 1996, severance pay disbursed to public-sector employees quadrupled. Payments hit a peak of $2.5 billion in 1996 and subsequently dropped to less than $1.5 billion by 1999,[2] following the same pattern as the early retirement rate.

Public sector workers retire earliest

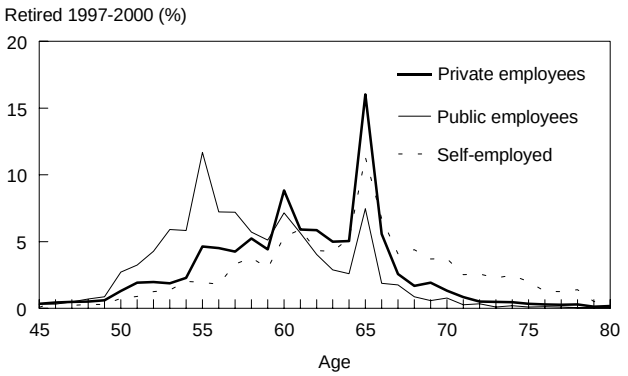
The early retirement rate is much higher in the public sector than in the private sector, even though the public-sector rate has fallen in recent years. Between 1997 and 2000, 63% of public-sector recent retirees left their job before 60—nearly twice the rate of the private sector. This can probably be attributed to the more favourable pension benefits and early retirement plans offered to public servants. Some public employees with a minimum of two years of experience in the public service can retire as early as 50 and still receive an annual allowance. Those with tenures of 30 years or more are eligible for pension benefits at age 55. The benefits available at 55 made it the most popular retirement age for public-sector employees (Chart D). Private-sector employees tended to retire at 65. The self-employed retired even later—less than one-quarter stopped working before age 60, with only about one-tenth opting for age 65. Self-employment

Chart C: Early retirement rate peak tied to government downsizing



Sources: Labour Force Survey; Canada Customs and Revenue Agency

Chart D: Public sector employees retire earliest



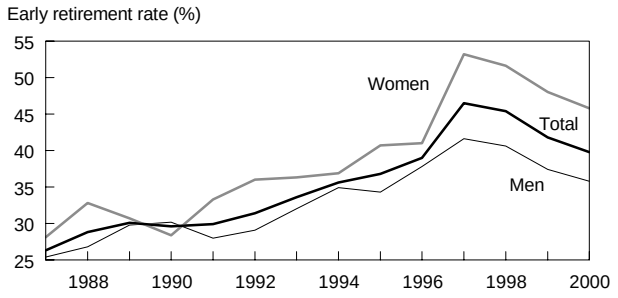
Source: Labour Force Survey

allows for a degree of flexibility not available to public or private employees. The self-employed have the option of reducing their activity gradually as they grow older. Furthermore, they are less likely to have a private pension plan, and some may continue to work because they have no choice.

More women than men retiring early

Women are much more likely than men to retire early (Chart E). Over the 1997-to-2000 period, approximately half of Canadian women retired before the age of 60 compared with just under 40% of men. Furthermore, greater early retirement in some public-sector industries during the late 1990s appears to have increased the gap between the early retirement rates of men and women.

Chart E: More women than men retiring early



Source: Labour Force Survey

Between 1987 and 1996, the early retirement rate difference between men and women was less than 4 percentage points. The gap grew to a 12-point average in the following four years. While the rate for men rose by 4 points from 1996 to 1997, early retirement for women jumped from 41% to 53%. This disparity may be explained by changes in certain female-dominated industries in the mid-1990s. From 1996 to 1997, early retirement in health care and educational services jumped 21 points (from 37% to 58%) and 13 points (from 53% to 66%) respectively. This is significant because more than one-quarter of all employed women are involved in these two industries.

Another factor may be the difference in marriage age for men and women. In most married couples, the husband is older than the wife—since 1974, the difference has remained steady at approximately two years. When it comes time to retire, many couples do so at the same time (Gower, 1998). If the husband is 60 or over, the wife may be under 60 and therefore counted as an early retiree. In 1997, one-third of married couples retired 'together' (that is, less than one year apart). Among these couples, the wife's average age was 58.5 versus 60.7 for the husband (Gower, 1998). An additional 37% of married women who retired in 1997 did so more than one year ahead of their spouses. The average age of these women was 56.4, compared with 62.2 for their husbands. These women are counted as early retirees, but their husbands are not.

Early retirement increases with income and education

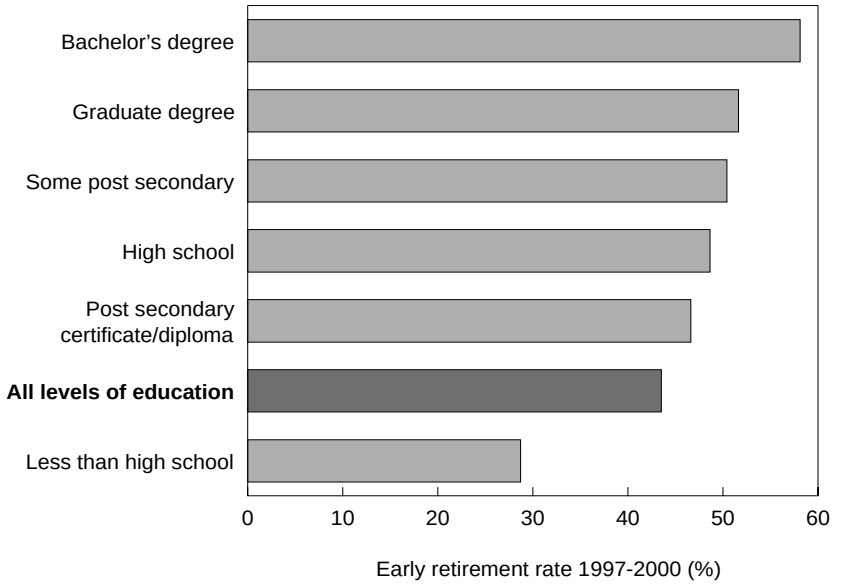
Highly educated workers seem more likely to retire early than those with less formal education (Chart F). Less than 29% of recent retirees with less than a high-school diploma left work before 60. Those with a bachelor's or graduate degree had early retirement rates of 58% and 52% respectively. Recent retirees with moderate levels of education fell in-between.

Predictably, Canadians with higher levels of educational attainment have higher earnings. In 2000, employees with a high-school diploma averaged $14.69 per hour. Those with a community-college diploma or certificate earned $17.32, and those with a bachelor's degree $21.90.

As income level rises, so does the likelihood of saving, making early retirement more feasible. In 1999, only 15% of tax filers with a total income of less than $20,000 contributed to a registered retirement savings plan or were covered by an employer-sponsored pension plan. About 63% of tax filers with total incomes of $20,000 to $39,999 saved. This proportion climbed to 92% for those with total incomes over $60,000 (Statistics Canada, 2001).

Despite the overall trend, recent retirees with a bachelor's degree had significantly higher early retirement rates than those with a master's or doctorate (58% compared with 52%). This could be explained in part by the additional years the latter group spends in school, which translates to a later career start and, presumably, a later finish.

Chart F: Highly educated more likely to retire early



Source: Labour Force Survey

The extremely low early-retirement rates in agriculture can be explained by a more detailed class-of-worker analysis. Workers in this industry are primarily self-employed (69% compared with the overall average of 17%). Also, many farmers are lower-income workers—average earnings for agricultural employees are less than $11 per hour compared with the overall mean of $17. Some farmers and their staff may have no choice but to postpone retirement until Canada or Quebec Pension Plan benefits can be collected.

Moreover, the nature of the farming business may discourage early retirement. Traditionally, family farms were passed down through generations as the primary means of income for the family. As farms became more mechanized,

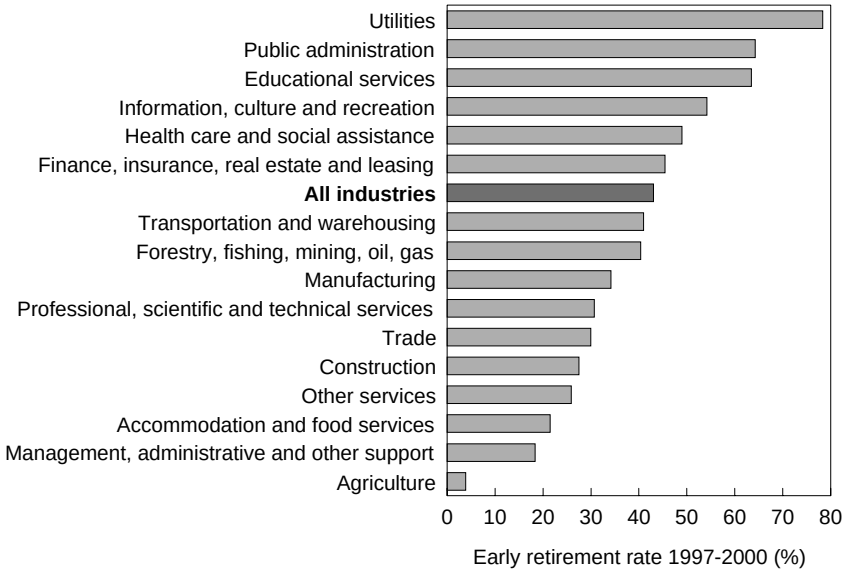
Early retirement by industry

In line with the trend towards early retirement in the public sector, the highest early retirement rates are found in utilities, public administration, and educational services, with five-year average rates of 78%, 64%, and 63%, respectively (Chart G). Agriculture exhibits the lowest early retirement rate, at just 4%.

Influence of class of worker

The trend in early retirement by industry can be explained in part by the class of worker found in each industry—for example, a clear relationship exists between early retirement and the proportion of public-sector workers in an industry (Table 1). Industries with the lowest early retirement rates were also the ones with the lowest proportion of public-sector workers; those with the highest early retirement rates had the highest proportion.

Chart G: Utilities, public administration and education have the most early retirees



Source: Labour Force Survey

Table 1: Public sector composition and early retirement rate by industry, 1997-2000

	Percent public	Early retirement rate
		%
Agriculture	0.0	3.8
Accommodation and food services	0.1	21.4
Other services	0.2	25.8
Manufacturing	0.3	34.1
Professional, scientific and technical services	0.9	30.6
Trade	0.9	29.9
Management, and administrative and other support services	0.9	18.3
Construction	2.4	27.4
Forestry, fishing, mining, oil and gas	3.9	40.3
Finance, insurance, real estate and leasing	4.8	45.4
Information, culture and recreation	13.0	54.1
Transportation and warehousing	18.7	40.9
Health care and social assistance	48.6	48.9
Utilities	71.6	78.3
Educational services	85.3	63.4
Public administration	100.0	64.2

Source: Labour Force Survey

less labour was needed. At the same time, many children began to leave the family farm in pursuit of other opportunities—over one-quarter of Canada's population lived on a farm in 1941, compared with just 2% in 1996. Studies comparing 1971 and 1996 showed an increased exodus of young people from rural areas across Canada (Tremblay, 2001). Many aging farmers may no longer have the option of handing the reins over to their offspring; consequently they work into their 60s and beyond to maintain the family business.

Early retirement by province

The Atlantic provinces demonstrate much higher early retirement rates than the rest of the country with Newfoundland, Nova Scotia, and New Brunswick among the top four provinces (Chart H). With 59% of its recent retirees leaving early, Newfoundland exhibited the highest rate in Canada. The Prairie provinces fell at the bottom of the list, none with a rate over 39%. Saskatchewan boasted the lowest rate with only one-quarter of its recent retirees leaving before age 60.

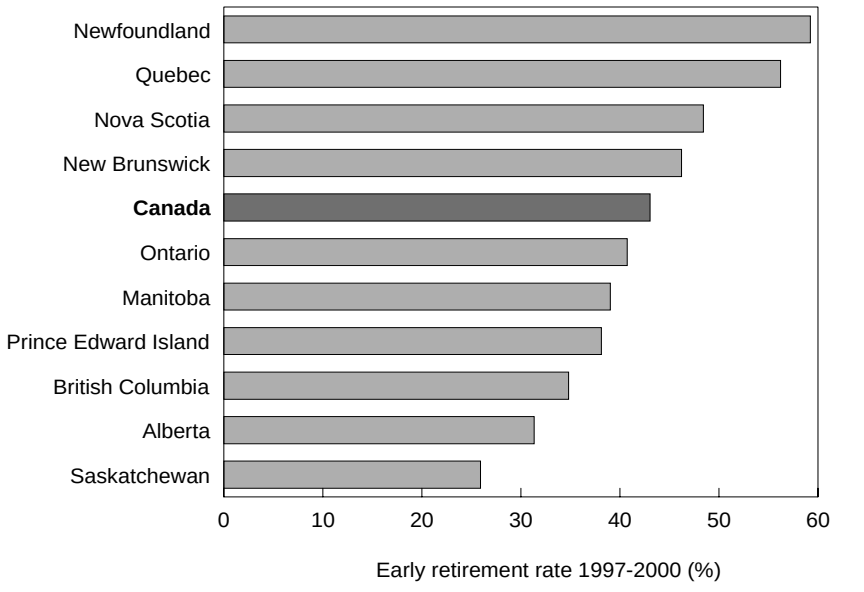
Agriculture content a good indicator

The differences can be explained in part by the industry mix in each province. One of the major factors contributing to the high early retirement rates in Newfoundland, Nova Scotia, and New Brunswick may be the very low ratio of agricultural workers in each province's labour force (Table 2). In Saskatchewan, which had the lowest early retirement rate, one in seven workers were involved in the farming industry. The proportion of agricultural workers in each province influences early retirement rates because very few agricultural workers retire early.

Early retirement tied to provincial unemployment

Another possible explanation of provincial differences may be the economic situation in each jurisdiction. The strong relationship between unemployment and early retirement suggests some Atlantic

Chart H: Early retirement highest in Atlantic provinces, lowest in western Canada



Source: Labour Force Survey

Table 2: Agriculture content and early retirement rate by province, 1997-2000

	Share of work force in agriculture	Early retirement rate
	%	
Newfoundland	0.5	59.2
British Columbia	1.6	34.8
Nova Scotia	1.7	48.4
Ontario	1.9	40.7
Quebec	1.9	56.2
New Brunswick	1.9	46.2
Alberta	5.4	31.3
Manitoba	7.0	39.0
Prince Edward Island	7.0	38.1
Saskatchewan	14.2	25.9

Source: Labour Force Survey

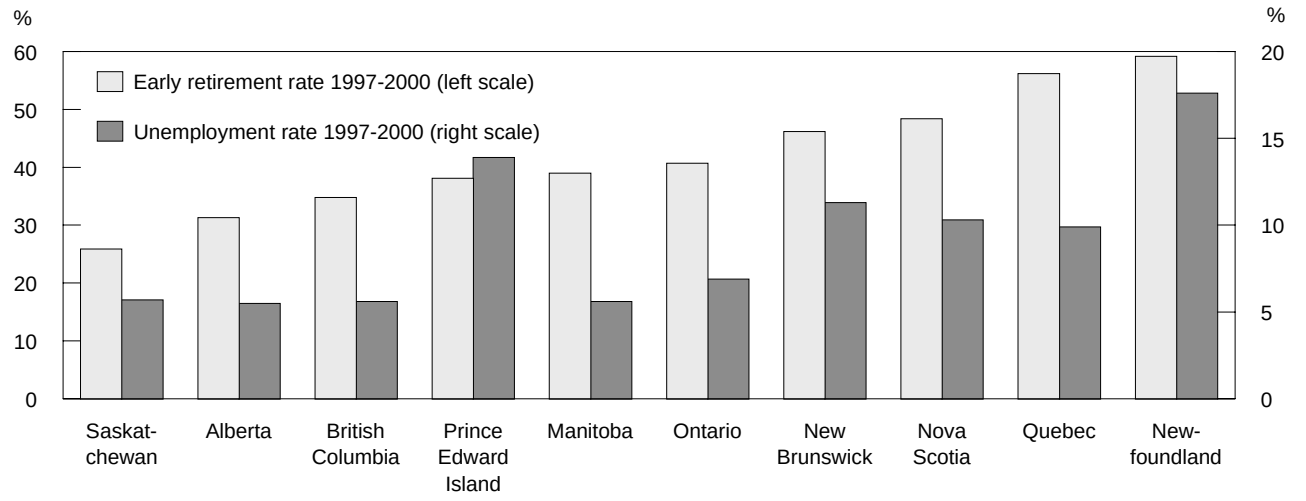
Canadians may have been forced to leave the workforce before turning 60. Whereas unemployment and early retirement rates were highest in the east, both rates were lowest in western Canada (Chart I). Notably, Newfoundland had a 17.6% unemployment rate combined with a 59% early retirement rate. These percentages were well above the 1997-to-2000 national averages of 8% and 43%. In contrast, Alberta, Saskatchewan, Manitoba and British Columbia experienced unemployment of less than 6% and early retirement rates of around one-third.

A previous study demonstrated the link between high rates of early retirement and economic factors by comparing the 1990-1992 recession with a three-year pre-recession period (Siroonian,1993). Early retirement due to layoffs, company closures, and early retirement packages rose significantly during the recessionary period. Today, provinces with weaker economic growth may see older workers forced to retire early. Furthermore, older workers who are laid off may find themselves competing with younger and better-educated workers for jobs in new and growing industries. Rather than start a difficult search for a new job, some older workers may choose early retirement.

Pension coverage influences provincial trend

While economic factors help to explain early retirement patterns in most provinces, some stand out against the trend. Prince Edward Island's unemployment rate stood at nearly double the national rate, yet its early retirement rate was among the lowest. This may be attributable to the relatively low proportion of workers in the province who are covered by an employer-sponsored pension plan—in 1997, only 24% of the provincial labour force as compared with 33% nationally. Pension plans also help to explain the high early-retirement rates in Newfoundland and Quebec where coverage rates were 39% and 35% respectively.

Chart I: Early retirement tied to provincial unemployment



Source: Labour Force Survey

Early retirement higher among full-time workers

Canadians who worked full time in their last job had higher early-retirement rates than those who worked part time—46% of recent retirees who had worked full time quit before 60 compared with 30% of part-time recent retirees. This is no surprise, as full-time workers earn more, and therefore may be able to save more for retirement. In fact, 58% of 1996 part-time or part-year employees earned less than $10,000 per year. Part-timers may also lack many of the retirement benefits granted to their full-time counterparts. Only one-fifth of part-time workers received an employer-sponsored retirement, compared with nearly three-fifths of full-timers. The lower early-retirement rates among part-time workers may also reflect a shift into part-time employment by older workers. Part-time work facilitates the transition to retirement, unlike full-time work, which brings an abrupt halt to working life (Walsh, 1999).

Summary

As a large-scale exit of baby boomers from the workforce looms, understanding trends in retirement has never been so important. Canadians today are retiring much earlier than only 10 years ago; however, government downsizing during the 1990s may have been a primary reason for the surge in early retirement of the last decade. After the 1997 peak, early retirement rates tapered off, suggesting that the growth seen in the 1990s may not be indicative of the future.

The propensity to retire early is driven not only by trends in public-sector employment, but also appears to be related to financial factors—specifically, the existence of a pension plan or other means of supplementary retirement income. Retirees with accumulated savings or pension benefits are more likely to retire before 60 because they need not rely on Canada or Quebec Pension Plan payments.

It is impossible to tell if early retirement rates will continue to rise in the years to come or follow the downturn seen since 1997. The change in trend makes any long-term projection based on recent behaviour uncertain. Regardless, the age at which workers choose to retire in the coming decades will have social and economic implications for the entire country.

Notes

1 A retiring allowance (or severance pay) is an amount paid to officers or employees at the time, or after, they retire from an office or employment in recognition of long service, or for the loss of office or employment. Retiring allowances include payments for unused sick leave credits and amounts received for termination of employment, but exclude superannuation or pension benefits, amounts received as a result of an employee's death, or benefits derived from certain counselling services.

2 The different reference periods of the sources may account for the differences in peak years between the early retirement rate and retiring allowance data. In the LFS, retirees who left work within the last 12 months are considered to have retired in the year of the survey, which may not necessarily be the year in which they retired. For example, respondents who retired in July 1996 may have been surveyed in June 1997. Even though they left work in 1996, they are considered 1997 recent retirees. Many public sector workers who retired in 1996 could have been recorded as 1997 recent retirees. Retiring allowance data are from Canada Customs and Revenue Agency and include only payments made between January and December of one year. Therefore, the 1996 retiring allowance peak could coincide directly with the 1997 early-retirement rate peak.

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Evolution of the Canadian workplace: work from home

Ernest B. Akyeampong and Richard Nadwodny

As Canada evolved from a rural and resource-based economy into an urban and industrialized one, residences became largely distinct from workplaces. Throughout the 1900s, increased access to cars, improved transportation infrastructure, and growth of public-transit systems combined to change the face of Canadian towns and cities, and further increased the distance between home and work for many. However, in the past decade or two, the trend appears to be reversing somewhat. Technological advances, notably in the information area (for example, computers and the Internet), have made it possible for workers in many industries to work from their homes, or even while travelling. There is a general belief that downsizing, restructuring, and contracting-out practices by corporations and governments, especially in the past decade, may also have pushed some employees into home-based self-employment[1], but that perception is not supported by empirical findings in a recent study (Lin, Yates and Picot, 1999).[2]

Using various surveys, this study examines the number of Canadians usually working from home over the past three decades. It discusses the advantages and disadvantages of this arrangement. It profiles who these workers are, what kind of work they do, the volume of work they perform, and how they accomplish it—especially their use of computers. It also looks at job quality.

Size of the work-from-home workforce

Estimates of the number of people working at home date back to the 1971 Census. Since then, the Survey of Work Arrangements (SWA), the Survey of Labour and Income Dynamics, the General Social Survey (GSS), and the Workplace and Employee Survey have all collected similar data. However, these surveys differ in their questions, reference periods, and designs (and indeed for some surveys, the questions were different in different years). As a result, no consistent time series exists on home-based workers, making it impossible to be precise on trends over the past three decades.

Nevertheless, similarities in question wording among some surveys permit the construction of two "mini-series" on trends. The censuses of 1971, 1981 and 1991 are fairly comparable, as are the SWA (1991 and 1995) and the GSS 2000. Compared with the SWA and the GSS, the census definition of a home-based worker is more restrictive, implying lower home-based numbers in the census series (see *Data sources, questions and estimates*).

According to the census, the number of home-based workers (employees plus self-employed) rose from 613,000 to 1,079,000 between 1971 and 1991. However, the increase was in line with that of the overall workforce, so the proportion of persons working at home remained virtually unchanged at around 8%. Both employees and the self-employed saw their home-based numbers increase (from 196,000 to 461,000 for employees and from 417,000 to 618,000 for the self-employed), but the share of home-based employees remained virtually unchanged at around 4% of all employees, while the share of the work-from-home self-employed rose from 39% to 43% of the total self-employed.

The year 1991 presents a classic example of the effects of questionnaire word changes and seasonality on survey results. That year, the census (conducted in June) counted 461,000 home-based employees, while the SWA (conducted in November) estimated 617,000—almost one-third more than the census. (The 1991 SWA did not cover the self-employed.) While some of the difference can undoubtedly be attributed to seasonality, some was due to differences in questionnaire wording: The less restrictive SWA definition contributed to the larger SWA count.[3]

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Data sources, questions and estimates

		Home-based workers		
		Total	Employees	Self-employed
		'000 / (% of workforce)		
Census of Population				
1971	Where do you usually work?	613 (8)	196 (3)	417 (39)
1981	At what address did you (usually) work?	773 (7)	298 (3)	474 (41)
1991	At what address did this person usually work?	1,079 (8)	461 (4)	618 (43)
Survey of Work Arrangements				
1991	Excluding overtime, does ... usually work any of his/her scheduled hours at home? (employees only)	...	617 (6)	...
1995	Excluding overtime, does ... usually do any of his/her work at home? (employees)	2,129 (16)	1,003 (9)	1,126 (53)
	Does ... operate his/her business from home? (self-employed)			
General Social Survey				
2000	Excluding overtime, do you usually work any of your scheduled hours at home?	2,795 (17)	1,426 (10)	1,369 (50)

The 1995 SWA and 2000 GSS estimates also show that the number of people doing some or all of their work at home rose from 2,129,000 in 1995 to 2,795,000 in 2000, but their share of total employment remained virtually unchanged around 16% to 17%. Both home-based employees and self-employed saw their numbers rise over the period—from 1,003,000 to 1,426,000 for employees, and from 1,126,000 to 1,369,000 for the self-employed. However, because growth in home-based work was matched by a proportionately equal growth in other work, the percentages of home-based employees and self-employed hardly changed over the period (around 9% to 10% for employees and ranging from 50% to 53% for the self-employed).

Results from the censuses, SWA and GSS also suggest that a large majority of home-based workers put in only a few hours of work at home each week.

Pros and cons of working at home

Working at home has both advantages and disadvantages. For the employee, it permits increased flexibility in scheduling activities; makes it easier to balance work and personal or family demands; reduces expenses for transportation, clothing and food; and cuts commuting time. On the negative side, working at home may reduce one's social circle, stifle career advancement, or even increase the workload.

For the employer, a work-from-home arrangement may increase employee productivity, reduce expenses for work space, improve recruitment and retention of employees, and reduce absenteeism.[4] Among the most commonly cited disadvantages are problems related to co-ordination and communication, lack of control over quality of work, and problems associated with information security.

Many of the pros and cons listed above for employees also apply to self-employed workers. Additional advantages include possible cost-savings resulting from operating a business at home instead of at an outside premise, as well as access to certain tax write-offs.[5]

Society in general can also benefit through reductions in road congestion (and possibly reduced accidents and their associated costs). Air pollution and greenhouse gas emissions would also be less. On the negative side, home-based businesses may contribute to increased noise, traffic and pollution in some residential neighbourhoods.

Who works at home

According to the GSS, 2.8 million people worked at home in 2000, (Table 1). Although this number was equally split between employees and the self-employed (1.4 million each), the former represented only 10% of all employees while the latter accounted for 50% of their group. Employees and the self-employed are profiled separately because the decision for an employee to work at home is generally made jointly by the employer and the employee, unlike the self-employed.

Table 1: Persons working from home by selected characteristics, 2000

	Employees			Self-employed		
		Work from home			Work from home	
	Total	Total	Incidence	Total	Total	Incidence
	'000		%	'000		%
Both sexes	**13,932**	**1,426**	**10.2**	**2,750**	**1,369**	**49.8**
Male	7,359	782	10.6	1,784	826	46.3
Female	6,572	644	9.8	965	544	56.3
Age						
15-24	2,991	137	4.6	141	60	42.3
25-54	9,782	1,174	12.0	2,078	1,046	50.4
55 +	1,159	114	9.8	531	263	49.6
Work status						
Full-time	5,845	747	12.8	1,358	727	53.6
Part-time	960	128	13.4	312	166	53.1
Education						
Less than high school diploma	2,216	86	3.9	435	166	38.2
High school diploma	2,659	147	5.5	475	202	42.6
Some postsecondary	2,379	189	8.0	384	204	52.9
Community college certificate	3,717	347	9.3	688	368	53.5
University degree	2,883	655	22.7	753	426	56.6
Marital status						
Married	8,316	1,009	12.1	2,084	1,065	51.1
Separated, divorced, widowed	1,008	99	9.9	213	119	56.1
Single	4,332	304	7.0	395	159	40.2
Age of youngest child						
With children	5,393	700	13.0	1,330	690	51.9
Pre-school age	1,350	199	14.8	279	141	50.5
5-12 years	1,935	259	13.4	482	268	55.7
13 years and over	2,109	241	11.4	569	281	49.3
Without children	411	47	11.5	49	24	49.5

Source: General Social Survey

Among employees, the incidence of home-based work is marginally higher for men (10.6%) than for women (9.8%). Core-age workers (25-54 year-olds) are the most likely to work at home (12.0%), and youths (15-24) the least likely (4.6%). The practice was almost equally as prevalent among full-time and part-time workers. Married employees were more likely to work from home than their single (never married) counterparts (12.1% versus 7.0%). Part of the difference reflects an age effect. The practice was more prevalent among employees with young children, especially pre-school aged (14.8%), than among employees without children (11.5%).

The likelihood of an employee usually doing some or all of their work at home rises with educational attainment. This is mainly because the occupations most conducive to this arrangement tend to have higher concentrations of highly educated workers, and vice versa. Among employees with university degrees, about 23% usually did some or all their work from home, compared with only 4% among those without a high-school diploma.

Among self-employed workers, the incidence of work from home was around 50% for most of the demographic groups selected. Notable exceptions were lower-than-average incidences among young entrepreneurs (42.3%), entrepreneurs with the least education (38.2%), and the never-married group (40.2%). As well, higher-than-average incidences (over 56%) were found among entrepreneurs with university degrees and the separated, divorced or widowed.

What and how much is done at home

Work from home varies by occupation and industry (Table 2). In a profit-maximization market economy, an employer would allow such an arrangement based on factors such as operational feasibility, effects on the morale and productivity of co-workers, and union demands. Operational feasibility rests partly on whether links with co-workers require an employee to be present on the employer site, and on whether the equipment used at work is available at, or portable to, home. An auto-assembly worker, for example, has to work at the employer's work site; a social science researcher, on the other hand, can more easily work from home.

Table 2: Persons working from home by industry, occupation and province, 2000

	Employees			Self-employed		
		Work from home			Work from home	
	Total	Total	Incidence	Total	Total	Incidence
	'000		%	'000		%
Industry	**13,932**	**1,426**	**10.2**	**2,750**	**1,369**	**49.8**
Agriculture	151	--	--	255	166	65.2
Forestry, fishing, mining, oil and gas	289	28	9.6	75	27	35.5
Utilities	108	--	--	--	--	--
Construction	630	44	7.0	273	114	41.6
Manufacturing	2,200	164	7.4	146	70	48.4
Trade	2,095	149	7.1	325	141	43.2
Transportation and warehousing	610	50	8.3	155	36	23.0
Finance, insurance, real estate and leasing	762	107	14.0	168	105	62.3
Professional, scientific and technical	676	155	22.9	355	244	68.7
Management, and administrative and other support	394	44	11.1	182	68	37.4
Educational services	1,035	242	23.4	61	33	53.7
Health care and social assistance	1,236	107	8.6	200	127	63.6
Information, culture and recreation	700	90	12.9	135	87	65.0
Accommodation and food services	1,018	36	3.6	96	35	36.1
Other services	477	62	12.9	218	77	35.1
Public administration	906	95	10.5	16	--	--
Occupation						
Management	902	229	25.4	508	222	43.6
Business, finance and administrative	2,580	301	11.7	295	191	64.7
Natural sciences	949	175	18.4	154	99	64.5
Health	619	28	4.5	103	40	39.2
Social science, education	1,023	271	26.5	108	76	70.0
Artistic, culture, recreation and sport	312	52	16.5	203	134	65.9
Sales	3,615	220	6.1	503	246	48.8
Trades, transport and equipment	1,830	74	4.0	369	110	29.8
Occupations unique to primary industry	377	20	5.4	334	182	54.5
Occupations unique to processing and manufacturing	1,199	35	2.9	80	32	39.4
Province						
Newfoundland	243	21	8.6	33	15	46.1
Prince Edward Island	69	--	--	--	--	--
Nova Scotia	446	43	9.5	57	27	46.7
New Brunswick	355	27	7.6	57	20	35.8
Quebec	3,400	354	10.4	664	305	45.9
Ontario	5,465	552	10.1	976	497	51.0
Manitoba	524	49	9.4	101	56	55.1
Saskatchewan	415	38	9.2	116	61	52.3
Alberta	1,403	142	10.2	342	174	50.8
British Columbia	1,611	193	12.0	394	210	53.3

Source: General Social Survey

With these factors in mind, the lowest incidences of home-based work were found among workers in occupations unique to processing and manufacturing (2.9%); trades, transport and equipment-operating (4.0%); and health (4.5%) occupations. In contrast, the highest incidences were found among employees in managerial positions (25.4%) and in social-science and education professions (26.5%).

The picture by industry largely mirrored that by occupation. The practice of working from home was least common among employees in accommodation and food services (3.6%), construction (7.0%), trade (7.1%) and manufacturing (7.4%). Higher incidences were observed among employees in educational services (23.4%) and the professional, scientific and technical industry (22.9%).

The incidence of work from home among the self-employed by occupation and industry was generally similar to that found among employees, except that for each occupation and industry, the practice was much more common among the self-employed.

Incidence also varied by province. These variations reflect in part differences in provincial industry and occupational mixes. The practice was most common in British Columbia (12.0%) and least common in New Brunswick (7.6%). For self-employed workers, those living in Manitoba (55.1%) were most likely to work from home. Those in New Brunswick were the least likely (35.8%) to do so.

As stated earlier, most employees working at home do so for only a few hours each week.[6] In 2000, about 65% of such employees worked between one and 10 hours each week at home. Less than 3% put in more than 40 hours. About 33% of the work-from-home self-employed put in between one and 10 hours of work at home each week, and 17% of them reported more than 40 hours.

Use of computers and information technology

Advances in information technology are generally believed to be among the driving forces behind the growth in home-based work for both employees and the self-employed, especially in the past decade or two. Notably, innovations to telephone systems and the advent of e-mail and the Internet have made it easier to keep in touch with co-workers and clients from practically anywhere. But what evidence exists to support this contention?

Without assigning causality, the GSS shows that the advent of computer and automated technology affected the work of home-based workers more than that of their non–home-based counterparts, and that home-based workers used these new technologies much more. This applied both to employees and the self-employed (Table 3).

Among employees, about 77% of home-based workers compared with 54% of their non–home-based counterparts felt that their work had been greatly or somewhat affected by the computer or automated technology in the past five years. Furthermore, about 83% of home-based employees compared with 51% of their non-home-based counterparts reported using a computer in their main job in the past 12 months.

The frequency of use of computers and other automated technology was also greater among home-based employees. The proportions using the telephone or e-mail every day or several times a week for work-related purposes were 58% and 48% respectively; for their non-home based counterparts, the corresponding proportions were less than half—26% and 19%.

As well, a higher proportion of home-based employees (49%) felt their work had become more interesting as a result of computers, compared to 30% for non–home-based employees.

Job quality

Job quality for home-based and non–home-based employees can be measured in several ways. Data

Table 3: Use of computers or automated technology, 2000

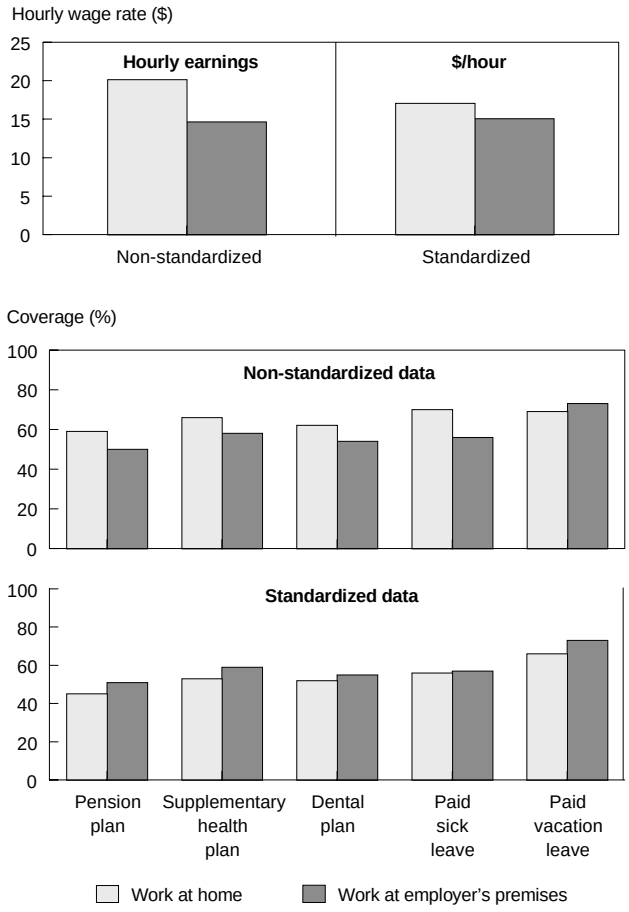
	Employees		Self-employed	
	Work at home	Work at employer's premise	Work at home	Work outside home
	%			
Used a computer in main job in past 12 months	83.3	51.3	60.4	40.7
Work has been greatly or somewhat affected by computers or automated technology in last 5 years	76.5	53.7	60.8	47.4
Work has become more interesting as a result of computers in last 5 years	49.1	29.7	37.2	27.3
Used the Internet every day or several times a week at home last month	51.8	29.2	45.2	27.6
Used the telephone every day or several times a week for work or business related purposes	57.7	26.5	39.6	25.5
Used e-mail every day or several times a week for work or business related purposes	47.8	19.5	26.7	16.1

Source: General Social Survey

limitations, however, restrict the focus to comparisons of wages and non-wage benefits. Both the hourly wage rate and non-wage benefits data—specifically employer-sponsored pension, medical, or dental plan coverage, and vacation and sick leave entitlements—analyzed in this study come from the 1995 SWA. Although somewhat dated, this survey is the only source of information available.

An earlier study (Pérusse, 1998) found that employees who usually worked at home earned an average hourly wage higher than that of their non–home-based counterparts ($20.15 versus $14.65). The former were also more likely to be covered by an employer-sponsored pension, dental or medical plan, and entitled to paid sick leave (Chart). Nevertheless, since both the wage rate and non-wage benefit coverage depended on many other factors including age, sex, industry, occupation, education, experience, job tenure, union membership and corporate size, the data had to be standardized to arrive at more statistically meaningful comparisons.[7] Standardization changed the picture markedly. For example, standardizing by age, sex and occupation narrowed the hourly wage differential (to $17.07 versus $15.07) between the two groups of workers and reversed the results with respect to pension, health and dental plan coverage. Thus, the standardized results confirmed that wage rates and non-wage benefits are the combined result of many factors, and that the place of work may not necessarily be an important determinant, if at all.

Chart: Standardization narrowed wage differences and reversed most non-wage disparities.



Source: Survey of Work Arrangements, 1995

Summary

Working from home offers potential advantages as well as disadvantages to employers, employees and the self-employed alike. Although no consistent time series exist, data from various sources suggest that the number of Canadians doing some or, in a few cases, all of their regular work at home has been increasing over the past three decades. That growth, however, has been matched by similar proportionate increases in the employment of non–home-based workers, leaving the share of home-based work relatively unchanged. For operational reasons, the practice is most common among social science and educational workers, and least common among manufacturing, construction, accommodation and food service, and health workers. Innovations in information technology in the past decade or two appear to have affected home-based workers more strongly. Use of the computer, e-mail, Internet and telephone for work purposes is much higher among home-based workers than among those who work only outside the home. Also, a larger percentage of home-based workers (employees and self-employed alike) felt their work had become more interesting as a result of computers.

The future of home-based work, especially for employees, rests on many factors. From the employer's side, these include issues related to co-ordination and communication with employees, concerns about the security of confidential information, and problems and costs of providing computer technical support at home. From the employee's side, the appeal of a

home-based work arrangement is that it is not static and can change according to personal and family demands. For the self-employed, zoning laws will continue to play an important role.

Perspectives

Notes

1 According to the Labour Force Survey, self-employment in the professional, scientific and technical service industry (which includes many consultants) more than doubled (+119%) from 1989 to 1999, much more than the 37% rise in overall self-employment during the same period.

2 The fixed-effects modelling results of the Lin et al. study show a statistically significant but empirically small negative (positive) relationship between self-employment and unemployment (full-time paid employment).

3 The 1996 Census was not used in this study because the definition of the home-based worker was more restrictive: The term *usually work at home* was defined as *most of the time* (for example, 3 days out of 5). Not surprisingly, under this tighter definition, the 1996 Census yielded a count of 1,086,000 home-based workers, hardly any different than the 1,079,000 in the 1991 Census. (The 2001 Census also used the more restrictive definition.)

4 Nortel Networks is an example of a large Canadian high-tech company that claims to use work-from-home arrangements (or HOMEbased program, as it is referred to by the company) to attract workers and retain employees. In 2000, about 17% (13,000) of the company's global employees belonged to its telework program. Nortel estimates that adoption of this program has resulted in a 20% reduction in worker absenteeism, a 10% improvement in employee job satisfaction, and a 24% reduction in staff turnover. The company also estimates an annual savings of $20 million in real estate costs due to its telework program, and an annual reduction of 30 million pounds of greenhouse gas pollutants into the atmosphere as a result of fewer employees commuting (Telecommute Connecticut-Research).

5 Canadian tax laws permit persons using their home as a workplace to deduct some home depreciation costs and other expenses such as energy use when filing their tax returns.

6 Though likely more interesting, the survey data do not allow the estimation of proportion of scheduled weekly work time performed at home.

7 Standardization is a statistical technique that makes it possible to assess observed differences in a particular characteristic between one group and another, assuming that these two groups are identical in some respect. In the case of paid work at home, it is of interest to know whether merely working at home is associated with pay that differs from that obtained from working at an employer's premises. To eliminate the effect of age, sex and occupation on their wages, respondents are categorized as home worker/non–home-worker in such a way that each combination of variables is represented in the same proportion as in the overall group of workers.

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