Catalogue no. 75-001-XPE

PERSPECTIVES

ON LABOUR AND INCOME

SUMMER 2001
Vol. 13, No. 2

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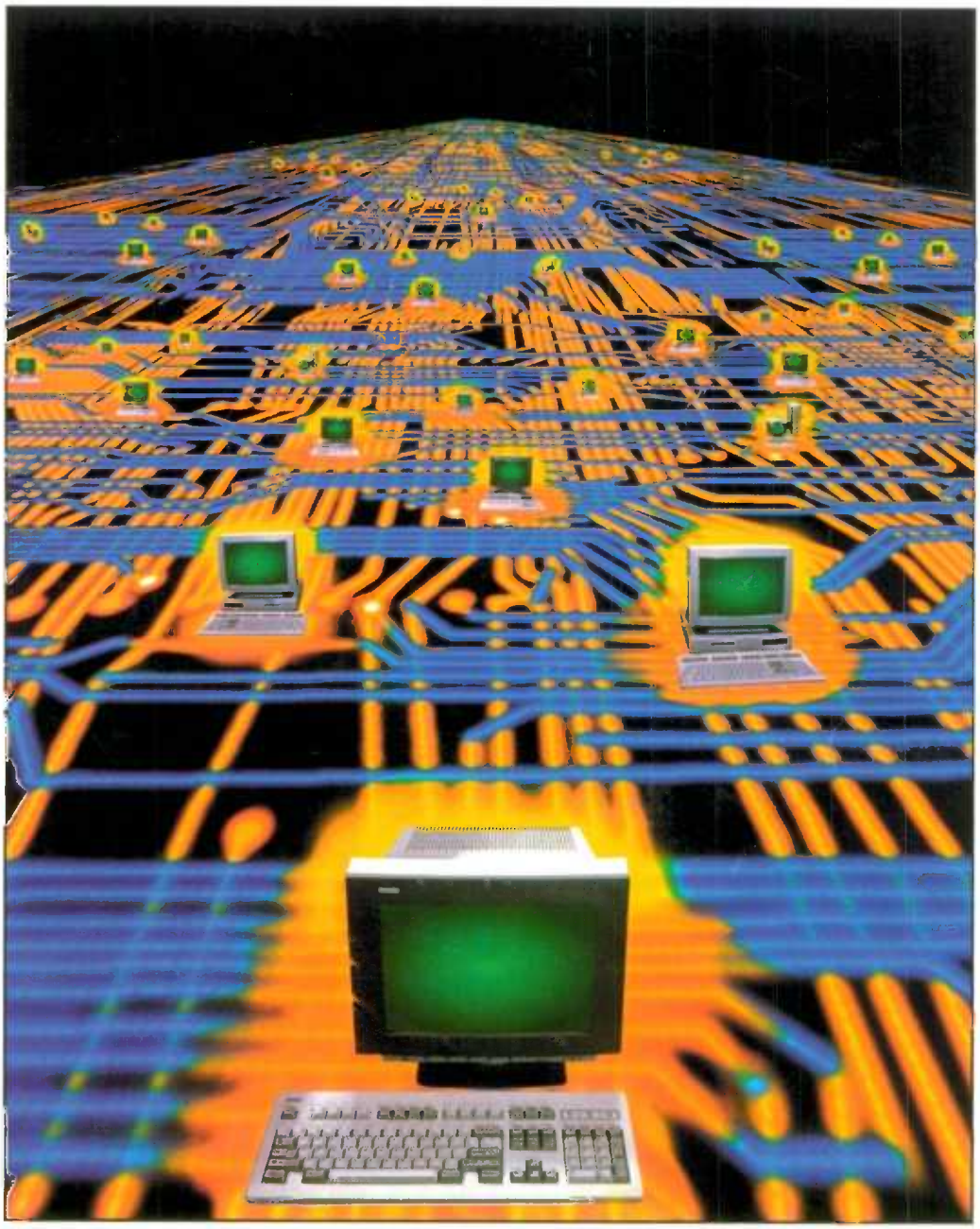
- EI USE
- LOW INCOME
- PART-TIME EMPLOYMENT
- PENSION COVERAGE
- GAMBLING UPDATE



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Summer 2001 Vol. 13 No. 2

PERSPECTIVES

ON LABOUR AND INCOME

Departments

Articles

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SUBSCRIPTION RATES: CDN $18.00 per issue, CDN $58.00 for a one-year subscription.

Shipping charges outside Canada:

	Single issue	Annual subscription
United States	CDN $ 6.00	CDN $24.00
Other countries	CDN $10.00	CDN $40.00

All prices exclude sales taxes.

Indexed in the *Canadian Index, Canadian Periodical Index, P.A.I.S. International, Sociological Abstracts, Econlit, Canadian Business and Current Affairs* and *Employee Benefits Infosource*. Also indexed in French in *L'Index de l'Actualité* and *Point de Repère*.

PERSPECTIVES
ON LABOUR AND INCOME

Symbols

The following standard symbols are used in Statistics Canada publications:

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

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Forum

From the Managing Editor

Erratum

The article "Part-time by choice" in our spring 2001 issue showed an incorrect formula for shift-share analysis in note 3. The correct version is:

$$m^{t+1} - m^{t} = \sum_{i} \left[\frac{\left(s_i^{t} + s_i^{t+1} \right)}{2} \cdot \left(m_i^{t+1} + m_i^{t} \right) \right]$$

$$- \sum_{i} \left[\frac{\left(m_i^{t} + m_i^{t+1} \right)}{2} \cdot \left(s_i^{t+1} + s_i^{t} \right) \right]$$

NAICS

Beginning with January 2001 data, estimates from the Survey of Employment, Payrolls and Hours (SEPH) are based on the North American Industry Classification System (NAICS). The NAICS-based estimates are not comparable to the previously published estimates based on the Standard Industrial Classification (SIC) of 1980. In order to facilitate the transition, NAICS-based historical series have been produced from January 1991 to December 2000. The estimates of employment and average earnings reflect NAICS-based levels derived from the administrative sample and modifications to the industrial coverage and methodology of the survey. In addition, seasonal factors have been revised to improve the historical consistency of seasonally adjusted estimates.

A concordance table between NAICS and 1980 SIC codes is available on request. A description of the conversion process and its impact on the data are available in the April 2001 issue of *Employment, Earnings and Hours* (Catalogue no. 72-002-XIB or 72-002-XPB). For more information on NAICS, consult the "NAICS Canada" page on Statistics Canada's Web site (www.statcan.ca), or contact the Labour Statistics Division at labour@statcan.ca.

Fact-sheets

Beginning with this issue, we will be inaugurating a series of "fact-sheets." These brief updates will highlight recent statistics and trends on several popular themes, including gambling, work absences, unionization, and age of retirement. This quarter we feature a fact-sheet on gambling, which shows that net revenue from government-run lotteries, video lottery terminals and casinos rose from $2.7 billion in 1992 to $9.0 billion in 2000. Fact-sheets for other topics will be introduced as new data become available.

As always, we welcome your comments and suggestions.

Henry Pold
Managing Editor
E-mail: henry.pold@statcan.ca

Perspectives

We welcome your views on articles and other items that have appeared in *Perspectives*. Additional insights on the data are also welcome, but to be considered for publication, communications should be factual and analytical. We encourage readers to inform us about their current research projects, new publications, data sources, and upcoming events relating to labour and income.

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Highlights

In this issue

Working with computers ... p. 9

- Almost 6 in 10 workers used a computer at their job in 2000, with the majority (78%) using one daily. A decade earlier only 3 in 10 workers were using computers.
- Workers were significantly more likely to use a computer at work if they were under 55, had a high level of education or income, were an employee, worked full-time, or worked in a "high skill" or a clerical occupation.
- Almost all workers used their computer for word processing (83%). Four other common purposes were data entry (72%), record keeping (69%), spreadsheets (63%), and the Internet (54%). Only 16% of workers reported using their computer for programming.
- Women were more likely than men to use a computer at work, 60% compared with 54%. However, except for word processing, women were less likely to have performed all types of computer-related work.
- The most common methods used by workers to acquire their computer skills were informal: trial and error (97%), help from co-workers (76%) and help from friends or family (76%).
- Public employees used more methods to learn their computer skills (5.1) than private-sector employees (4.7) or the self-employed (4.0). Employer-sponsored classroom training was particularly common for public employees (68%) compared with those in the private sector (53%) or the self-employed (36%).

Repeat users of employment insurance ... p. 16

- While men accounted for 52% of employees in 1997, they made 59% of regular EI claims (that is, excluding claims for maternity, paternal, sickness and other special benefits) in 1996.
- Persons 35 and over had a disproportionate share of multiple EI claims (3 to 5 between 1992 and 1996).
- Less than half (49%) of persistent EI users had completed high school, compared with more than three-quarters (78%) of all employees.
- The Atlantic provinces accounted for 16% of regular benefit claims, more than twice their 7% share of employees. Quebec also had a disproportionate share of EI claims (34%) relative to paid employment (24%).
- Most regular EI claimants were satisfied with their employment and income situations. Moreover, satisfaction with each increased with the number of claims, possibly because frequent users were more accustomed to changes in their status.
- A strong majority of EI claimants would have been willing to change employers or the kind of work they did, but not their province of residence.
- Most claimants accepted EI use as a "fact of life".

Experiencing low income for several years ... p. 25

- Between 1993 and 1998, some 13% of all individuals lived in families with low income. For these persons, family income was 31% to 38% below the low income cutoff.
- About 8% of Canadians lived in families experiencing low income for four years or more between 1993 and 1998. Only 3% experienced low income for all six years and some 76% lived in families with no experience of low income during the period.
- Some 29% of children under six experienced low income for at least one year; about 12% lived in families that had low income for four years or more. Conversely, only 6% of people 65 and over had low income for four years or more between 1993 and 1998.
- Between 1993 and 1998, fully 38% of people living in families headed by a lone parent experienced low income for four years or more, compared with 23% of unattached individuals.
- Of all those who started a spell of low income in one year, 50% to 60% no longer had low income the following year. On the other hand, some spells of low income last a long time: of all Canadians falling into low income in 1994, some 30% remained for three years or more.

Trends in part-time work ... p. 36

- Part-time work has increasingly divided into two camps: short-hour part-time (less than 15 hours per week) and long-hour part-time (15 to 29 hours).
- While long-hour part-time work increased every year from 1976 to 2000, more than doubling over the period, short-hour part-time grew more slowly and then began to decline after 1996.
- As a result, between 1976 and 2000, average weekly hours for part-time workers increased from 15.5 to 16.9.

Pension coverage and retirement savings ... p. 39

- Between 1984 and 1998, registered pension plan (RPP) coverage declined for men aged 25 to 54 and for women 25 to 34, while for women 35 to 54, the percentage covered by a pension plan increased from 46% in 1984 to 51% in 1998.
- At least two factors may explain the drop in men's coverage. First the unionization rate fell during the period: from 39% to 26% for young men (25 to 34) and from 48% to 41% for prime-age (35 to 54) men. Pension coverage rates are much higher in unionized jobs than they are in non-unionized jobs. Second, employment has shifted away from high-coverage industries to low-coverage industries.
- Between 1986 and 1997, average contributions to RPPs fell substantially among young and prime-age men, dropped slightly among young women, and rose among prime-age women. However, registered retirement savings plan (RRSP) contributions grew dramatically (by at least 70%) for each of the four age-sex groups.
- Over the same period, contributions to RPPs and RRSPs made by workers in the top income quintile were 9 to 46 times greater than those made by workers in the bottom quintile. Contributions by the latter never exceeded $200 per year for young men and women or $630 per year for prime-age men and women.

What's new? ... p. 53

- **Just released**

  CANSIM II

  Annual Demographic Statistics, 2000

  Survey of Approaches to Educational Planning

  Workplace and Employee Survey

  Labour Market Outcomes of Arts and Culture Graduates

  Literacy, Numeracy and Labour Market Outcomes in Canada

Training as a Human Resource Strategy: The Response to Staff Shortages and Technological Change

Job Tenure, Worker Mobility and the Youth Labour Market During The 1990s

Farm family income

Measuring Economic Well-Being of Rural Canadians Using Income Indicators

Employment Structure in Rural and Small Town Canada: An Overview

The Assets and Debts of Canadians: An Overview of the Results of the Survey of Financial Security

Composition of Assets and Debts Held by All Family Units, Canada, Regions and Provinces, 1999

Family Units and Net Worth by Net Worth Groups, Canada, Regions and Provinces, 1999

Net Worth of Economic Families, Unattached Individuals and All Family Units by Selected Family Characteristics, Canada, Regions and Provinces, 1999

Income Trends in Canada

Labour Force Historical Review, 2000

Historical Labour Force Statistics, 2000

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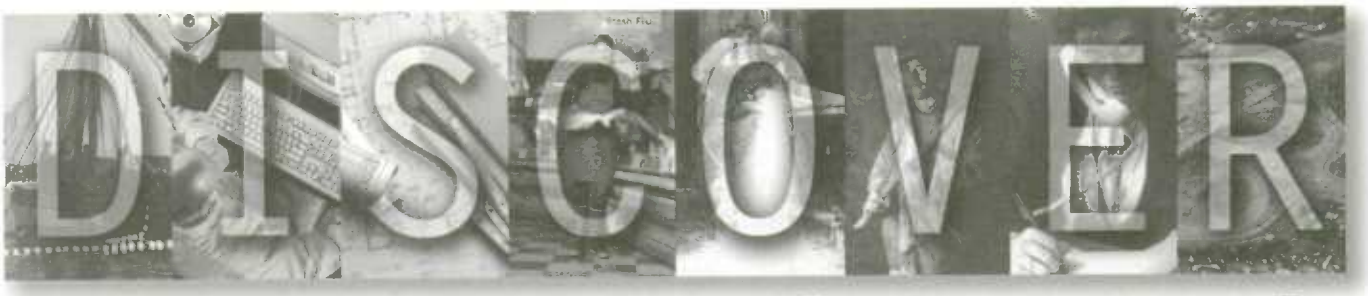
Perspectives



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Working with computers

Katherine Marshall

Long gone, but still remembered by many, are typewriters, typing pools, carbon copies, adding machines and physical mail boxes. The ubiquitous personal computer has changed all this and revolutionized the workplace. Furthermore, most workers today go well beyond using their computer as a mere typewriter or calculator.

As intriguing as this computer-use revolution may be, embracing information and communication technology (ICT) is viewed as an essential ingredient for both businesses and individuals to remain competitive in today's knowledge-based economy. "[A]ccess to and development of information, communication and e-commerce resources are increasingly viewed as crucial for economic and social development." (OECD, 2001). It is argued that access to and use of ICTs can increase productivity and efficiency, enhance knowledge and skill levels, and improve the quality of work life (ILO, 2000).

Concerns have been raised, however, over the uneven use of ICTs—the "digital divide"—between and within countries. For example, only 6% of the world's population has ever logged onto the Internet, and close to 90% of them are from industrialized countries (ILO, 2000). Digital divides have been documented within industrialized countries as well—among individuals, households, businesses and geographic regions.

This paper examines the extent of computer use by Canadian workers (see *Data source and definitions*): which workers are most likely to use a computer at their job, how often they use it, what they use it for, and how they learned their computing skills.

Katherine Marshall is with the Labour and Household Surveys Analysis Division. She can be reached at (613) 951-6890 or katherine.marshall@statcan.ca.

Computer use soars

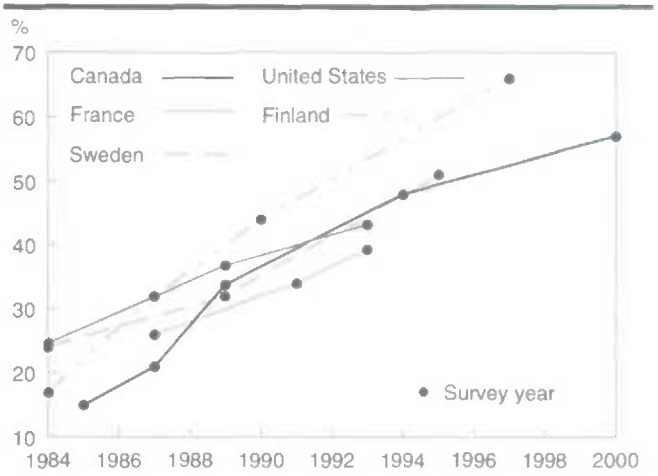
In a mere decade, the proportion of workers using a computer at their main job has risen from 33% in 1989 to 57% in 2000—with almost 80% of users now working at their computer every day (Chart A, Table 1). The same trend can also be seen in other industrialized countries (see *International comparisons*).

As found in past studies, a higher proportion of employed women in 2000 used a computer at work than men, 60% compared with 54%. In 1989, the comparable figures were 38% and 32%.

International comparisons

As was the case in Canada, as little as 15 years ago (mid-1980s) less than one-third of the employed in other industrialized countries were using a computer at their job (OECD, 1998). Since then, growth in the use of computers at work has been steady and constant—with still no indication of a levelling in the trend.

Computer use at work rising in industrialized countries.



Sources: General Social Survey; Organisation for Economic Co-operation and Development
Note: Differing definitions and methodologies limit comparability.

Data source and definitions

The main theme for the 2000 **General Social Survey (GSS)** was access to and use of information and communication technology, specifically computers and the Internet. From January to December, approximately 25,000 respondents 15 or older were asked details of their personal use of computers and the Internet. Topics covered included the use of computer technology in the workplace and the development of computer skills. Both the 1989 and 1994 GSS asked a limited number of questions on technology use. For more information on the 2000 cycle of the GSS, contact Kathryn Stevenson at (613) 951-4178.

Employed: persons who reported spending any time working at a job or business in the month previous to the interview.

Uses a computer at work: employed persons who used a computer at their main job during the preceding 12 months.

Income: total annual personal income, before deductions, from all sources. It comprises earnings from paid or self-employment, government transfer payments, and income from pension plans or other sources.

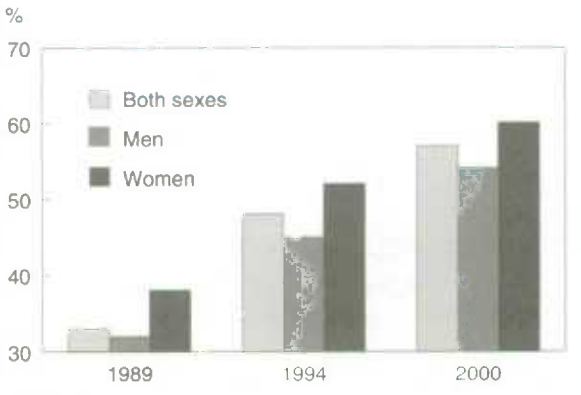
Public/private sector employment: a standard Labour Force Survey (LFS) variable, created after data collection based on National Accounts definitions. The public sector consists of employees in public administration at all levels of government, crown corporations, liquor control boards and other government institutions such as schools, hospitals and public libraries. The private sector is all remaining employees plus self-employed owners of businesses. All 4-digit industries from the LFS with 50% or more public sector employees were deemed to be public sector industries for the GSS, and all remaining industries, private sector. Using this proxy method, 17% of the employed in the GSS in 2000 were public sector, compared with 19% from the LFS.

Education and income key factors

Professional occupations[1] often require a highly developed set of skills that, as the data confirm, often includes using a computer. Those with such jobs had the highest rate for computer use at work (86%) (Table 1). Most managerial jobs also involved computer use (78%). Although clerical jobs may not be considered "high skill", they had the second highest rate of computer use (84%). However, as shown later, persons in this line of work use a computer quite differently than do professionals or managers. Since higher level jobs usually require higher levels of education and can command higher earnings, it is not surprising to see these characteristics linked with computer use too. For example, while only 41% of workers with a high school education sat, at least occasionally, at a keyboard for their job, fully 85% of those with a university degree did so. And whereas only 36% of workers with an annual income less than $20,000 used a computer at work, 80% of those with $60,000 or more did so.

Younger (15 to 24) and older (55 and over) workers were both less likely to use a computer at work than were core-age (25 to 54) workers, about 40% compared with 62%. Also, full-time workers were more likely than part-time workers to use a computer at work (60% versus 39%), and employees more than the self-employed (57% versus 52%). However, the self-employed were more likely to use the Internet for their job than employees (69% versus 52%), confirming that, increasingly, the Internet is being used by the self-employed as a tool to conduct business (data not shown).

Chart A : More than half the employed now use a computer at work.



Source: General Social Survey

Table 1: Computer use and frequency of use among the employed, by selected characteristics

	Uses a computer	Uses daily*	Odds ratios†	
			Total	Daily*
	'000			
Total	**8,338**	**6,413**		
	%			
Both sexes	**57**	**78**		
Men	54	79	1.0	1.0
Women	60	77	1.1††	0.8††
Age				
15 to 24	41	67	1.0	1.0
25 to 54	62	80	0.9††	1.1††
55 and over	44	78	0.4	1.1††
Education				
High school or less	41	74	1.0	1.0
Postsecondary certificate or diploma	62	79	1.7	1.2††
University degree	85	81	3.0	1.0††
Residence**				
Urban	59	79	1.0	1.0
Rural	48	72	0.8††	0.8††
Income (individual)				
Less than $20,000	36	63	1.0	1.0
$20,000 to 39,999	58	77	1.9	1.3††
$40,000 to 59,999	71	80	3.7	1.6
$60,000 and over	80	86	6.2	2.8
Class of worker				
Employee	57	80	1.0	1.0
Self-employed	52	65	0.8††	0.4
Work status				
Full-time	60	81	1.0	1.0
Part-time	39	52	0.6	0.3
Occupation				
Management	78	85	1.0	1.0
Professional	86	80	1.4††	0.7††
Technical	71	75	0.7††	0.6††
Clerical	84	87	2.1	1.8
Sales and service	39	70	0.3	0.5
Trades, transport and equipment operators	32	62	0.1	0.2
Primary	24	43	0.1	0.2
Processing, manufacturing and utilities	29	79	0.1	0.5††

Source: General Social Survey, 2000

* *Of all computer users.*

** *Excludes Prince Edward Island; urban indicates population concentration of 1,000 or more and a population density of 400 or more per square kilometre.*

† *Odds ratios are generated from a logistic regression. They indicate whether certain levels of an explanatory variable, compared with the reference category (ratio = 1.0), increase or decrease the odds of a certain event occurring while controlling for all other explanatory variables in the model. In this case, separate models were used to look at the chances (odds) of using a computer at work, and using a computer at work daily.*

†† *Difference with reference category not significant at the <.001 level.*

Among those with access, 8 in 10 use computer daily

Of the 8.3 million workers who used a computer at work, 78% (6.4 million) did so daily. Compared with computer use overall, there was much less discrepancy among workers who used a computer daily. In other words, if a computer was used at work, no matter the occupation or the workplace, the use was likely intense—with a few exceptions. Workers falling at least 10 percentage points below the average in terms of daily computer use comprised those 15 to 24 (67%), the self-employed (65%), those with an income of less than $20,000 (63%), those in trades and transport and equipment operating (62%), part-time workers (52%) and those in primary occupations (43%).

Most differences significant

Logistic regression[2] was used to examine the relationship between computer use, intensity of use, and the above explanatory variables simultaneously. With only a few exceptions, all variables had a significant influence on the likelihood of using a computer at work (Table 1). The findings for age and residence were revealing. Even though younger workers were less likely to use a computer at work than core-age workers (41% compared with 62%), the difference was not significant when all other relevant variables, such as education and work status, were taken into account.

Many younger workers have not yet completed their schooling and perhaps work part time. Once this was taken into account, their

computer use was not significantly different from that of core-age workers. Similarly, controlling for occupation (which takes into account the higher proportion of jobs in primary occupations in rural areas) and other variables, urban and rural dwellers were not significantly different in their computer use. As expected, education and income were strong predictors of computer use at work. For example, workers with a university degree were 3.0 times more likely to use a computer at work than those with a high school education or less.

On the other hand, only a few significant differences were evident in the *daily* use of computers. For example, the self-employed were significantly less likely than employees to use a computer daily, as were part-time workers compared with full-time. Also, higher income significantly increased the chances of working with a computer every day

Proficiency notwithstanding—almost everyone has learned to type

Of those who used a computer at work, the vast majority had composed text with a word processing package (83%), and most reported using their computer for four other purposes as well: data entry (72%), record keeping (69%), spreadsheets (63%), and the Internet (54%) (Table 2).[3] Of a possible eight work-related computer tasks, workers did an average of 4.5. Less than half performed more technical tasks such as graphics generation (48%), data analysis (46%) and programming (16%).

Occupation is a key determining factor, not only for overall computer use at work (as shown above), but also for the type and number of computer applications used. For example, almost all professionals in natural and applied science used a computer at work (96%), and for the most purposes (6.3). This was also

Table 2: Computer use, by occupation and age

			Tasks performed*								
	Employment	Use computer	Word processing	Data entry	Record keeping	Spreadsheets	Internet	Graphics	Data analysis	Programming	Average tasks
						%					
All occupations	**100**	**57**	**83**	**72**	**69**	**63**	**54**	**48**	**46**	**16**	**4.5**
Management	9	78	87	79	80	74	69	55	60	16	5.2
Professional	17	86	93	75	73	71	73	58	56	25	5.2
Business and finance	3	95	94	85	81	87	71	51	76	14	5.6
Natural and applied science	4	96	96	79	77	89	87	73	73	55	6.3
Teaching	4	85	96	71	70	61	69	61	43	14	4.9
Technical	7	71	85	69	68	62	63	58	42	16	4.6
Clerical	15	84	86	81	73	67	48	41	45	10	4.5
Sales and service	26	39	77	65	58	51	38	42	34	10	3.8
Retail trade	3	46	72	58	44	50	22	44	24	13	3.3
Wholesale trade	4	83	82	79	75	63	63	48	53	8	4.7
Trades, transport and equipment operators	13	32	59	55	58	49	30	37	33	13	3.3
Primary	4	24	62	70	72	61	50	41	47	10	4.1
Processing, manufacturing and utilities	8	29	63	57	54	45	26	37	37	13	3.3
Age	**100**	**57**	**83**	**72**	**69**	**63**	**54**	**48**	**46**	**15**	**4.5**
15 to 24	16	41	89	72	54	67	43	56	41	23	4.5
25 to 54	74	62	83	73	71	64	56	48	48	15	4.6
55 and over	10	44	76	69	68	51	53	34	39	11	4.0

Source: General Social Survey, 2000

* *In the past 12 months, except for the Internet, which refers to the past month.*

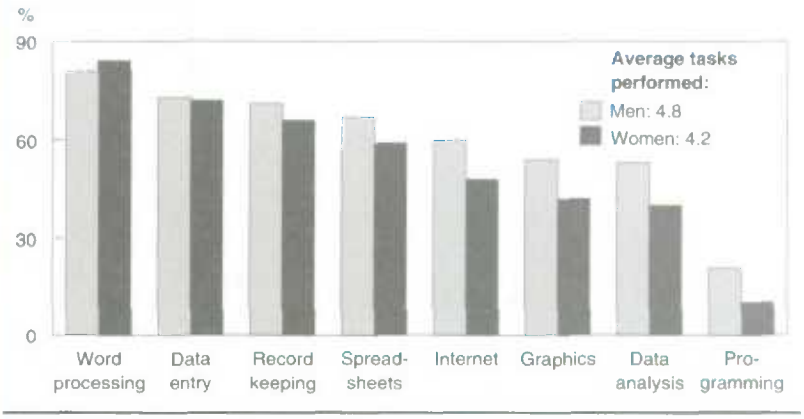
the only occupational group in which the majority did some computer programming at work (55%, compared with 16% overall). This group also had the highest average Internet use (87%, compared with 54% overall). Many in this field are considered knowledge workers, who generate and transmit ideas electronically and use the Internet to have "...access any time to unlimited amounts of the 'raw material' of knowledge creation" (ILO, 2000). At the other end of the spectrum are workers with jobs in trades and transport and equipment operation, primary occupations, or processing, manufacturing and utilities. Less than one-third of them used a computer at work, and those who did, used it for fewer purposes (3.3 to 4.1).

Computer users aged 15 to 24 used their machines for about the same number of purposes (4.5) as those 25 to 54 (4.6), but for more than workers 55 and over (4.0). Furthermore, compared with core-age workers, higher proportions of younger workers did word processing (89% versus 83%), programming (23% versus 15%), graphics generation (56% versus 48%), and spreadsheets (67% versus 64%). The high rate of computer programming among younger workers is consistent with the lower-than-average age profile of workers in computer programming and related occupations (Gower, 1998).

Computer tasks vary by sex

Although women were more likely than men to use a computer at work (60% versus 54%), they performed fewer tasks with their computer, 4.2 compared with 4.8 (Chart B). Furthermore, except for word processing, women were less likely than men to have done all computer-related types of work. The difference in computer work was particularly high for the Internet (48% for women versus 60% for men), graphics generation (42% versus 54%), data analysis (40% versus 53%), and programming (10% versus 21%). These differences can be explained largely by the varying occupations of women and men. For example, more men were employed in management (66%) and professional (53%) occupations—fields with higher-than-average use for all computer tasks. On the other hand, more women were employed in clerical (75%) and sales and service (52%) occupations—positions with below average rates for many of the different applications.

Chart B: Except for word processing, men are more likely to perform all types of computer work.



Source: General Social Survey, 2000

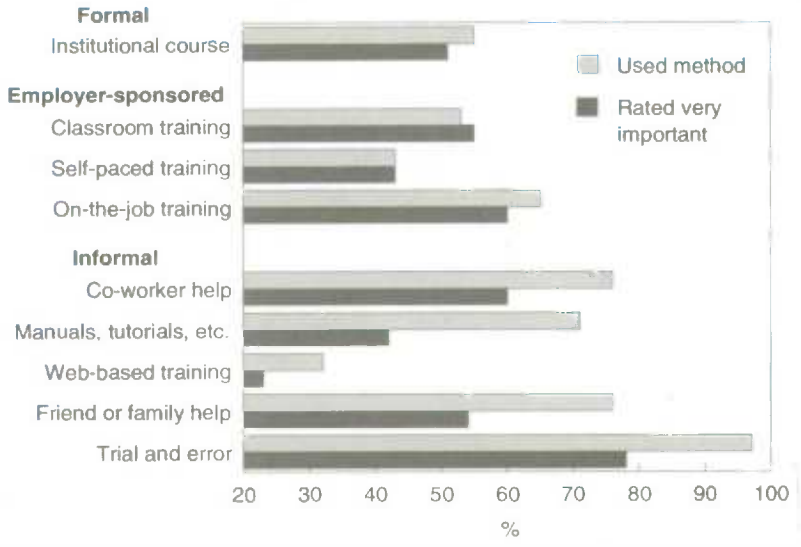
Multiple methods used to acquire skills

Although more than half of computer users had taken at least one computer-related course from an institution, most workers used less formal methods to learn their computer skills (Chart C). Not surprisingly, almost all computer users (97%) enhanced their skills through trial and error, and 78% rated it a very important method. Three-quarters of those who used a computer at work reported learning from co-workers and friends or family as well, and more than half also rated these as very important. Most also reported learning from manuals or tutorials (71%), but these were rated as very important by only 42%. The most common employer-related learning method was on-the-job training (65%), which, after trial and error, had the second highest rating (along with co-worker assistance) as a very important method (60%).

Classroom training prominent in public sector

In acquiring computing skills, public-sector employees[4] were considerably more likely than those in the private sector to use all three types of employer-related training methods (classroom, self-paced

Chart C: On-the-job training is the most common employer-sponsored computer-skills learning method.



Source: General Social Survey, 2000

and on-the-job). On-the-job training was the most common method for both public (74%) and private (68%) employees, and it was rated as very important by 6 in 10 that had such training. The largest difference occurred with classroom training—68% of public employees had it, compared with only 53% of private employees (Table 3).

Table 3: Methods used to learn computer skills*

	Used method			Rated very important		
	Employees		Self-employed	Employees		Self-employed
	Public	Private		Public	Private	
	%					
Formal						
Institutional course	54	57	52	50	52	47
Employer-sponsored						
Classroom training	68	53	36	60	55	45
Self-paced training	49	44	33	44	44	36
On-the-job training	74	68	41	61	61	49
Informal						
Co-worker help	84	78	57	63	59	55
Manuals, tutorials, etc.	73	70	76	40	42	47
Friend or family help	77	74	81	57	51	60
Web-based training	30	33	33	21	23	22
Average methods used	5.1	4.7	4.0			

Source: General Social Survey, 2000

* *Refers to training ever taken. Excludes trial and error, which almost everyone has tried.*

Just over one-third of the self-employed experienced each of the three forms of employer-sponsored training, either in a previous paid job, or possibly with their own company if it had employees and offered such training. The low employer-related training rates are reflected in the overall number of computer learning methods used by the self-employed (4.0 of a possible 8). The number of computer training methods used by both public and private employees was higher, 5.1 and 4.7, respectively. Compared with employees, the self-employed were most likely to rely on friends or family (81%) and manuals or tutorials (76%) to learn to use their computer, with the former perceived as very important by the most people (60%).

Summary

Information and communication technology in the workplace has risen dramatically, with almost 6 in 10 workers in 2000 using a computer for their job, double the 3 in 10 just a decade earlier. Furthermore, almost 80% of these workers used a computer every day. Most used their machine for at least four purposes—with word processing, data entry, record keeping and spreadsheets being the most common. Except for word processing, men were more likely than women to do all types of computer-related work.

However, access to and use of ICTs was not evenly dispersed across the workplace. Workers were significantly more likely to use a computer at work if they were under 55, had high levels of education or income, were an employee, worked full-time, or were in a high skill or a clerical occupation.

Society is in the midst of an emerging digital era. Without doubt, there will be further technological change with implications for the workplace. Hence, for most workers (re)training, be it formal, informal or employer-sponsored, will be an ongoing part of their work life.

Notes

1 Includes financial analysts, accountants, scientists, engineers, architects, computer programmers, physicians, dentists, lawyers, teachers, librarians and journalists.

2 This technique isolates each variable and reveals its relationship with the probability of using a computer at work while holding all other variables constant. Thus, it is possible to determine, for example, whether sex still influences computer use when occupation and other job and personal characteristics are held constant.

3 The GSS asked about several types of computing activities with the following question: "In the past 12 months, have you done any of the following on a computer...." Except for a specific question about Internet activity at work, the survey did not ask respondents whether they did the other activities at home or at work. However, given that the study population for this section was employed people who used computers at work, it can be assumed that the reported computer activities were most likely done at work.

4 Those employed in public administration, government institutions such as schools, hospitals and public libraries, crown corporations, and liquor control boards (See *Data source and definitions*).

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Repeat users of employment insurance

Lori M. Stratychuk

The Employment Insurance (EI) program[1] provides various income support benefits to qualifying individuals. In most cases, EI acts like insurance, providing income for those who have unexpectedly become unemployed. Other benefits are also available for maternity, paternity and sickness. In addition, EI provides "active labour market programs" for such things as training, job creation, job sharing, and wage subsidies.

EI covers virtually all employees across the country, most of whom never need to draw upon the program. Among those who do draw benefits, most do so only infrequently. However, a number of individuals, year after year, work for a portion of the year and then collect EI benefits for the rest of the year. This study looks at the characteristics of these individuals (see *Data sources and definitions*).

The first part of this study compares the demographic characteristics of repeat users of EI with those of employees overall. The second part examines the attitudes of repeat users toward employment and unemployment in general.

Characteristics of repeat users of EI

Who are the repeat users of the EI program? Do they display patterns by sex, age, education, region of residence, or occupation? This section addresses these issues.

Men use EI more than women, and with greater intensity

Among occasional EI claimants, men and women differ only slightly in their use of the program—men make up 52% of employees and 55% of occasional EI users; women, 48% and 45% (Table 1). Overall however, men do comprise a disproportionate share of regular EI claimants (59%). The difference arises from their unbalanced share among repeat users (65%) and persistent users (62%).

Those over 35 more likely to be repeat users of EI

The age distribution of EI claimants is clearly different than that of employees overall (Table 1). Those 15 to 19 constitute 6% of all employees, yet they represent less than half a percent of all claimants. This is unsurprising, since young workers may not have enough labour market experience to make even a single EI claim. On the other hand, all age groups from 35 onward have a disproportionate share of repeat users and persistent users.

Table 1: EI use, 1992 to 1996

		Frequency			
	Employees in 1997	Overall	Occasional (1 – 2)	Repeat (3 – 4)	Persistent (5)
			%		
Sex					
Men	52	59	55	65	62
Women	48	41	45	35	38
Age					
15 to 19	6	-	1	-	-
20 to 24	11	9	15	5	1
25 to 34	27	30	32	32	20
35 to 44	28	29	26	31	34
45 to 54	20	20	17	21	29
55 to 59	5	6	4	6	9
60 plus	3	5	4	5	7

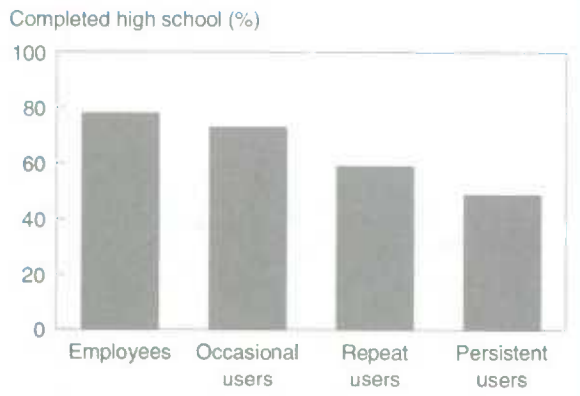
Sources: Labour Force Survey; Survey of Repeat Use of Employment Insurance

Lori M. Stratychuk is with the Household Survey Methods Division. She can be reached at (613) 951-0380 or lori.stratychuk@statcan.ca.

Repeat users less likely to have completed high school

An inverse relationship between claims initiated over the five-year period and high school completion is clear (Chart A). Only 49% of persistent EI users had completed high school. The rate increased modestly (to 59%) for repeat EI users. The rate jumped to 73% for occasional users of the EI program, which was still lower than the rate for all employees (78%).

Chart A: High-frequency claimants were less likely to have completed high school.



Sources: Labour Force Survey, 1997; Survey of Repeat Use of Employment Insurance

The inverse relationship was not just because of the age distribution of EI claimants—that is, high frequency claimants tended to be older, and older individuals were less likely to have completed high school. The high school completion rate for each age group and EI claim frequency displayed the same pattern (Table 2). The high school completion rate for all employees was always higher than for occasional EI users, which was higher than for repeat EI users, which was higher than for persistent EI users.

Atlantic Canada and Quebec benefit most

The Atlantic provinces had proportionately more EI claimants than employees (Table 3). Atlantic Canada accounted for 16% of all regular benefit claims initiated, which was more than twice their share of employees (7%). Their share of repeat users was *more than double* their portion of employees and persistent users were almost *quadruple*. Quebec also had a disproportionate share of EI claims initiated (34%) relative to its share of paid employment (24%).

Table 2: Proportion of EI claimants with high school completion

		EI use, 1992 to 1996			
	Employees in 1997	Overall	Occasional	Repeat	Persistent
			%		
All ages	**78**	**64**	**73**	**59**	**49**
15 to 19	42	38	38	48	--
20 to 24	87	76	79	65	41
25 to 34	87	76	82	70	65
35 to 44	81	65	72	62	54
45 to 54	75	55	63	52	45
55 to 59	59	38	54	31	26
60 plus	55	40	54	34	24

Sources: Labour Force Survey; Survey of Repeat Use of Employment Insurance

The disproportionately high EI claim rates in the Atlantic provinces and Quebec, relative to their share of employees, are not unexpected, given their high unemployment rates. However, the connection between high unemployment rates and high EI claim rates exists because of the regional[2] component of the EI program. As the unemployment rate in an EI region increases, the hours required to qualify for EI diminishes and the maximum duration of benefits increases.

Seasonal occupations linked to claim rates...

Given the seasonal nature of certain occupations, individuals in such jobs are more likely to experience a layoff and then apply for EI benefits.[3] The extent to which persons in a particular occupation over-use the EI program can be measured by the ratio of their share of repeat claims to their share of paid employment. If the ratio is one, individuals in the occupation use EI regular benefits no more or less than expected. The more this ratio exceeds one, the more they rely on the EI program.

Employees in fishing and forestry occupations were the most frequent EI users.[4] Their share of regular claims was almost ten times their share of paid employment (Table 4). The construction trades also

Data sources and definitions

The data come from the 1997 Survey on the Repeat Use of Employment Insurance (EI), a joint project between the Social Research and Demonstration Corporation (SRDC) and Statistics Canada, funded by Human Resources Development Canada (HRDC). The sample consisted of individuals who had had a regular EI claim during the 1996 calendar year. (Regular claims are distinct from maternity, paternal, sickness, job training and fishing benefit claims.)

Survey population

Type of claimant	Claims in 1992-1996	'000	%
Occasional	1 or 2	802	50.7
Repeat	3 or 4	477	30.2
Persistent	5	301	19.1

The main objective was to develop a profile of repeat EI users. The survey collected detailed information on the 1997 labour market activities of respondents. In addition, it asked about job search activities, household composition and income, residence, demographics, education and training, and attitude toward employment and unemployment in general. The survey was developed as a result of the Earnings Supplement Project.

Data from the Labour Force Survey provide a benchmark for demographic characteristics. Employees serve as the comparison group, since they are the ones at risk of having an EI claim in the future.

The Earnings Supplement Project: As the average length of each unemployment spell increased in the early 1990s, and EI claims outpaced resources, new and innovative ways for promoting employment and reducing unemployment duration were considered. The Earnings Supplement was one of five new employment measures considered by HRDC. Its aim was to test whether a financial incentive would encourage more rapid re-employment of displaced workers (those who had been employed for at least three consecutive years before being laid off), who often bear large adjustment costs. A second component was designed to encourage repeat users of EI to take off-season or year-round jobs. In both cases, unemployed workers who accepted employment at a lower wage than previously, within a specified period, were offered an earnings supplement.

The Earnings Supplement Project was undertaken to determine the effectiveness of this supplement in helping these two groups of EI claimants become re-employed more quickly. HRDC contracted the SRDC, a non-profit organization, to manage the overall project. Statistics Canada was contracted to assist in data collection activities as well as to conduct a follow-up survey. While the data were originally meant to help researchers evaluate the effectiveness of the earnings supplement, such a disproportionately small number of repeat users agreed to participate that the follow-up survey was not administered (Tattrie, 1999). Instead, the Survey on the Repeat Use of Employment Insurance was developed specifically for this group.

Table 3: EI claimants by region

	Employees in 1997	EI use, 1992 to 1996				Unemployment rate, 1997
		Overall	Occasional	Repeat	Persistent	
		%				
Atlantic	7	16	10	18	27	13.9
Quebec	24	34	29	36	41	11.4
Ontario	38	27	33	23	17	8.4
Prairies	17	12	14	10	8	6.0
British Columbia	14	12	14	12	7	8.4

Sources: Labour Force Survey; Survey of Repeat Use of Employment Insurance

had a disproportionate share of EI claims, with regular EI claims more than triple their share of paid employment. All the other trades (mining, processing, machining, transportation and materials handling) also had a relatively large share of claims relative to employment. Teachers also had a disproportionate share of EI claims. Although their work, as well as the education required, is quite different from all other occupations with an excessive share of regular EI claims, the seasonal nature of their jobs is quite similar.

Table 4: Claim frequency and duration of EI benefits, 1992 to 1996

	(A) Employees	(B) EI users	B/A	Claim frequency		Weeks of benefits	
				Mean	Median	Mean	Median
	%						
All occupations	**100.0**	**100.0**	--	**2.8**	**3**	**60.8**	**70**
Managerial, administrative	14.6	5.5	0.4	2.2	3	48.8	56
Natural science	4.4	2.4	0.5	2.4	3	54.0	62
Social science	2.2	1.5	0.7	2.2	3	46.2	39
Religion	0.3	--	--	--	--	--	--
Teaching	5.3	6.7	1.3	3.0	4	45.5	43
Medicine	5.7	2.3	0.4	2.3	3	52.1	54
Artistic	1.7	2.0	1.2	2.6	3	57.6	67
Clerical	16.2	11.1	0.7	2.4	3	52.9	54
Sales	8.7	5.5	0.6	2.0	2	46.8	54
Service	13.1	11.5	0.9	2.7	3	62.3	70
Farming	1.3	4.1	3.2	3.4	4	76.4	90
Fishing	0.1	0.8	8.0	4.1	5	131.8	148
Forestry	0.3	2.6	8.7	3.8	4	95.2	104
Mining	0.5	0.9	1.8	2.9	3	60.7	60
Processing	3.0	4.5	1.5	3.1	4	79.0	94
Machining	1.9	2.8	1.5	2.8	3	61.3	75
Fabricating	8.8	9.1	1.0	2.5	3	50.3	58
Construction	4.2	15.1	3.6	3.5	4	79.3	86
Transportation	3.7	7.1	1.9	3.1	4	62.9	65
Materials handling	2.8	3.3	1.2	2.6	3	59.3	72
Other crafts	1.2	1.0	0.8	2.4	3	52.4	63

Sources: Labour Force Survey, 1997; Survey of Repeat Use of Employment Insurance; Employment Insurance administrative data

Note: Shading indicates occupations with a greater proportion of EI users than employees (B/A > 1).

... and claim duration

Whether based on the frequency of claims or the duration of benefits, individuals reporting fishing as their main occupation were the most intense users of EI. Their mean claim frequency was 4.1 between 1992 and 1996. The median number of claims was 5 over the same period, indicating that for the majority it was customary to claim EI benefits *every* year. The median weeks of benefits was 148, hence the majority of those who collected EI in 1996 had spent more time on EI than at work between 1992 and 1996. Individuals in forestry occupations were the second most intense users of EI, with a claim frequency of 3.8 and 95.2 weeks of benefits.

The occupation groups displayed an interesting pattern in the mean and median number of claims initiated and weeks of benefits (see *Mean and median*). For almost all occupations, the mean was smaller than the median, indicating a skew to the right in the distributions of claims initiated and weeks of benefits. This implies that the majority of EI claimants had more than the average number of claims and more than the average number of weeks of benefits.

Mean and median

The mean is the sum of the values of some characteristic divided by the number of individuals with the characteristic. The median represents the "middle" value, where half of the individuals fall below and half above. Using both statistics provides an improved picture of the distribution of the data. In particular, if the median is larger than the mean, then the majority of individuals are actually above the average value.

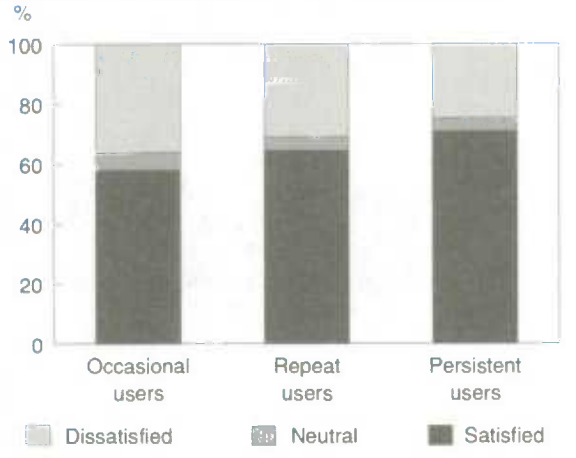
Attitudes of repeat EI users

What are the attitudes and opinions of EI claimants? What is the link between the opinions of EI claimants and their claim history? This part of the article looks at these issues.

Most claimants satisfied with their employment...

The vast majority of regular EI claimants were satisfied with their employment situation in 1997 (Chart B).[5] Moreover, satisfaction with the previous year's employment *increased* with the number of claims. More repeat users than occasional users were satisfied with their employment situation (65% versus 58%), and more persistent users than repeat users were satisfied with their employment situation (71% vs. 65%). One possible explanation is that individuals experiencing one or two claims were not expecting the change in their employment situation. These individuals with a small number of claims were probably more dissatisfied, given their *expectations* of

Chart B: Satisfaction with the previous year's employment situation increased with claims.



Source: Survey of Repeat Use of Employment Insurance

employment for the year. On the other hand, individuals who had many claims most likely worked in seasonal industries and were more prepared for changes in their employment situation.

...and their income

EI claimants' satisfaction with their income was almost exactly the same as their satisfaction with their employment situation—the majority were satisfied with their previous year's income (Chart C).[6] Again, the proportion satisfied with the previous year's income increased with the number of claims. Just over half (51%) of occasional claimants indicated they were satisfied with the previous year's income, compared with 59% of repeat users and 66% of persistent users. Following the earlier logic, individuals with only one or two claims in the five-year period were likely more surprised by the change in their income, and therefore less satisfied relative to what they *expected* they would earn for the year.

Claimants willing to change employers...

Claimants showed very low attachment to their employer (Table 5). The vast majority reported they would be willing to accept a job with another employer doing similar work.[7] Over three-quarters (76%) indicated they would be very likely to switch employers, and an additional 16% indicated they would be somewhat likely to switch. This sentiment was held almost equally by occasional EI claimants, repeat users and persistent users of the program.

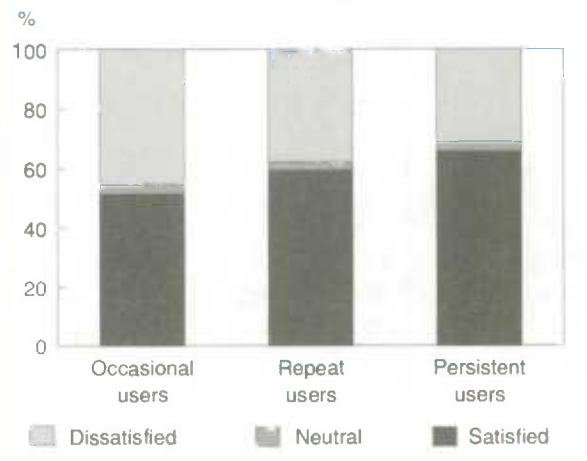
...and willing to do a different kind of work...

Claimants showed slightly more attachment to their type of work. Only 16% reported they would be unlikely to accept a job with another employer doing a different kind of work, which is approximately double the proportion who indicated they would be unlikely to accept another job with a different employer but doing a similar kind of work (8%). Their conviction is somewhat diminished—although 84% of claimants indicated they would be likely to accept another job with another employer doing a different kind of work, only two-thirds of these individuals said they would be very likely to do so. Once again, this opinion was invariant by claim history.

...but not prepared to change province

In a complete reversal to their willingness to switch employers and type of work, EI claimants showed a strong preference to remain in their province of residence. The majority (56%) said they would be very unlikely to accept a job with another employer doing similar work with similar pay, but in a different province. An additional 20% said they would be somewhat unlikely to do so. As before, the opinion was nearly the same for occasional, repeat and persistent EI users.

Chart C: Satisfaction with last year's income also increased with claims.



Source: Survey of Repeat Use of Employment Insurance

Table 5: Willingness to accept another job

If laid off with a possible recall sometime in the future, what is the level of willingness to accept another job with...		All users	Occasional users	Repeat users	Persistent users
				%	
different employer, similar kind of work	very likely	76	76	77	73
	somewhat likely	16	16	16	18
	somewhat unlikely	4	4	4	4
	very unlikely	4	5	4	5
different employer, **different kind of work**	very likely	54	54	55	53
	somewhat likely	30	30	30	31
	somewhat unlikely	9	9	8	9
	very unlikely	7	8	7	7
different employer, similar kind of work with similar pay, **different province**	very likely	11	11	11	9
	somewhat likely	13	14	14	10
	somewhat unlikely	20	19	21	22
	very unlikely	56	56	54	58

Source: Survey of Repeat Use of Employment Insurance

Most claimants feel entitled to benefits

Over half (57%) of all claimants felt they were entitled to all of their weeks of benefits, because they "had paid into the program," with the majority indicating strong agreement (Table 6). This attitude was the same, regardless of claim history.

No stigma to EI, say most claimants

A considerable majority of claimants (82%) disagreed with the statement, "If I were collecting EI, I would not want my friends to know about it." A more resounding message comes from the 58% of all claimants who indicated that they strongly disagreed with

Table 6: Opinions on entitlement to, social stigma attached to, and dependence on EI benefits

		All users	Occasional users	Repeat users	Persistent users
				%	
"I deserve all my weeks of benefits because I paid into it."	strongly agree	39	41	37	38
	somewhat agree	18	18	17	17
	neutral	6	6	6	6
	somewhat disagree	16	15	17	16
	strongly disagree	22	20	23	24
"If I were collecting EI, I would not want my friends to know about it."	strongly agree	5	6	4	4
	somewhat agree	6	7	5	5
	neutral	7	7	7	7
	somewhat disagree	24	25	24	23
	strongly disagree	58	55	60	61
"The kind of work I get means that having to depend on EI from time to time is a fact of life."	strongly agree	35	25	41	50
	somewhat agree	28	26	30	29
	neutral	5	6	4	3
	somewhat disagree	14	17	12	9
	strongly disagree	19	27	14	8

Source: Survey of Repeat Use of Employment Insurance

this statement. There was also a slight trend for individuals to feel *less* reluctant to admit that they received EI benefits as their claim history increased—55% of occasional users strongly disagreed with the statement, compared with 60% and 61% of repeat and persistent users, respectively.

Dependence on EI is a fact of life

The majority of EI claimants agreed that, given the type of work they do, dependence on EI from time to time was a fact of life. This opinion rose perceptibly with claim history—51% of occasional users, 71% of repeat users and 79% of persistent users of the EI program agreed.

Summary

Certain demographic characteristics are associated with repeat use of EI. Repeat users tend to be men and to have lower educational attainment. Persons over 35 constitute a disproportionate share of repeat users, as do residents of Atlantic Canada and Quebec.

Certain occupations, specifically the trades and those specific to primary industries, use regular EI benefits more than their share of paid employment would suggest. Based on both claim frequency and claim duration, persons in fishing occupations are the most intense users of EI.

Changes to the EI program since 1997

Bill C-12 enacted some extensive changes to the Unemployment Insurance (UI) program in addition to the name change to Employment Insurance (EI). The program was changed from a weeks-based system, to an hours-based one. Effective January 1, 1997, the entrance requirement switched from a given number of weeks, depending on the regional unemployment rate, to the equivalent in hours, assuming a 35-hour work-week (Government of Canada, 1996; HRDC, 1996).

A number of provisions were also implemented, some specifically targeted at repeat users of EI. These include the Divisor, the Intensity Rule, the decrease in benefit duration and the Clawback. The Divisor is a rule that encourages individuals to work two (35-hour equivalent) weeks more than the minimum requirement for their region in order to maximize their weekly benefits. The Intensity Rule results in a decrease in the EI benefit rate (of the *next* regular EI claim) based on past EI claims to a maximum of 5 percentage points, for a minimum rate of 50 percent. Finally, the Clawback forces high-income individuals to pay back a portion of their regular EI benefits at tax time, based on their claim history and their net income. Specifically, individuals with a *net* income of at least $39,000 and 20 weeks of regular benefits over the previous five-year period (as of June 30, 1996) would see 30 to 100 percent of their benefits taxed back.

Continued dependence on EI?

EI administrative files made it possible to follow up on survey respondents to see if they continued to receive regular EI benefits in subsequent years.

More intense users of EI were more likely to claim benefits in the following years. The most striking results are for the persistent users of the EI program. In 1997, the year after the survey and after implementation of the changes to EI, 79% of persistent users had initiated another regular claim. The number of persistent users initiating a claim in 1998 dropped to 60%. Nonetheless, over half of all persistent users initiated regular claims in both 1997 *and* 1998.

Continued use of EI in 1997 and 1998

Claims in 1992-1996	Respondents initiating a regular EI claim in...		
	1997	1998	1997 *and* 1998
		%	
1	20	16	6
2	34	26	14
3	48	34	22
4	63	46	35
5	79	60	53

Sources: EI administrative data; Survey of Repeat Use of Employment Insurance

The majority of EI claimants were satisfied with their employment and income situation. They expressed a willingness to change employers and type of work. However, they showed strong geographic immobility; the majority felt strongly attached to their current province. Claimants also showed strong feelings of entitlement to their benefits. In addition, very few perceived any social stigma attached to receiving EI benefits, given their expressed lack of reluctance to admit receipt of EI benefits to friends and family.

Finally, the majority felt that given the type of work they do "dependence on EI from time to time is a fact of life." Furthermore, this feeling increased with claim history. The continued dependence on the program was supported by EI administrative records, which showed a strong link between previous claim history and future use of the EI program (see *Changes to the EI program since 1997*). More than half of those who had an EI claim *every year* from 1992 to 1996 proceeded to have claims in both 1997 and 1998—further evidence of the perseverance of repeat usage of EI.

Perspectives

Notes

1 Known as the Unemployment Insurance (UI) program prior to July 1996.

2 The regions used for the EI program are usually census metropolitan areas or a combination of rural areas.

3 Occupation is defined by an individual's main employer in 1997, which is the job they may have returned to *after* an unemployment spell (and their EI claim). It would have been preferable to have the occupation *prior* to the EI claim, however this was not available. Only 90.4% of individuals reported a main occupation in 1997, so the percentages have been proportionately adjusted to sum to 100%. The other 9.6% of respondents consists of 0.2% of individuals that did not state their occupation and 9.4% who did not have an occupation to report in 1997. The figures for employees have similarly been adjusted to sum to 100%.

4 Most fishermen are covered by separate EI benefits and therefore were not part of the sample in this study. Individuals in fishing occupations receiving regular benefits are non self-employed fishermen.

5 The exact wording for the question on the EI claimants level of satisfaction with their employment situation was, "Now thinking about the past year and keeping in mind that you may have been both employed and unemployed during that time, please tell me if you were satisfied or dissatisfied with your employment situation." The response choices were satisfied, dissatisfied, or neither satisfied nor dissatisfied. Individuals who responded with (dis)satisfied were further probed by asking, "Were you very (dis)satisfied or somewhat (dis)satisfied?" Individuals not answering these questions were excluded from the calculations.

6 The question on satisfaction with income was, "Keeping in mind that your income may have varied over the past year, were you satisfied or dissatisfied **in general** with your income?"

7 The question was, "Thinking of your current (or last, if the individual was unemployed at the time of the survey) job – suppose you are laid off from this job with a possible recall sometime in the future. In the meantime, another employer in your area offers you a similar job, in terms of work and pay. Would you be likely or unlikely to accept this offer?"

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Experiencing low income for several years

René Morissette and Xuelin Zhang

Some believe that the same people have low incomes year after year. According to this view, the population with low income is static, exhibiting little, if any, turnover. However, while living with low income is the long-term reality for some, considerable movement into and out of this state takes place over time (Finnie, 1997; Laroche, 1997; Morissette and Drolet, 2000).

With the advent of longitudinal data such as that available in the Survey of Labour and Income Dynamics (SLID), the understanding of low income is greatly enriched: it is now possible to follow individuals over time and to determine the duration of any low income in a given period. This provides a measure of the extent to which Canadians are exposed to low income. Using SLID data, this study analyzes which people were most likely to have had low income for several years between 1993 and 1998. While earlier studies are confirmed (see *Previous findings updated*), some new results emerge for a more nuanced profile of the population at risk.

A cross-sectional view of low income

An examination of the annual incidence of low income (see *Low income cutoffs*) shows that, on average, some 13% of all individuals lived in families with low income between 1993 and 1998 (Table 1). For these persons, family income was 31% to 38% below the low income cutoff, depending on the year and the sample considered. While these cross-sectional data provide interesting information, they tell nothing about the number of years these people experienced low income during the period. To answer this question, one needs longitudinal data.

René Morissette and Xuelin Zhang are with the Business and Labour Market Analysis Division. They can be reached at (613) 951-3608 or rene.morissette@statcan.ca, or (613) 951-4295 or xuelin.zhang@statcan.ca, respectively.

Previous findings updated

A previous study, covering 1993 to 1996, found that persons most likely to experience low income for at least one year or for four consecutive years had less education, had work limitations throughout the period, or were members of visible minorities, recent immigrants, unattached individuals or members of lone-parent families (Morissette and Drolet, 2000). Groups at high risk of experiencing low income did not necessarily have a substantial income gap while having low income.[1] This article confirms that, during the 1993 to 1998 period, these groups had high chances of having low income for at least one year. As well, their chances of having low income for at least four years or for six consecutive years were also high. And again, higher risk of low income was not necessarily associated with the severity of low income.

While the earlier study found that 5% of the population had low income for all four years of the 1993 to 1996 period, 3% of the population were in low income for all six years of the 1993 to 1998 period.

The high risk of low income among visible minorities observed previously does not apply to those born in Canada. Rather, the higher risk was found only among immigrant visible minorities. Since recent immigrants in general are more likely to have low income, the high risk faced by visible minorities may be partly related to the difficulties faced by new entrants to the Canadian labour market.

Having a work limitation is not necessarily a permanent condition. Between 1993 and 1997, of all individuals who had a work limitation in one year, 27% to 35% no longer had a work limitation in the next year. As a result, only 2% of all individuals had a work limitation for all six years between 1993 and 1998 while 15% had a work limitation during part of the period. As expected, risks of long-term low income were much higher among the former than among the latter. Hence, these two groups must be distinguished in any analysis of persistent low income.

Low income cutoffs

Low income cutoffs (LICOs) are established using data from the Survey of Household Spending (or its predecessor, the Family Expenditure Survey). They are intended to convey the income level at which a family may need to spend a greater-than-average proportion of its income on the basics (food, shelter and clothing). The LICO varies by family size and community size.

Although LICOs are often referred to as poverty lines, they have no official status as such, and Statistics Canada does not recommend their use for this purpose.[2] Separate low income cutoffs can be calculated with before- or after-tax income.[3] This study uses the latter because it is a better indicator of disposable income.

The number of years of low income during a given period and the duration of a spell of low income are two different concepts.[4] First, someone may have started a spell in 1991 and moved beyond it in 1995. If so, the number of years he or she had low income during the 1993 to 1998 period would equal two (1993 and 1994), while the duration of the spell of low income would be four years (1991, 1992, 1993 and 1994). Second, someone may have experienced two spells of low income lasting one year each, for two years total, during the 1993 to 1998 period.

A longitudinal view

Had there been no turnover in this 13%, the percentage of individuals who had low income for at least one year during the period would have remained at that level. Conversely, had the population been replaced completely by a new group after one year, 78% (13% times six) of Canadians would have experienced low income for at least one year. Reality lies somewhere between these two extremes: 24% of persons lived in families with low income for at least one year between 1993 and 1998 period (Table 2).

Some people do live in straitened circumstances persistently. About 8% of Canadians lived in families experiencing low income for four years or more during the study period. Only 3% experienced low income for six consecutive years. At the same time, some 76% of Canadians lived in families with no experience of low income between 1993 and 1998.

Long-term low income among children and seniors

In recent years, growing attention has been paid to children living in families with low income. Some analysts have pointed out that growing up in a low income family may increase the probability of encountering low income as an adult (Corak, 1998). If so, families with low income would produce a new generation at high risk of exposure.

About 12% of all children under six lived in families that had low income for four years or more, compared with roughly 8% of all persons. Some 29% of these children experienced low income for at least one year.

Conversely, seniors (65 and over) experienced low income less frequently. Between 1993 and 1998, only 6% had low income for four years or more. Since the early 1980s, the growth of income from the Canada and Quebec Pension Plans, from private pensions and from the Guaranteed Income Supplement and Old Age Security has helped to decrease the percentage of seniors in low income (Myles, 2000).

The small percentage of those 65 and over who experienced low income hides substantial differences between men and women.

Table 1: Cross-sectional statistics on low income after tax (1992 LICO base)

	1993	1994	1995	1996	1997	1998
				%		
Low income individuals	12.0	13.1	12.6	14.2	13.7	12.2
				1996 $		
Income deficit*						
All individuals	6,050	6,340	6,620	6,190	6,750	6,860
Excluding those with negative family income	5,920	5,910	5,990	5,860	5,850	5,960
				%		
Income deficit*/LICO						
All individuals	32.3	33.1	34.6	32.6	34.8	37.5
Excluding those with negative family income	31.5	31.2	31.7	30.9	31.3	32.2

Source: Survey of Labour and Income Dynamics, 1993 to 1998
* *Low income cutoff minus family income.*

Table 2: People with low income, 1993 to 1998

Characteristics	Years of low income								
	0	1	2	3	4	5	6	1+	4+
	%								
Both sexes	**76.0**	**8.0**	**4.7**	**3.0**	**2.9**	**2.2**	**3.3**	**24.0**	**8.4**
Men	78.0	7.5	4.5	2.3	2.8	2.0	3.0	22.0	7.8
Women	74.0	8.4	4.9	3.7	2.9	2.5	3.6	26.0	9.0
Age in 1993									
Less than 6	71.0	7.9	5.8	3.3	3.7	3.4	5.0	29.0	12.1
6 to 17	72.4	9.7	5.3	3.5	3.3	2.8	3.0	27.6	9.1
18 to 24	61.5	13.4	8.8	5.5	5.4	2.4	3.0	38.5	10.8
Not a student	75.9	9.8	--	--	--	--	--	24.1	7.0
Student	56.5	18.4	10.8	5.6	4.0	2.9	1.8	43.5	8.7
25 to 34	76.5	7.4	5.5	2.7	2.4	2.7	2.8	23.5	7.9
35 to 44	80.9	6.8	3.0	2.2	2.7	1.5	3.0	19.1	7.2
45 to 54	81.4	5.0	3.7	2.7	2.2	1.7	3.5	18.6	7.4
55 to 64	77.3	7.7	4.7	2.5	2.0	2.3	3.6	22.7	7.9
65 and over	84.1	6.2	1.6	1.9	1.8	--	3.6	15.9	6.2
Men	94.5	--	--	--	--	--	--	5.5	--
Women	83.8	7.2	2.5	1.4	--	--	3.1	16.2	5.0
Family composition (all years)									
Unattached	61.0	7.2	4.1	4.4	3.4	4.0	15.9	39.0	23.3
Couple, no children	91.3	4.6	1.7	1.2	--	--	--	8.7	1.1
Couple with children	84.4	5.3	3.1	1.7	1.4	1.7	2.5	15.6	5.6
Lone parent	42.4	5.8	3.5	10.3	8.4	10.2	19.4	57.6	38.0
Other	84.7	4.6	3.2	--	4.3	--	--	15.3	6.8
Changed over period	67.7	12.2	7.6	4.2	4.1	2.4	1.9	32.3	8.4
Family composition in 1993									
Unattached	58.8	9.8	6.7	5.5	5.1	3.7	10.5	41.2	19.3
Couple, no children	86.9	6.1	2.6	1.7	1.4	0.8	--	13.1	2.7
Couple with children	80.2	7.6	4.5	2.3	1.9	1.5	2.1	19.8	5.5
Lone parent	47.6	11.5	7.5	8.0	6.7	7.6	11.1	52.4	25.4
Other	76.5	8.3	5.0	2.3	4.4	2.8	0.7	23.5	7.9

Source: Survey of Labour and Income Dynamics

About 16% of senior women had low income for at least one year, compared with only 6% of men. In part, this reflects their lower or limited participation in the labour market in earlier years, which in turn yielded little or no pension income.

Persons aged 18 to 24 in 1993 who were students at least one year during the period were much more likely than their non-student counterparts to experience low income for at least one year (44% versus 24%), mainly because they were much more likely to have low income for up to two years. This suggests that low income is only a temporary state for most students.

Lone-parent families and unattached individuals more vulnerable

While 8% of the population experienced low income for four years or more, some groups were at much greater risk of exposure than others. Fully 38% of people living in families headed by a lone parent were in this situation for four years or more. The corresponding number was 23% for unattached individuals. This is much higher than the corresponding percentage for people living in families composed of couples with children (6%).

These figures refer to people whose family type remained unchanged over the study period. Obviously, families change over time. Some women who were

lone mothers in 1993 may have eventually married. Since marriage may help lone-parent families move out of low income, looking only at families that remain lone-parent for all six years would overestimate, for this family type, the percentage of individuals in low income for several years. The same argument can be made for unattached individuals. For this reason, the study also presents data by family type defined as of 1993.

When this is done, the incidence of longer-term low income drops markedly. For instance, of all persons living in families headed by a lone parent in 1993, some 25% experienced low income for four years or more. Corresponding figures for unattached individuals and persons living in families composed of couples with children were 19% and 6%.

The high risk of exposure to low income observed for lone-parent families probably reflects a combination of factors. First, only one parent can enter the labour market and contribute to family income. Second, institutional factors—such as the availability and cost of child-care services—combined with limited labour market opportunities may lead some lone parents to decide not to participate in the labour market. Third, the jobs available may be restricted by these parents' need to combine family and work responsibilities. Lone parents may limit themselves to jobs relatively close to school or child-care facilities and may have to refuse high-paying jobs that also involve long hours. Or they may be able to work only part time.

For a more complete picture of low income, several other individual characteristics, such as educational attainment, visible minority status, immigration status and work limitation status, need to be examined. Persons aged 16 and over are studied here.

People with work limitations are at risk

People who had work limitations throughout the period had a relatively high chance of encountering low income.[5] Almost 50% were in low income for at least one year between 1993 and 1998 (Table 3). Furthermore, 16% experienced low income for all six years. In contrast, 19% of persons who experienced no work limitations during the period had low income for at least one year, and only 2% had low income for all six years. People whose work limitation status changed, that is, who had work limitations for part of the period, were between these two extremes.

Several factors may contribute to this difference. First, some people may be unable to work and forced to rely on government transfers as their major source of income. For some, government transfers and earnings by other members of the family may not be large enough to lift them out of low income. Second, having a work limitation may restrict the jobs a person can perform, limiting access to high-paying positions. Third, for the tasks that can be performed as efficiently as others, persons with work limitations may receive lower wages. Fourth, some employers may discriminate through hiring rather than wages: they may simply prefer hiring people who do not have work limitations. Whatever the underlying mechanisms, having a work limitation dramatically increases the chances of low income.[6]

Visible minorities and immigrants also experience difficulty

Persons who immigrated to Canada after 1976, many of whom are members of visible minorities, had a high risk of experiencing low income.[7] At least 20% experienced low income for four years or more, compared with 7% of the Canadian-born population. In comparison, only 6% of persons who arrived in 1976 or before experienced low income for four years or more. Members of a visible minority were also more likely than others to have low income for four years or more: about 21% versus 7%.

The reasons for these differences are unclear. The longer immigrants are in the country, the more their economic situation improves. When they enter the labour market, they generally receive lower wages than the Canadian-born. If the period during which immigrants have a wage disadvantage lasts longer than it used to, they may, as a result, have a greater risk of encountering low income in the long term.

The higher risk among both visible minorities and the post-1976 group of immigrants exists even after differences in age and level of education are taken into account (Table 4).[8] Other factors important in determining levels of employment income, such as language skills and relevant work experience, have yet to be assessed. The high risk of having low income (for at least one year) found for visible minorities does not apply to those who are Canadian-born (Table 3). Among the latter, only 17% were in low income for at least one year, much less than the 39% for foreign-born visible minorities.[9]

Table 3: People 16 and over with low income, 1993 to 1998

Characteristics	Years of low income								
	0	1	2	3	4	5	6	1+	4+
	%								
Both sexes	**76.8**	**7.8**	**4.6**	**2.9**	**2.8**	**2.0**	**3.1**	**23.2**	**7.9**
Men	79.6	7.1	4.3	2.1	2.6	1.8	2.5	20.4	6.9
Women	74.2	8.4	4.9	3.7	3.0	2.2	3.7	25.8	8.9
Age in 1993									
16 to 24	61.6	14.5	8.6	5.6	5.5	2.6	2.6	38.4	10.7
25 to 34	76.5	7.4	5.5	2.7	2.4	2.7	2.8	23.5	7.9
35 to 44	80.9	6.8	3.0	2.2	2.7	1.5	3.0	19.1	7.2
45 to 54	81.4	5.0	3.7	2.7	2.2	1.7	3.5	18.6	7.4
55 to 64	77.3	7.7	4.7	2.5	2.0	2.3	3.6	22.7	7.9
65 and over	84.1	6.2	1.6	1.9	1.8	--	3.6	15.9	6.2
Education (all years)									
Less than high school	73.2	7.5	3.5	3.3	3.3	3.1	6.2	26.8	12.6
High school completed	80.0	6.0	5.2	1.5	1.8	1.4	4.0	20.0	7.2
Postsecondary*	80.0	7.6	4.5	2.5	2.3	1.4	1.7	20.0	5.4
University	89.3	4.1	2.6	1.8	--	--	--	10.7	2.2
Education changed	62.5	16.7	4.7	0.5	3.8	2.5	9.4	37.5	15.7
Student status									
Not a student	82.2	6.1	3.2	2.2	1.8	1.5	3.1	17.8	6.4
1 year	70.1	9.0	5.7	3.3	--	--	--	29.9	11.9
2 years	64.2	15.1	8.1	--	--	--	--	35.8	8.4
3 years	57.6	12.8	9.6	--	--	--	--	42.4	14.6
4 years	54.0	14.3	13.0	--	--	--	--	46.0	14.2
5 years	50.5	19.9	--	--	--	--	--	49.5	18.0
6 years	62.2	9.8	10.1	--	--	--	--	37.8	12.8
Work limitation (all years)									
No work limitation	81.1	7.0	4.2	2.1	2.2	1.5	1.8	18.9	5.5
Work limitation	51.2	9.6	7.9	--	--	6.8	16.3	48.8	28.4
Status changed	69.5	9.5	5.9	4.5	3.8	2.8	4.1	30.5	10.7
Minority status									
Visible minority	65.4	7.0	4.4	--	8.1	--	9.2	34.6	20.8
Canadian-born	82.8	--	--	--	--	--	--	17.2	--
Immigrant	61.2	7.9	4.9	--	9.7	--	10.4	38.8	24.0
Not a visible minority	77.7	7.8	4.6	3.0	2.4	1.9	2.6	22.3	6.9
Immigration status									
Canadian-born	77.4	8.0	4.5	2.9	2.5	1.9	2.9	22.6	7.3
Immigrant, before 1977	81.4	6.4	3.7	2.8	2.1	--	--	18.6	5.6
Immigrant, 1977 to 1986	59.1	7.1	--	--	--	--	--	40.9	20.3
Immigrant, after 1986	54.1	--	--	--	--	--	--	45.9	28.2
Family composition (all years)									
Unattached	61.0	7.2	4.2	4.4	3.4	4.0	15.9	39.0	23.3
Couple, no children	91.3	4.6	1.7	1.2	--	--	--	8.7	1.1
Couple with children	85.2	4.9	3.0	1.6	1.3	1.6	2.4	14.8	5.3
Lone parent	40.0	--	--	12.4	8.7	11.1	17.2	60.0	37.0
Other	86.4	4.9	3.0	--	--	--	--	13.6	5.0
Changed over period	70.0	11.2	7.0	4.0	4.0	2.2	1.7	30.0	7.9
Family composition in 1993									
Unattached	58.8	9.9	6.7	5.5	5.1	3.7	10.5	41.2	19.3
Couple, no children	86.9	6.1	2.6	1.7	1.4	0.8	--	13.1	2.7
Couple with children	81.0	7.1	4.5	2.3	1.9	1.4	1.8	19.0	5.1
Lone parent	50.1	11.9	7.3	7.5	7.0	6.9	9.4	49.9	23.3
Other	78.2	8.7	4.5	2.4	3.5	2.1	--	21.8	6.3
Unknown	75.2	7.8	7.2	--	--	--	--	24.8	6.9

Source: Survey of Labour and Income Dynamics

* *Some or completed.*

Table 4: Probability of being in low-income, 1993 to 1998

Characteristics	At least one year	At least four years	All six years
Reference group		%	
Both sexes	**18.3**	**3.9**	**0.8**
Men	16.2	3.6	0.7
Women	20.3	4.2	0.9*
Age			
16 to 24	24.3*	4.5*	0.9*
25 to 34	22.5	5.4	1.1
35 to 44	18.2	4.5*	1.0*
45 to 54	16.2	4.7*	1.3*
55 to 64	19.3*	4.2*	0.9*
65 and over	9.9	1.2	0.2
Education			
Less than high school	26.4	9.0	2.6
High school completed	17.7*	4.3	1.5
Postsecondary—some or completed	16.0	2.7	0.5
University	8.3	1.1	0.1
Education changed	19.9	3.8*	0.6*
Student status			
Not a student	17.0	3.5	0.8
1 year	24.9	8.0	1.7
2 years	27.2	5.2*	1.1*
3 years	32.9	11.1	1.2*
4 years	35.5	11.1	3.4*
5 years	37.9	14.5	0.1*
6 years	28.2	8.9	1.5*
Work limitation			
No work limitation	14.0	2.6	0.6
Work limitation	43.4	14.7	3.7
Status changed	26.0	5.9	1.2
Minority status			
Visible minority	20.8*	11.0	5.4
Not a visible minority	18.2	3.8	0.8
Immigration status			
Canadian-born	18.0	3.9	0.9
Immigrant, before 1977	16.8*	2.6	0.4
Immigrant, 1977 to 1986	37.1	8.2	1.2*
Immigrant, after 1986	37.7	10.4	1.6*
Family composition (all years)			
Unattached	41.5	22.0	11.7
Couple, no children	8.8	0.9	0.2
Couple with children	14.3	4.2	1.4
Lone parent	53.2	27.9	10.6
Other	9.3*	2.0	0.2
Changed over period	24.6	4.9*	0.8*
Family composition in 1993			
Unattached	41.3	16.5	6.7
Couple, no children	13.4	2.1	0.3
Couple with children	16.0	3.5	1.1
Lone parent	39.3	16.2	6.3
Other	16.4*	3.1*	0.2

Source: Survey of Labour and Income Dynamics

Note: Probabilities are conditional on the average values of the explanatory variables. Probabilities associated with family composition, all years and as of 1993, are from two separate logistic regressions. There are six logistic regressions, three for each type of probability for each family composition.

* *Not statistically different from the coefficient of the reference group at the 5% level.*

Highly educated at low risk

The risk of exposure to low income depends on the number of earners in a family and the level of income of each earner. Education tends to be a major determinant of earnings.

Persons with a university degree are generally insulated from low income. Almost 90% avoided it between 1993 and 1998, compared with 73% for persons who had not completed high school.

Higher levels of education may reduce the likelihood of having low income in two ways. First, because highly educated persons—whether main[10] or secondary earners—generally receive higher wages, they are less likely to have low income at a given moment. Second, as long as their wages increase more rapidly over time than those of persons with less education, they will probably move out of low income more quickly.

Higher risk not necessarily associated with severity

Whether a family experiences low income is not all that matters. The low income gap—the difference between the low income cutoff (LICO) and a family's income—is also relevant. The size of the income gap clearly affects a family's purchasing power. Some persons, while more likely than others to receive low income, may have *higher* family incomes than others experiencing a low income state. In other words, a higher incidence of low income is not necessarily associated with a greater depth of low income or a greater income gap.

Between 1993 and 1998, the average income gap for the population aged 16 and over that

Table 5: Income deficit while in low income, 1993 to 1998

Characteristics	Deficit	Relative deficit**
Reference group	1996 $	%-point
Both sexes	**5,060**	**-**
Men	5,290	-
Women	4,890	-0.8*
Adults 25 to 34	5,380	-
Elderly (65 and over)	1,950	-11.4
High school graduates	4,970	-
University graduates	6,210	4.9
Not a student	4,540	-
Student for six years	6,450	4.8*
Canadian-born	4,820	-
Immigrant, before 1977	5,770	1.0*
Immigrant, 1977 to 1986	5,740	-3.2*
Immigrant, after 1986	7,050	-2.6*
Visible minority	7,080	4.0*
Not a visible minority	4,810	-
With work limitation	4,470	0.8*
No work limitation	4,960	-
Unattached individuals	3,700	8.0
Couples with children	6,410	-
Lone parents	5,410	1.0*

Source: Survey of Labour and Income Dynamics
Note: Persons 16 and over (in 1993) who had at least one year of low (but not negative) income between 1993 and 1998.
* *Not statistically different from the coefficient of the reference group at the 5% level.*
** *Compared with reference group.*

encountered low income for one year or more was $5,060 (in 1996 dollars) (Table 5).[11] In other words, the average family income for persons in this group was $5,060 below their family's LICO. The average gap varied from group to group; for example, for a person aged 25 to 34 it was $5,380, compared with only $1,950 for a person aged 65 and over. Consequently, elderly people not only had a relatively low risk of experiencing low income for several years, they also had a smaller income gap when they did encounter low income.

High school graduates had a higher risk of low income than university graduates. However, when they were in a low income situation, their family income averaged $4,970 below their LICO, compared with $6,210 for university graduates. One reason could be that following a layoff from a high-paying job, university graduates may take some time to find a new job with the same pay level, resulting in a longer spell of unemployment and a substantial decrease in family income.

Are these qualitative differences statistically significant? Yes. Other things being equal, elderly people had an income gap (as a percentage of the associated low income cutoff)[12] some 11 percentage points lower than that of people aged 25 to 34. Similarly, university graduates had a relative income gap about 5 percentage points higher than that of high school graduates.

No statistically significant differences in the relative income gap existed within the following groups: immigrants versus the Canadian-born, visible minorities versus others, persons with work limitations versus others, and lone-parent families versus couples with children. In contrast, the relative income deficit of unattached individuals was 8 percentage points higher than that of persons living in families composed of couples with children.[13]

How long does a spell of low income last?

Given that 24% of the population had low income for at least one year during the 1993 to 1998 period and only 13% of the population, on average, had low income, the population under study was not static; that is, it underwent substantial turnover. A more direct way to examine turnover in this population is to calculate how long people remained in low income.

Many factors lead to a change in low income status. Being laid off from a high-paying job, having a new child, moving from a small to a large community or experiencing a family breakdown may push a family into low income. Similarly, persons who escape low income may do so by securing a higher-paying job, getting married, moving from a small to a large company, or having a child leave home or enter the labour market.

Of all those who started a spell of low income in 1994, some 61% moved out of this state in 1995 (Table 6). Similarly, of all who started a spell of low income in 1995, some 50% escaped low income in 1996. Thus, 50% to 60% of persons who began a spell of low income in one year no longer had low income the following year. These high exit rates confirm a substantial turnover in this population.

Table 6: Duration of new low income spells

Duration (years)	Year low income spell began			
	1994	1995	1996	1997
	%			
One	60.8	50.3	50.8	51.7
Two	9.5	14.6	17.3	48.3*
Three	7.9	12.0	37.9*	-
Four	8.2	23.1*	-	-
Five	13.7*	-	-	-

Source: Survey of Labour and Income Dynamics, 1993 to 1998

* *The spell may have lasted longer.*

On the other hand, some spells of low income last a long time: of all Canadians falling into low income in 1994, some 30% remained for three years or more.[14] Corresponding percentages for 1995 and 1996 were 35% and 38%. Furthermore, 14% of individuals who started a spell of low income in 1994 were in this state for five years or more. This indicates a persistence of low income in Canada.[15]

Taken together, these figures provide strong evidence against the extreme views that people with low income remain in low income, or that they are there for only a short period (one year). The reality is more complex and lies between the two.

High-risk groups with low income

The extent to which some groups are represented in the population with low income depends not only on their risk of exposure, but also on their relative number in the whole population.

Many people, such as recent immigrants, members of visible minorities, those with work limitations, or those in lone-parent families, have a high risk of exposure to low income. However, they represent a small proportion of the population. Consequently, it is not surprising that they account for a relatively small share of those with low income.

For instance, 32% of persons living in lone-parent families were in low income in 1993, compared with only 8% of those in families composed of couples with children. Yet, because they represented only 7% of the entire population, people in lone-parent families accounted for just 20% of those in low income in 1993.[16] In other words, 80% of the population in low income in 1993 consisted of people not in lone-parent families.

Cumulated income and cumulated low income cutoffs

While the number of years in low income during the 1993 to 1998 period provides one simple measure of the persistence of low income, it does not allow a comparison of the extent to which different families were in straitened circumstances during the six-year interval. For instance, family A, which was in low income for six consecutive years, may have had a larger cumulated (over six years) income than family B, which was in low income for only four years.

To see this, assume that the low income cutoff for these two families equals $20,000 (in constant dollars) and is steady throughout the period. Family A may have had a constant disposable income of $18,000 between 1993 and 1998 and, as a result, have a cumulated income of $108,000 ($18,000 times six) over the 1993 to 1998 period and experience low income for all six years. Its six-year family income-to-LICO ratio would equal 0.90 ($108,000/$120,000). In contrast, family B may have received $15,000 during the first four years and $21,000 in the last two years. If so, it would be in low income for only four years but still have a cumulated income of only $102,000 ($15,000 times four plus 21,000 times two). As a result, it would have a six-year family income-to-LICO ratio of 0.85 ($102,000/$120,000).

The question then becomes: what percentage of individuals live in families whose cumulated income is less than their cumulated low income cutoff? In other words, what percentage of people have a six-year income-to-LICO ratio less than 1.0?

Overall, 8% of persons aged 16 and over lived in families whose cumulated income was less than their cumulated low income cutoff over the study period (Table 7). This percentage was somewhat smaller than that of people with low income in a given year.[17] All groups with a high risk of experiencing low income for several years—workers with lower education, students, persons with work limitations, visible minorities, post-1976 immigrants, unattached individuals and lone-parent families—also had a high risk of having a six-year income-to-LICO ratio less than 1.0.

Table 7: Incidence of low income, 1993 to 1998

	Six-year family income less than:		
	125% of six-year LICO	Six-year LICO	75% of six-year LICO
		%	
Both sexes	**14.1**	**7.9**	**3.1**
Men	11.6	6.7	2.9
Women	16.5	9.1	3.3
Age			
16 to 24	15.1	9.8	3.3
25 to 34	14.6	8.4	3.3
35 to 44	12.1	6.9	3.3
45 to 54	11.5	8.1	3.8
55 to 64	14.6	8.2	3.9
65 and over	18.7	6.0	--
Education (all years)			
Less than high school	22.7	12.5	4.9
High school completed	13.6	7.3	3.1
Postsecondary*	10.8	5.3	1.9
University	4.7	3.1	--
Education changed	16.4	11.4	4.8
Student status			
Not a student	12.8	6.5	2.5
1 year	16.3	11.9	--
2 years	12.7	7.5	--
3 years	21.9	14.3	--
4 years	20.3	13.1	--
5 years	21.1	--	--
6 years	15.6	11.4	--
Work limitation			
No work limitation	9.7	5.6	2.2
Work limitation	37.0	27.7	13.7
Status changed	18.4	10.9	4.6
Minority status			
Visible minority	26.5	19.7	10.2
Not a visible minority	13.1	7.0	2.5
Immigration status			
Canadian-born	13.1	7.2	2.7
Immigrant, before 1977	13.0	6.0	2.2
Immigrant, 1977 to 1986	31.9	22.4	--
Immigrant, after 1986	33.0	26.3	--
Family composition (all years)			
Unattached	40.8	24.6	11.2
Couple, no children	5.3	1.3	--
Couple with children	11.2	6.0	2.6
Lone parent	55.6	46.3	18.9
Other	8.1	5.2	--
Changed over period	12.8	6.8	2.4
Family composition in 1993			
Unattached	31.4	19.0	8.4
Couple, no children	6.9	2.8	0.5
Couple with children	10.3	5.1	2.1
Lone parent	36.2	26.4	11.2
Other	10.4	5.7	1.2

Source: Survey of Labour and Income Dynamics
* *Some or completed.*

Conclusion

According to longitudinal data, roughly 50% of individuals who started a spell of low income were in that state for only one year between 1993 and 1998. On the other hand, as many as 30% of persons who started a spell of low income were there for three or more years. This suggests that low income does persist in some cases.

On average, some 13% of Canadians lived in families that had low income. However, as many as one in four experienced low income for one year or more during this six-year period. About 8% did so for at least four years. Some people, such as those in lone-parent families or those with a work limitation, were exposed to four consecutive years of low income much more frequently. Others, such as those with a university diploma, appear to have been insulated.

Twelve percent of children under six experienced low income for at least four years. Though four years may seem a short period, it represents a sizeable percentage of a young child's life (Phipps, 1999). Conversely, only 6% of people 65 and over experienced low income for four years or more.

The results also show that for many persons with a work limitation, government transfers and potential earnings from secondary earners may not lift them out of low income. Having a limitation at work severely limits earnings and probably prevents some people from achieving higher incomes.

Foreign-born visible minorities and post-1976 immigrants were more likely than others to experience persistent low income. This suggests that the problems faced by members of visible minorities and recent immigrants may be intimately related.

Perspectives

Notes

1 The low income gap is the low income cutoff minus family income.

2 For a detailed explanation, see "On poverty and low income" (Catalogue no. 13F0027XIE), by I.P. Fellegi. This article is available on Statistics Canada's website (www.statcan.ca). Select "Products and services", then "Research papers" and "Personal finance and Household finance".

3 After-tax income refers to income after federal and provincial income taxes and government transfers.

4 See Duncan and Rodgers (1991) for a discussion of various measures of persistent poverty. Logistic regression can be used to model the duration of spells of low income (Hosmer and Lemeshow, 1989). Multiple episodes are taken into account in Huff Stevens (1995) and Laroche (1997).

5 A work limitation is a long-term physical condition, mental condition or health problem that limits the kind or amount of activity that can be performed at work. People who had work limitations for all six years of the 1993 to 1998 period, people who had no work limitations during the period, and people whose status changed (that is, who had work limitations part of the period) represented 2%, 83% and 15%, respectively, of the population 16 and over.

6 These mechanisms will tend to decrease families' market income by lowering the earnings of the main earner or those of other earners.

7 Among individuals aged 16 and over (longitudinal sample), members of visible minorities account for 67% of immigrants who came to Canada after 1976. Members of visible minorities represent 7% of the population; immigrants, 17%. Immigrants who arrived before 1977, between 1977 and 1986, and after 1986 represent 12%, 3% and 2%, respectively, of the population. Immigrants represent 76% of members of visible minorities and members of visible minorities represent 35% of all immigrants.

8 Using logistic regressions, the study performed a multivariate analysis of the probability of experiencing low income for at least one year, for at least four years, and for six consecutive years. Three logit models were estimated separately, one for each probability. The control variables were sex (two categories), age (six groups), educational attainment (five categories), student status (seven categories), work limitation status (three categories), visible minority status (two categories), immigration status (four categories), and family composition (six categories). When the probabilities of having low income were calculated, say, by age group, the other control variables were set to their average values (Table 4). The higher risk among visible minorities remains when one considers the probability of experiencing low income for at least four years or for six years. Among post-1976 immigrants, the higher risk remains for the probability of experiencing low income for at least one year or for at least four years.

9 This finding is consistent with previous work by Hum and Simpson (1998), which shows that the wage disadvantage observed for visible minorities in the aggregate applies more to those who were foreign-born than to those who were Canadian-born. This pattern remains in a multivariate analysis. The probability of being in low income for at least one year is 11% for Canadian-born visible minorities, which is not significantly different (at the 5% level) from the 18% for other Canadian-born persons. For foreign-born visible minorities, the figure is 36%.

10 The main income earner is the family member with the highest annual income. Apart from the logistic regressions mentioned in note 8, logistic regressions were estimated for a subsample of individuals in families whose main income earner remained unchanged throughout the 1993 to 1998 period. In this case, the control variables refer to the characteristics of the main income earner of the family to which an individual belongs (rather than the characteristics of the individual). The resulting subsample consists of 60% of the population. However, as Jenkins (1999) emphasizes, "if one restricts analysis to persons and households who do not experience compositional change, one will be omitting a significant fraction of the population and introducing a form of selection bias." In any event, although the magnitude of the effects may differ somewhat from those reported in Table 4, the qualitative conclusions stated above hold. More precisely, individuals living in lone-parent families or in families whose main income earner has relatively little education, has a work limitation, is a member of a visible minority or is a post-1976 immigrant are more likely to experience low income for at least four years than are other people.

11 Since the individual is the unit of analysis, the study also averages the individual-specific income gap across all persons who lived in families with low income for at least one year.

12 The relative income gap is regressed on the following control variables: sex, age, educational attainment, student status, immigration status, visible minority status, work limitation status and family composition. This measure is used because it is more appropriate for between-group comparisons. Consider an unattached individual whose income is $1,000 below his or her LICO and a family of six whose income is also $1,000 below their LICO. The former will probably be worse off than the latter because his or her income gap represents a much higher *proportion* of his or her LICO. Thus, a better measure of the depth of low income is the relative income gap, that is, a percentage of a family's LICO.

13 Unattached individuals have a lower income gap ($3,700) than persons living in families composed of couples with children ($6,410) but a higher *relative* income gap, because the former have lower LICOs than the latter.

14 While this figure (30%) may seem inconsistent with the 11% of individuals who were in low income for at least three years between 1993 and 1998 (Table 2), this is not the case. The data refer to different populations. The 11% refers to the

entire Canadian population and the 30%, to the percentage of Canadians *falling into low income in 1994* (who accounted for only 4% of the Canadian population [Morissette and Drolet, 2000: Table 9]).

15 Of all those who started a spell of low income between 1994 and 1996, some 10% to 17% had low income for two years.

16 See Morissette and Drolet (2000).

17 When based on cross-sections of the sample, the incidence of low income for persons aged 16 and over equals 10%, 11%, 11%, 11%, 10% and 10% for 1993 through 1998.

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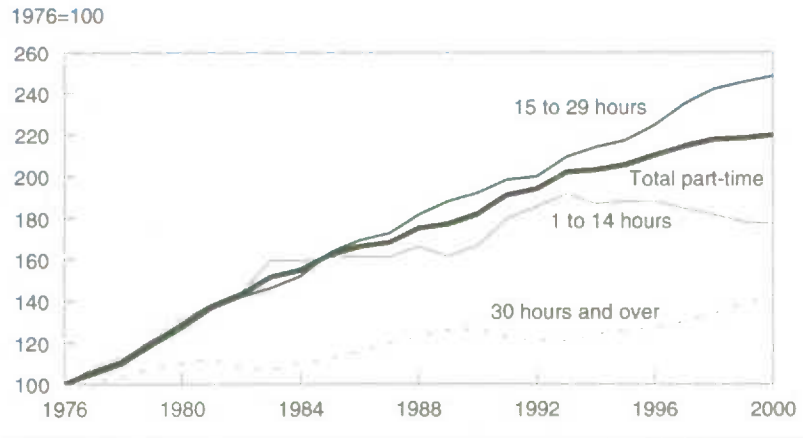
Trends in part-time work

Henry Pold

For more than two decades the ranks of part-time workers marched steadily onward and upward. Through good times and bad times, the proportion of workers whose usual hours at their main job amounted to less than 30 per week kept climbing (Chart). At the end of the 1990s, however, a plateau seemed to have been reached. In 1999, the seasonally adjusted December estimate of part-time employment actually dropped on a year-over-year basis, but then bounced back somewhat in December 2000. But numbers can conceal as much as they reveal. A closer look at the data shows different trends for short-hour (less than 15) and long-hour (15 to 29) part-time workers.

Chart: Since the early 1990s, the divergence in part-time employment has accelerated.



Source: Labour Force Survey

The overall levelling-off of part-time employment was entirely attributable to a decline among short-hour part-time workers. For those working 15 to 29 hours, the numbers continued their steady upward trend. The number of people working less than 15 hours per week peaked in 1993 and generally declined after 1996. The number working 15 to 29 hours increased every year between 1976 and 2000, more than doubling over the period.

Henry Pold is with the Labour and Household Surveys Analysis Division. He can be reached at (613) 951-4608 or henry.pold@statcan.ca.

In 1976, about 13% of workers put in less than 30 hours per week at their main job. By 2000, this had climbed to 18%. The proportion of those working less than 15 hours was virtually unchanged over the period (5% and 6%). The proportion working 15 to 29 hours increased by about half, from less than 8% to more than 12%.

Business cycle effects

What lies behind the decline in the number of people working less than 15 hours per week? One factor appears to be the business cycle. While long-hour part-time work seems almost immune to it, short-hour part-time is somewhat susceptible. Following the recession of the early 1980s, short-hour part-time employment showed no growth until the end of the decade. And after the recession in the early 1990s, short-hour employment once again plateaued.

The precariousness of short-hour part-time jobs may reflect in part their temporary nature. For example, only 61% were permanent in 2000, compared with 77% of long-hour part-time jobs. Another indication of their vulnerability is the lower rate of unionization, 22% compared with 32% in 2000. (While the figures for job status and unionization are down slightly since 1997—when the data were first collected—it is too early to identify consistent trends.)

Table 1: Usual hours of work at main job, 2000

	Total	1 - 14	15 - 29	30 +
		(1976 = 100)		
Both sexes	**152.5**	**177.4**	**248.6**	**142.8**
15 to 24	90.0	157.8	215.2	63.9
25 to 54	181.8	193.2	280.3	175.0
55 and over	135.9	227.2	222.5	122.4
Men	**131.0**	**190.2**	**255.2**	**124.9**
15 to 24	85.5	151.8	199.1	65.7
25 to 54	149.6	421.4	446.4	145.3
55 and over	116.8	249.0	224.2	107.7
Women	**189.0**	**171.4**	**246.0**	**180.2**
15 to 24	95.2	162.7	229.2	61.6
25 to 54	242.1	170.3	258.0	245.7
55 and over	180.2	215.0	221.6	165.7

Source: Labour Force Survey

Virtually all occupations and industries reflect trend

Between 1987 and 2000,[1] every major occupational group except primary occupations had the highest growth rates for persons working 15 to 29 hours per week (Table 2). The number of workers averaging 15 to 29 hours more than doubled among those in natural and applied sciences, and in government service and religion. In half of the 10 occupation groups, the second highest growth was among those working 30 or more hours, while in the other half the honour went to those working less than 15 hours per week.

In every industry but one, the greatest gains between 1987 and 2000 were found among those working 15 to 29 hours per week (Table 3). The lone exception was agriculture, where employment actually declined. The smallest drop in this industry was among those working the longest hours and the biggest was among

Changing legislation

Instead of resuming their growth toward the end of the 1990s, short-hour part-time jobs actually began to decline in 1997. Coincidentally, the rules for Employment Insurance (EI) premiums changed in January of that year. Prior to 1997, employers were not obliged to deduct EI premiums if an employee worked less than 15 hours in a week. And if no deduction was made, the employer did not have to pay its share, which is 1.4 times the employee deduction.

Only older men buck trend

Of the six age-sex groups examined here, only men 55 and older had a lower growth rate for long-hour part-time jobs than for short-hour ones (Table 1). Men 25 to 54 had by far the largest proportional increases in both types of part-time jobs—more than 300% each over the 25-year period.

Table 2: Employed by usual hours worked and occupation, 2000

	Usual hours at main job			
	Total	1 - 14	15 - 29	30 +
		(1987 = 100)		
All occupations	**121.0**	**110.0**	**143.8**	**119.0**
Management	125.1	124.6	169.4	123.7
Business, finance and administrative	112.1	98.4	130.2	111.0
Natural and applied sciences and related	173.9	201.6	240.1	172.0
Health	130.0	116.9	135.5	129.3
Social science, education, government service and religion	140.4	137.9	213.5	133.2
Occupations in art, culture, recreation and sport	143.5	145.6	160.5	139.7
Sales and service	126.7	112.6	145.5	123.6
Trades, transport and equipment operators and related	105.9	107.9	143.2	104.4
Unique to primary industry	90.0	66.3	81.5	93.7
Unique to processing, manufacturing and related	115.8	83.7	127.7	116.0

Source: Labour Force Survey

Table 3: Employed by usual hours worked and industry, 2000

	Usual hours at main job			
	Total	1 - 14	15 - 29	30 +
	(1987 = 100)			
All industries	**121.0**	**110.0**	**143.8**	**119.0**
Goods	**105.7**	**79.3**	**109.2**	**106.4**
Agriculture	78.1	57.8	70.0	82.5
Forestry, fishing, mining, oil and gas	96.5	110.2	136.1	95.3
Utilities	97.9	--	188.2	97.4
Construction	111.6	119.3	145.9	109.8
Manufacturing	111.8	90.2	126.4	111.8
Durable	119.7	96.4	153.9	119.5
Non-durable	103.1	85.6	111.2	103.2
Services	**127.5**	**115.0**	**147.8**	**125.4**
Trade	116.6	96.1	131.3	116.0
Wholesale	131.7	134.0	149.4	130.8
Retail	112.6	93.9	130.1	110.7
Transportation and warehousing	122.1	108.9	158.1	119.9
Finance, insurance, real estate and leasing	114.7	97.7	148.0	112.4
Professional, scientific and technical	197.2	163.5	238.9	195.8
Management, administrative and other support	205.3	192.6	210.1	206.1
Education	123.6	136.1	175.5	115.4
Health care and social assistance	132.9	103.7	136.4	134.9
Information, culture and recreation	134.6	147.3	161.8	129.4
Accommodation and food	137.1	127.5	162.8	130.2
Public administration	99.0	79.7	118.5	98.8
Other	110.3	95.3	117.4	111.3

Source: Labour Force Survey

those working the shortest hours. Unlike the growth rates by occupation, the rates by industry were skewed to the longer end. Only five industries (of 18) had greater increases for short-hour part-time workers than for full-time.

Moonlighters affected

The decline in the number of people working less than 15 hours per week may also help to explain the levelling-off in the rate of multiple jobholding to around 5% in the latter part of the 1990s. It is much easier (and perhaps even necessary) to take on a second job when one is working less than 15 hours per week than when one is putting in closer to 30 hours. The rate of multiple jobholding jumped from 2.1% in 1976 to a peak of 5.2% in 1997 and then eased to 4.8% in 2000.

Conclusion

In 1976, for every 10 people working short-hour part-time at their main job, 15 worked long-hour part-time. By 2000 the latter had increased to 20. As a result, the average usual hours worked by part-timers climbed from 15.5 per week in 1976 to 16.9 in 2000.

The continuing growth in the number of people working 15 to 29 hours may reflect the emergence of what could be termed career part-time jobs. Two factors may have contributed to this trend. More women (who have traditionally worked shorter hours) have entered (and stayed) in the labour force, so that most families today comprise dual-career spouses who must juggle family and work responsibilities. In addition, more part-time jobs now offer benefits once reserved for full-time employees.

What cannot easily be determined is the driving force behind the trend. The extent to which more people choose part-time work adds to the supply of such workers (Marshall, 2001). On the other hand, the evolving requirements of employers may also increase the demand for part-time workers.

Perspectives

Note

1 The Labour Force Survey changed its occupation and industry coding systems in 2000, and revisions were taken back only to 1987.

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Pension coverage and retirement savings

René Morissette and Marie Drolet

While several Canadian studies have documented the widening earnings differential between young workers and prime-age workers over the past two decades (Beach and Slotsve, 1996; Morissette, Myles and Picot 1994), few have connected it with the growing gap in pension coverage.

This article analyzes pension coverage over a 15-year period for men and women in different age groups. It uses data from the Longitudinal Administrative Databank, as well as from the Survey of Union Membership, the Labour Market Activity Survey and the Survey of Labour and Income Dynamics (see *Data sources and concepts*).

While changes in pension coverage provide useful information on movements in the incidence of pensions, they are silent on the extent to which workers prepare themselves for retirement. Reduced individual retirement savings may lead to less income for future generations. One way to address this issue is to examine how individual contributions to tax-assisted retirement savings programs have evolved over time. This is the second goal of the article, which documents the evolution of registered pension plan (RPP) and registered retirement savings plan (RRSP) contributions of men and women of different age groups.

René Morissette and Marie Drolet are with the Business and Labour Market Analysis Division. They can be reached at (613) 951-3608; rene.morissette@statcan.ca or (613) 951-5691; marie.drolet@statcan.ca, respectively; fax: (613) 951-5403. Adapted from an article in the February 2001 issue of Canadian Journal of Economics.

RPP coverage: 1984 to 1998

Between 1984 and 1998, RPP coverage declined for three of the four age-sex groups (Table 1). Pension coverage among young men fell from 54% to 44%. A more moderate yet substantial decline was observed for prime-age men: the proportion covered by an RPP dropped from 69% to 62%.[4] Young women's coverage

Table 1: Pension coverage of men and women

	Employees covered by a pension plan*				Taxfilers with contributions to an RPP**			
	Men		Women		Men		Women	
	25-34	35-54	25-34	35-54	25-34	35-54	25-34	35-54
	%							
1984	54.2	69.3	46.7	45.7	...	...	...	...
1986	50.4	67.2	42.9	46.4	26.2	37.8	27.6	31.9
1987	49.6	67.6	43.1	46.8	25.6	37.0	27.3	32.3
1988	50.9	67.5	43.0	49.6	25.5	37.0	27.7	33.8
1989	51.7	68.9	43.2	50.8	24.7	36.2	27.3	34.3
1990	49.1	69.2	44.8	50.5	24.5	36.1	27.7	35.0
1991	...	...	...	...	24.1	35.7	27.7	35.7
1992	...	...	...	...	23.8	35.5	28.2	36.5
1993	46.9	68.7	46.3	54.2	23.2	35.3	27.9	36.8
1994	49.2	71.0	44.3	55.8	22.1	34.4	27.0	36.6
1995	45.4	67.2	42.7	53.9	21.2	33.8	26.2	36.5
1996	43.9	63.2	40.9	51.9	20.3	32.9	25.1	36.0
1997	42.6	62.5	40.4	50.7	19.7	32.2	24.0	35.0
1998	43.6	62.4	38.7	50.8				
Change (%)								
1986-1997	-15.5	-7.0	-5.8	9.3	-24.8	-14.8	-13.0	9.7
1993-1997	-9.2	-9.0	-12.7	-6.5	-15.1	-8.8	-14.0	-4.9

Sources: Survey of Union Membership; Labour Market Activity Survey; Survey of Labour and Income Dynamics; Longitudinal Administrative Databank

* *Main job in December.*

** *Taxfilers with annual earnings (wages and salaries plus net income from self-employment) of at least $1,000 (1994 dollars).*

remained relatively stable between 1984 and 1993, then decreased from 46% in 1993 to 39% in 1998. In contrast, women 35 to 54 experienced an increase in coverage during the period. It was 46% in 1984, peaked at 56% in 1994 and stood at 51% in 1998.

Between 1991 and 1997, the percentage of workers participating in an RPP fell 5 percentage points among young men, 5 points among prime-age men and 3 points among young women. In contrast, it was virtually unchanged among prime-age women (Table 2). After the mid-1980s, then, RPP coverage fell among men and young women and rose among prime-age women.[5]

Table 2: Taxfilers with pension coverage, 1991-1997*

	Men		Women	
	25-34	35-54	25-34	35-54
		%		
1991	35.7	49.8	34.3	41.6
1992	35.3	49.7	35.1	42.9
1993	34.0	48.9	34.9	43.5
1994	32.2	47.4	33.6	42.9
1995	31.7	47.2	33.1	43.3
1996	30.8	46.2	31.9	42.9
1997	30.3	45.2	31.7	42.8
Change (%)				
1991-1997	-15.1	-9.2	-7.6	2.9
1993-1997	-10.9	-7.6	-9.2	-1.6

Source: Longitudinal Administrative Databank (LAD)

* *Taxfilers with annual earnings (wages and salaries plus net income from self-employment) of at least $1,000 (1994 dollars) and a positive pension adjustment.*

At least two factors may explain the drop in men's coverage. First, the unionization rate fell during the period: from 39% to 26% for young men and from 48% to 41% for prime-age men (Table 3). Since men's coverage rates are much higher in unionized jobs than they are in non-unionized jobs (Table 4), the decrease in the unionization rate is likely to have lowered their coverage rate. Second, employment has shifted away from high-coverage industries to low-coverage industries.[6] The decline in the unionization rate should have a more limited impact among prime-age men because it is less pronounced and the union/non-union differential in pension coverage is, in relative terms, lower among prime-age men than among young men.

The decline in union density (from 34% to 28%) and inter-sectoral shifts of employment also likely played a role in the drop of young women's coverage, but less so for prime-age women. Union density dropped only marginally for prime-age women and could not have exerted significant downward pressure on their coverage rate. Industrial shifts probably also played a minor role, since they involved industrial groups with fairly similar coverage rates. In contrast, occupational shifts toward professional/managerial and natural/social sciences-related positions and away from clerical, services-related and primary/processing-related occupations may explain part of the increase in coverage for prime-age women.

Retirement savings: 1986 to 1997

While changes in pension coverage provide useful information on an important component of workers' total compensation, they cannot reveal the extent to which workers prepare themselves for retirement. One way to address this issue is to examine contributions to tax-assisted retirement savings programs. This is done here using data from the LAD to document the evolution of workers' contributions to the two major tax-assisted retirement savings programs—RPPs and RRSPs—from 1986 to 1997.

Between 1986 and 1997, average contributions to RPPs fell substantially among young and prime-age men and dropped slightly among young women (Table 5). Among prime-age women, average RPP contributions rose. RRSP contributions grew dramatically (by at least 70%) for each of the four age-sex groups. For all three groups that experienced a drop in RPP coverage, the growth in RRSP contributions offset any decline in average RPP contributions. As a result, the sum of RPP and RRSP contributions rose substantially. Prime-age women also increased their RRSP contributions markedly during the period. Combined with the growth in their RPP contributions, this produced about a 70% increase in the sum of both.

These averages, however, mask considerable heterogeneity among workers in different income quintiles. For example, between 1986 and 1997, contributions to RPPs and RRSPs made by workers in the top quintile were 9 to 46 times greater than those made by workers in the bottom quintile (Table 6). Contributions by the latter never exceeded $200 per year for young men and women or $630 per year for

Table 3: Characteristics of employees

	Men				Women			
	25 - 34		35 - 54		25 - 34		35 - 54	
	1986	1997	1986	1997	1986	1997	1986	1997
	%							
Union status								
Unionized	38.6	25.6	47.9	41.1	34.0	28.0	37.6	36.9
Non-unionized	61.4	74.4	52.1	58.9	66.0	72.0	62.4	63.1
Industry								
Agriculture and fishing	1.5	--	0.8	1.6	0.9	--	1.0	1.1
Forestry and mining	4.5	3.2	4.2	3.3	0.9	--	0.6	--
Construction	6.8	9.8	6.9	6.9	1.1	--	1.1	1.1
Manufacturing	25.9	24.9	26.3	24.6	12.6	12.3	13.7	10.0
Distributive services	20.3	15.0	17.9	19.7	8.5	7.7	7.5	8.7
Business services	8.6	12.2	7.5	9.8	16.7	16.7	11.4	14.3
Consumer services	17.1	20.0	10.9	13.6	22.9	28.1	21.8	21.6
Public services	15.4	13.5	25.6	20.5	36.4	32.5	42.9	42.4
Occupation								
Professional and managerial	13.4	11.7	18.9	18.2	11.9	15.3	11.1	15.6
Natural and social science	13.6	15.2	15.4	14.7	23.5	24.7	24.7	26.5
Clerical	7.1	6.7	5.7	5.2	34.6	23.6	30.4	28.3
Sales	8.0	7.8	5.8	6.4	7.0	9.0	7.9	7.6
Service	7.6	9.7	8.5	8.9	11.5	16.0	13.8	11.4
Primary and processing	26.4	26.3	24.3	25.1	6.8	6.5	8.6	6.0
Construction	8.7	9.5	8.8	8.0	0.2	--	0.2	--
Other	15.3	13.1	12.6	13.6	4.4	4.6	3.1	4.5
Education								
Less than university	82.2	78.5	78.8	78.0	81.4	74.3	84.6	79.1
University degree	17.8	21.5	21.2	22.0	18.6	25.7	15.4	20.9
Status								
Full-time	95.8	92.6	97.6	96.1	77.9	75.5	74.3	75.1
Part-time	4.2	7.4	2.4	3.9	22.1	24.5	25.7	24.9
Average hourly wages (1986 dollars)	$							
	12.27	**12.09**	**15.33**	**15.16**	**10.11**	**10.19**	**10.69**	**11.56**

Sources: Labour Market Activity Survey, 1986; Survey of Labour and Income Dynamics, 1997

prime-age men and women.[7] In contrast, contributions made by workers in the top quintile were substantial, between $2,900 and $5,800 per year during the period, depending on the age-sex group.

For all demographic groups and quintiles, real contributions to RPPs and RRSPs (measured both in absolute terms and as a percentage of annual earnings) grew between 1986 and 1997. In absolute terms, however, the increase was negligible among workers in the bottom quintile: it varied from $60 for young women to $170 for prime-age women. On the other hand, the increase was substantial among workers in the top quintile, ranging from $1,700 for young women to $2,300 for prime-age men.

In sum, even though Canadian workers appeared to prepare themselves for retirement better in the late 1990s than they had in the mid-1980s, the extent to which they did so differed markedly between low earners and high earners. While low earners increased their contributions to the two major tax-assisted retirement savings programs during the period, the amounts were still very small.

Factors affecting coverage

Movements in the industrial and occupational structure of employment, as well as changes in union density, are important determinants of the changes in pension coverage rates. Specifically, the decline in unionization and employment shifts toward low-coverage industries explain most of the decline in pension coverage among men and young women (Morissette and Drolet, 2001).

Several other explanations for the decreases in RPP coverage can be put forward. First, increases in competition—from abroad or within industries—may induce firms to cut labour costs by terminating some pension plans. New firms entering a market may delay offering plans in order to maximize their chances of survival during their first few years.

Second, increases in employers' contributions to various programs, such as the Canada or Quebec Pension Plan (C/QPP) or Employment Insurance, may lead new firms not to offer an RPP or may induce existing firms to terminate a plan (Frenken, 1996).

Data sources and concepts

Two sources of data allow the calculation of pension coverage by age in Canada: the Longitudinal Administrative Databank (LAD) and a combination of specific household surveys.[1] The LAD file, based on T1 tax records, provides two measures: the percentage of taxfilers who participate in a contributory registered pension plan (RPP) and the percentage who participate in any RPP. The first is available for 1986 to 1997, while the second covers only 1991 to 1997. While the LAD has age and sex information, it contains very few covariates that can be used to explain the evolution of coverage rates over time. For instance, it contains no information on workers' union status, education, industry of employment or occupation.

To explain the evolution of pension coverage for different age groups, it is necessary to use surveys that collect data on pension plan coverage, worker attributes and job characteristics. The 1984 Survey of Union Membership (SUM), the 1986 to 1990 Labour Market Activity Surveys (LMAS) and the Survey of Labour and Income Dynamics (SLID), launched in 1993, all satisfy this requirement. These household surveys are all based on the Labour Force Survey sample design and measure pension plan coverage by asking employees:

> "Are you covered by a pension plan connected with this job (do not count, CPP/QPP, deferred profit sharing plans or personal savings plans for retirement)?"

Although the wording of the question is exactly the same across all surveys, two important caveats are necessary. First, respondents may answer that they are *covered* by a plan in their job even though they are not *members* of (that is, do not participate in) the plan. This could happen when participation in a plan is voluntary. Under this scenario, the survey question would measure the percentage of workers who are *offered* a plan, regardless of whether they are plan members.

By definition, workers who are offered a plan include workers in compulsory plans, workers who choose to participate in voluntary plans, and workers who reject participation in voluntary plans. The measure of pension coverage may include some workers in the third group yet there is no information in SUM-LMAS-SLID that distinguishes them from the first two groups. However, this distinction is not important when looking at *changes* in coverage over time. Since most RPPs are compulsory and do not offer workers the option not to participate,[2] most of the changes in the percentage being offered a plan will likely reflect changes in the percentage of workers who are members of compulsory plans rather than changes in the percentage of workers who are offered voluntary plans.

A second issue is related to group RRSPs (registered retirement savings plans). Some respondents may consider group RRSPs to be registered pension plans, while others may correctly report that they are not covered by a RPP. In this case, the question would capture both employees covered by an RPP and part of those covered by group RRSPs. As a result, part of the changes in the measure of pension coverage derived from SUM-LMAS-SLID could reflect changes in the incidence of workers who are members of group RRSPs. However, the tax data provide compelling evidence that the percentage of workers *participating* in RPPs has declined among men and young women and has risen among prime-age women since the mid-1980s. The same trends are observed in SUM-LMAS-SLID.

Assuming that the measurement of pension coverage obtained from SUM-LMAS-SLID includes only workers who are RPP members, then part of the observed decline in RPP coverage may be offset by the potential growth in group RRSP membership, for which no data currently exist. If so, the decline in RPP coverage does not necessarily imply a decline in workers' total compensation. Conversely, if the measurement of pension coverage obtained from SUM-LMAS-SLID includes *all* members of group RRSPs as well as members of RPPs, then the decline in pension coverage observed in the survey data necessarily implies a decline in total compensation. In any event, the results suggest that, unless the decline in RPP coverage is *totally* offset by the growth in group RRSPs (with equivalent employer contributions), many workers may have to accept jobs providing lower fringe benefits than at the beginning of the 1980s.

The analysis focuses on two age groups: 25 to 34 (young workers) and 35 to 54 (prime-age workers). Workers under 25 are excluded, since potential changes in their coverage will probably have little effect on their retirement income, given the high probability of future job changes. Likewise, those over 54 are omitted because many may benefit from early retirement provisions and those still working may not be representative of the whole group.

LMAS and SLID allow measurement of pension coverage in *all* jobs held by employees. In contrast, SUM measures pension coverage only for the *main* job held in December.[3] Hence, the sample selected consists of employees 25 to 54 in their main job in December.

Table 4: Pension coverage of young and prime-age employees

	Men				Women			
	25 - 34		35 - 54		25 - 34		35 - 54	
	1986	1997	1986	1997	1986	1997	1986	1997
	%							
Total	**50.4**	**42.6**	**67.2**	**62.5**	**42.9**	**40.4**	**46.4**	**50.7**
Union status								
Unionized	78.1	78.4	84.7	89.8	71.7	80.0	76.4	84.9
Non-unionized	33.0	30.3	51.2	43.4	28.1	25.0	28.4	30.8
Industry								
Agriculture and fishing	8.0	--	--	--	--	--	--	--
Forestry and mining	63.6	--	69.3	64.8	--	--	--	--
Construction	31.9	29.7	41.7	46.7	--	--	--	--
Manufacturing	54.8	50.2	71.1	66.0	35.7	40.2	41.6	43.7
Distributive services	60.8	53.0	68.6	62.4	53.7	50.3	53.0	50.8
Business services	37.0	33.2	59.2	54.2	42.6	46.6	39.9	45.0
Consumer services	27.1	23.9	35.9	31.4	20.7	14.4	16.8	21.8
Public services	71.2	65.9	86.2	90.2	58.1	58.9	65.1	70.9
Occupation								
Professional and managerial	49.8	44.1	73.7	61.6	49.5	53.4	56.8	58.9
Natural and social science	59.9	51.1	80.5	79.2	56.4	57.3	67.0	71.3
Clerical	62.4	46.7	79.3	72.7	46.0	39.8	48.5	49.1
Sales	33.6	32.2	39.5	39.5	26.7	20.6	19.0	33.2
Service	45.6	41.4	62.0	62.9	19.6	19.0	25.4	24.1
Primary and processing	50.4	39.1	64.6	60.9	26.9	33.1	27.7	29.4
Construction	48.8	36.0	58.9	59.6	--	--	--	20.2
Other	48.9	48.5	63.0	56.8	40.0	--	--	--
Education								
Less than university	49.4	40.9	64.1	59.8	39.8	35.9	42.6	45.8
University degree	54.9	48.9	78.9	72.1	56.6	53.3	67.1	69.2
Status								
Full-time	51.9	44.8	68.2	64.0	49.3	45.5	54.7	57.9
Part-time	16.1	15.7	27.5	24.7	20.4	24.6	22.5	28.9

Sources: Labour Market Activity Survey, 1986; Survey of Labour and Income Dynamics, 1997

Third, any increase in administrative costs (for example, an increase in hourly fees for actuarial services in defined-benefit plans) could reduce firms' incentives to provide RPPs and lead them either to move to a group RRSP or to offer no retirement plan at all. Last, the legislative changes introduced during the 1980s and early 1990s regarding vesting, locking-in and cost-sharing may have increased the costs of providing pension plans, dissuading some new employers from offering RPPs or inducing established employers to terminate plans.[8]

The decline in unionization may not be purely external. It could be caused—at least in part—by increases in competitive pressures, which could induce employers to be more antithetical toward unions. Thus, increases in competition, which could in turn originate from technological changes, could be a major factor behind the decline in coverage observed among three demographic groups.

Job quality for young men

These results raise some concern about job quality for young men. Some studies have documented a decline in real annual earnings of young men during the 1980s (Morissette, Myles and Picot, 1994; Beach and Slotsve 1996).[9]

Unless the decline in young men's pension coverage is totally offset by the growth in group RRSPs (with equivalent employer contributions), the drop in their *total compensation* is underestimated.

Second, unless the trends regarding unionization and industrial shifts reverse, and unless the growth in group RRSPs offsets the decrease in RPP coverage, new cohorts of young men may have to accept jobs providing lower fringe benefits than those offered previous cohorts.

Recent work has shown that young men experienced a downward shift in their age-earnings profile during the 1980s (Beaudry and Green, 1996). The current study raises a related question: will the drop in RPP coverage observed among young men have long-term effects, that is, affect their retirement income?

The dramatic growth in RRSP contributions among young men has offset any decline of their RPP contributions. The extent to which they prepare themselves for retirement—as measured by their

contributions to RPPs and RRSPs—appears to have improved over the 15 years. While these calculations do not take into account the impact of the loss of employer RPP contributions (resulting from the decline in pension coverage) on young workers' retirement income, they provide some evidence that young men's contributions to RRSPs have evolved to increase their retirement income (abstracting from any future changes to C/QPP programs).

Table 5: RPP and RRSP contributions

	25-34		35-54	
	RPP	RRSP	RPP	RRSP
		$		
Men				
1986	430	670	890	1,500
1987	410	560	850	1,500
1988	400	710	850	1,500
1989	380	700	830	1,400
1990	380	690	840	1,300
1991	380	800	830	1,700
1992	390	870	850	1,800
1993	370	1,000	830	2,000
1994	350	1,100	810	2,200
1995	330	1,300	780	2,400
1996	310	1,600	750	2,600
1997	300	1,600	710	2,600
Women				
1986	350	460	520	860
1987	340	380	530	900
1988	340	480	540	950
1989	330	470	540	910
1990	350	470	580	880
1991	350	540	610	1,000
1992	370	600	650	1,100
1993	380	730	670	1,300
1994	360	820	680	1,400
1995	340	930	660	1,500
1996	330	1,100	640	1,700
1997	310	1,100	620	1,700

Source: Longitudinal Administrative Databank
Notes: Taxfilers with annual earnings (wages and salaries plus net income from self-employment) of at least $1,000 (1994 dollars). Contributions below $1,000 are rounded to the nearest $10, those above are rounded to the nearest $100. The denominator used to calculate the average consists of all workers in a given age-sex group, rather than only workers who have made contributions. The average captures changes in both the percentage of members and the contributions of those who contribute.

This conclusion must be put into perspective, since it does not apply to all young men. Contributions to RPPs and RRSPs made by young men in the bottom quintile are extremely small and, in absolute terms, barely rose over the period. This suggests that increases in future retirement income may be marginal or non-existent for this group.

Conclusion

Decreases in RPP benefits do not necessarily imply that workers are worse off. Some substitution may take place between direct and indirect payroll benefits. Also, even though pension coverage of young women fell between 1986 and 1997, real annual earnings of young women working full year full time rose by 5% during the period.[10] However, decreases in RPP benefits of young men and prime-age men suggest that they are worse off, because—ignoring any potential effect of group RRSPs—the decline in their RPP coverage between 1986 and 1997 took place during a period of flat or declining (real) earnings.[11]

Canadian workers appear to have prepared themselves for retirement better in the late 1990s than did their counterparts in the mid-1980s. This must be put into context, however. The increase in RRSP contributions may not represent a net increase in savings. It is unclear whether tax-assisted retirement savings programs (such as RPPs and RRSPs) encourage new savings or simply induce a shift of savings from one vehicle to another (Gale, 1998).

The growth in pension coverage observed among prime-age women must be interpreted with caution, since it was not steady between 1986 and 1997. Both survey data and tax data indicate that coverage rose between 1986 and 1993, but fell between 1993 and 1997. These trends are consistent with pension plan data, which show that pension coverage among women rose from 36% to 42% between 1987 and 1993 and then fell to 40% in 1997 (Statistics Canada, 1999). A recent decline in coverage among prime-age women may signal further declines for this group.

Part of the changes in pension coverage measured in the survey data could reflect changes in the incidence of workers who are members of group RRSPs. Unless the decline in RPP coverage is *totally* offset by the growth in group RRSPs (with equivalent employer contributions), many Canadian workers may have to accept jobs providing lower fringe benefits than those received by their counterparts at the beginning of the 1980s.

Table 6: Average contributions to RPPs and RRSPs, by earnings quintile*

	$ contribution (% of earnings)												Change 1986-1997	
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	Total	Due to RRSP
													$	%
Men 25-34														
Lowest	100	70	120	110	100	120	130	140	140	160	180	170	70	100.0
	(1.4)	(1.0)	(1.5)	(1.3)	(1.2)	(2.1)	(2.2)	(2.5)	(2.3)	(2.6)	(2.9)	(2.7)		
Middle	800	690	830	810	800	800	820	880	980	1,100	1,300	1,200	400	150.0
	(2.7)	(2.3)	(2.8)	(2.7)	(2.8)	(2.9)	(3.0)	(3.3)	(3.7)	(4.2)	(4.9)	(4.6)		
Highest	2,800	2,500	2,700	2,600	2,600	3,000	3,300	3,700	3,900	4,400	4,800	5,000	2,200	113.6
	(4.7)	(4.2)	(4.5)	(4.4)	(4.4)	(5.3)	(5.6)	(6.4)	(6.7)	(7.5)	(8.3)	(8.3)		
Men 35-54														
Lowest	450	490	520	440	380	460	440	490	530	570	630	610	160	100.0
	(4.9)	(5.3)	(5.3)	(4.1)	(3.7)	(6.2)	(5.8)	(6.9)	(6.8)	(7.5)	(8.5)	(7.6)		
Middle	2,100	2,100	2,200	2,200	2,100	2,100	2,300	2,400	2,500	2,700	2,900	2,900	800	112.5
	(5.4)	(5.3)	(5.5)	(5.5)	(5.5)	(5.8)	(6.2)	(6.6)	(6.8)	(7.4)	(8.1)	(8.1)		
Highest	5,000	4,900	4,900	4,500	4,300	5,500	5,900	6,400	6,600	7,000	7,300	7,300	2,300	121.7
	(6.3)	(6.2)	(6.0)	(5.4)	(5.3)	(7.0)	(7.3)	(8.0)	(8.2)	(8.6)	(9.0)	(8.8)		
Women 25-34														
Lowest	60	60	70	50	50	80	90	100	100	120	130	120	60	100.0
	(1.8)	(1.7)	(1.9)	(1.3)	(1.1)	(2.0)	(2.3)	(2.9)	(2.8)	(3.2)	(3.5)	(3.1)		
Middle	490	430	500	510	510	540	590	650	720	810	880	850	360	102.8
	(2.7)	(2.3)	(2.7)	(2.7)	(2.7)	(2.9)	(3.1)	(3.5)	(3.9)	(4.4)	(4.8)	(4.6)		
Highest	2,300	2,000	2,300	2,200	2,300	2,600	2,800	3,200	3,400	3,600	4,000	4,000	1,700	111.8
	(5.5)	(4.9)	(5.5)	(5.3)	(5.4)	(6.0)	(6.4)	(7.3)	(7.7)	(8.2)	(9.2)	(9.1)		
Women 35-54														
Lowest	190	190	210	160	160	210	220	280	310	320	360	360	170	100.0
	(5.5)	(5.6)	(5.5)	(3.7)	(3.3)	(5.3)	(5.3)	(6.4)	(7.1)	(7.3)	(8.3)	(8.5)		
Middle	1,000	1,000	1,100	1,100	1,100	1,200	1,300	1,400	1,500	1,600	1,800	1,800	800	76.3
	(5.1)	(5.1)	(5.5)	(5.4)	(5.3)	(5.4)	(5.7)	(6.4)	(6.6)	(7.3)	(7.8)	(7.9)		
Highest	3,500	3,600	3,600	3,500	3,500	4,200	4,500	4,900	5,100	5,300	5,700	5,700	2,200	95.5
	(7.4)	(7.5)	(7.5)	(7.2)	(7.1)	(8.2)	(8.5)	(9.3)	(9.6)	(10.0)	(10.8)	(10.6)		

Source: Longitudinal Administrative Databank

* *Taxfilers with annual earnings (wages and salaries plus net income from self-employment) of at least $1,000 (1994 dollars).*

Finally, the trends observed at the individual level may be different from those at the family level. For instance, the substantial drop in pension coverage of young men could be partly offset by the growth in labour market participation of spouses in today's young dual-earner couples—a question for future research.

Perspectives

Notes

1 The Pension Plans in Canada (PPIC) database has data on RPP coverage by sex but not by age.

2 PPIC data indicate that members of compulsory plans represented roughly 90% of all RPP members between 1985 and 1994 (Special tabulations from the Pensions Section of Statistics Canada).

3 The main job is the one with the greatest number of usual weekly hours.

4 The drop in pension coverage of young men and prime-age men is consistent with PPIC data, which show that the percentage of men who are members of RPPs has fallen from 48% in 1987 to 42% in 1997.

5 The percentages shown in Table 2 are smaller than those shown in columns 1-4 of Table 1. This is mainly because the denominator used in the calculation of these percentages (the number of tax filers with annual earnings of at least $1,000 in 1994 dollars, in the tax data, and the number of employees in December in their main job, in SLID) is greater in the tax data than it is in SLID.

6 Employment of young men has shifted away from distributive services (-5 percentage points) and public services (-2 points) toward business services (+4 points), consumer services (+3 points) and construction (+3 points). Employment of prime-age men has moved away from public services (-5 percentage points) and manufacturing (-2 points) toward consumer services (+3 points), business services (+2 points) and distributive services (+2 points).

7 One reason why individuals with low earnings contribute little to their RRSPs is that their contribution may offer very little, if any, tax savings (Frenken, 1997).

8 See Appendix 1 in Morissette and Drolet (2000) for details on these legislative changes.

9 Between 1975 and 1986, real annual earnings of men 25-34 employed full year full time dropped 6.5%. Between 1986 and 1997, they fell an additional 2.5% (Authors' calculations from the Survey of Consumer Finances).

10 Authors' calculations from the Survey of Consumer Finances.

11 Real annual earnings of prime-age men employed full year full time dropped 1% between 1986 and 1997.

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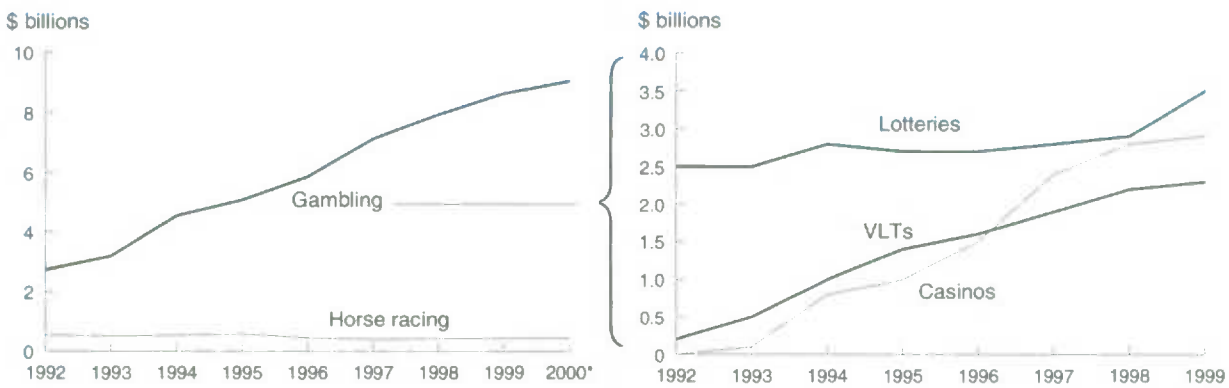
Fact-sheet on gambling

Katherine Marshall

- Net revenue from government-run lotteries, video lottery terminals (VLTs) and casinos rose from $2.7 billion in 1992 to $9.0 billion in 2000 (preliminary data).[1]
- Net revenue from pari mutuel betting (horse racing) dropped from $530 million to $430 million over the same period (1992 to 2000).
- In 1999, lotteries accounted for 40% of all net non-charity gambling revenue, casinos 33%, and VLTs 27%.
- After several years of flat revenue generation, lotteries broke the $3 billion mark in 1999, jumping from $2.9 billion in 1998 to $3.5 billion in 1999.

Net revenue from government-run gambling



Source: National Accounts
* *Preliminary data.*

Katherine Marshall is with the Labour and Household Surveys Analysis Division. She can be reached at (613) 951-6890 or marskat@statcan.ca.

- Of the $8.6 billion generated from government-run gambling in 1999, $5.0 billion was profit.
- Average gambling expenditure per person 18 and over in 1999 ranged from $90 in the two Territories to $488 in Manitoba, with a national average of $370.[2]

Provincial gambling revenues, profits and expenditures

	Gambling revenue*			Gambling profit**			Annual gambling expenditure per capita†	
	1992	1999	Increase	1992	1999	Increase	1992	1999
	$ millions (current)		%	$ millions (current)		%	$ (current)	
Canada	**2,734**	**8,632**	**216**	**1,680**	**4,987**	**197**	**130**	**370**
Newfoundland	80	160	100	42	93	121	190	382
Prince Edward Island	20	26	33	7	12	71	205	251
Nova Scotia	125	313	151	72	137	90	180	430
New Brunswick	117	187	61	49	90	84	210	320
Quebec	693	2,464	256	472	1,316	179	130	430
Ontario	853	3,250	281	529	1,546	192	105	370
Manitoba	153	416	173	105	249	137	185	488
Saskatchewan	62	319	415	39	221	467	85	423
Alberta	225	953	323	125	807	546	120	434
British Columbia	403	539	34	239	512	114	155	172
Yukon and Northwest Territories	5	6	20	1	4	300	80	90

Sources: National Accounts; Public Institutions (Financial management statistics); and post-censal population estimates

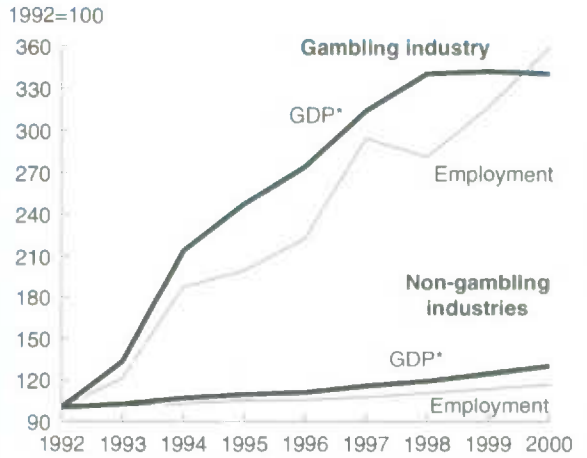
* *Total money wagered on non-charity lotteries, casinos and VLTs, minus prizes and winnings (see* Data sources and definitions*).*

** *Net income of provincial and territorial governments from total gambling revenue, less operating and other expenses.*

† *Persons 18 and over, as this is the legal age for gambling in most provinces.*

- Compared with workers in non-gambling industries, those in gambling were more likely to be women (56% versus 46%), under 35 (53% versus 38%), paid by the hour (81% versus 62%), and paid less ($14 hourly versus $17).
- Employment in the gambling industry has risen from 12,000 in 1992 to 42,000 in 2000.

Gambling outpaced other industries.



Sources: Labour Force Survey; National Accounts

* *The price, at factor cost, of the goods and services produced. The GDP figures for the gambling industry refer strictly to wagering activities, such as lottery ticket sales, VLT receipt sales and bets at casinos. Other economic spinoffs, such as hotel and restaurant business, security services, or building and equipment maintenance, are not included.*

Characteristics of workers

	Gambling		Non-gambling	
	1992	2000	1992	2000
		'000		
Total employed	**12**	**42**	**12,830**	**14,868**
		%		
Sex				
Men	35	44	55	54
Women	65	56	45	46
Age				
15 to 34	57	53	45	38
35 and over	43	47	55	62
Education				
High school graduation or less*	66	55	57	48
Postsecondary certificate or diploma	21	36	27	32
University degree	13	9	16	20
Work status				
Full-time	59	80	82	82
Part-time	41	20	18	18
Province				
Atlantic provinces	8	4	7	7
Quebec	9	14	24	23
Ontario	28	49	39	39
Prairie provinces	30	18	17	18
British Columbia	25	14	13	13
Class of worker				
Employee	98	96	85	84
Self-employed	--	4	15	16

Source: Labour Force Survey

* *May include some uncompleted postsecondary.*

Characteristics of jobs

	Gambling		Non-gambling	
	1997	2000	1997	2000
			'000	
Employees*	**34**	**40**	**11,419**	**12,448**
			%	
Union status				
Unionized**	30	33	34	32
Non-unionionized	70	67	66	68
Job status				
Permanent	91	92	89	87
Temporary	9	8	11	13
Usually receive tips				
Yes	27	24	7	7
No	73	76	93	93
Paid by the hour				
Yes	80	81	61	62
No	20	19	39	38
Average hourly earnings†			$	
Men: full-time	13.58	15.72	17.83	19.20
Women: full-time	13.06	13.62	14.77	15.73

Source: Labour Force Survey

* *More detailed questions on employees were introduced with the 1997 revision of the Labour Force Survey.*

** *Includes persons who are not union members, but whose jobs are covered by collective agreements.*

† *Includes tips and commissions.*

- Although one in seven women and men living alone reported spending money on casinos, slot machines or VLTs, men spent more than three times as much as women, $700 compared with $200.[3]

- Gambling participation and expenditure rates increased with household income. For example, 64% of households with incomes of less than $20,000 gambled in 1999 and spent an average of $333, while equivalent figures for those with incomes of $80,000 or more were 80% and $776.

Household expenditures on gambling activities

	At least one gambling activity		Government lotteries		Other lotteries/raffles, etc.		Casinos, slot machines and VLTs		Bingos	
	$	%	$	%	$	%	$	%	$	%
All households										
1998	464	77	253	67	82	34	438	20	707	10
1999	499	76	246	67	76	32	631	20	655	10
One-person households*	350	66	192	57	64	22	459	15	536	7
Men	421	69	242	61	83	22	709	16	364	3
18 to 44	374	69	184	60	65	23	650	20	--	--
45 to 64	508	74	297	68	76	24	923	15	--	--
65 and over	380	60	281	54	155	16	428	8	--	--
Women	283	63	142	54	47	21	208	14	573	11
18 to 44	165	63	114	52	48	28	143	18	105	7
45 to 64	254	70	139	64	34	20	203	13	593	9
65 and over	346	60	155	49	54	19	244	12	655	14
All households										
Newfoundland	477	75	254	61	99	44	360	12	528	22
Prince Edward Island	--	74	291	55	99	46	--	11	1,177	19
Nova Scotia	580	79	249	64	50	48	567	22	958	15
New Brunswick	431	74	218	63	56	41	292	12	741	17
Quebec	450	81	267	76	52	18	633	18	433	9
Ontario	493	74	241	65	79	32	574	21	638	10
Manitoba	673	77	232	63	73	45	771	29	802	15
Saskatchewan	494	79	227	61	90	56	488	29	476	13
Alberta	597	73	228	60	103	44	844	20	932	9
British Columbia	480	73	236	66	67	32	691	17	777	6
Income										
Less than $20,000	333	64	173	55	50	17	414	11	562	11
$20,000 to 39,999	478	77	242	68	66	28	629	18	580	12
$40,000 to 59,999	519	81	274	72	80	39	540	23	739	9
$60,000 to 79,999	547	86	300	75	83	46	483	29	873	8
$80,000 and over	776	80	245	68	101	45	1,221	29	936	6

Source: Survey of Household Spending
Note: Expenditures are per spending household. Unless otherwise indicated, figures are for 1999.
* *Using one-person households allows examination of individual characteristics. Persons 18 and over were selected as this is the legal age for gambling in most provinces.*

Data sources and definitions

Labour Force Survey: a monthly household survey that collects information on labour market activity, including detailed occupational and industrial classifications, from all persons 15 years and over.

National Accounts: The quarterly Income and Expenditure Accounts (IEA) is one of several programs constituting the System of National Accounts. The IEA produces detailed annual and quarterly income and expenditure accounts for all sectors of the Canadian economy, namely households, businesses, governments and non-residents.

Survey of Household Spending: an annual survey that began in 1997 and replaced the Family Expenditure Survey and the Household Facilities and Equipment Survey. It collects data on expenditures, income, household facilities and equipment, and other characteristics of families and individuals living in private households.

Gambling industries: This industry group covers establishments primarily engaged in operating gambling facilities, such as casinos, bingo halls and video gaming terminals; or providing gambling services, such as lotteries and off-track betting. It excludes horse race tracks and hotels, bars and restaurants that have casinos or gambling machines on the premises.

Gambling profit: net income from provincial and territorial government-run lotteries, casinos and VLTs, after deducting prizes and winnings, operating expenses (including wages and salaries), payments to the federal government and other overhead costs.

Gambling revenue: all money wagered on provincial and territorial government-run lotteries, casinos and VLTs, less prizes and winnings. Gambling revenue generated by and for charities and on Indian reserves is excluded.

Government casino: a government-regulated commercial casino. Permits, licences and regulations for casinos, both charity and government, vary by province. Government casinos, now permitted in several provinces, also vary by the degree of public and private involvement in their operations and management. Some government casinos are run entirely as crown corporations, while others contract some operations—for example, maintenance, management and/or services—to the private sector.

Video lottery terminal (VLT): a coin-operated, free-standing electronic game of chance. Winnings are paid out through receipts that are turned in for cash, as opposed to cash payments from slot machines. Such terminals are regulated by provincial lottery corporations.

Notes

1 Refers to total money wagered on non-charity lotteries, casinos and VLTs, minus prizes and winnings.

2 Survey of Household Spending (SHS) and National Accounts rankings of provincial expenditures differ, in part because the SHS includes both charity and non-charity gambling activity.

3 The expenditure figures are not adjusted for any winnings. As well, households consistently under-report the amount of money they spend on gambling. Comparisons with Lottery Corporation figures, for example, have shown that households under-report their government lottery purchases by more than 50%.

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Demographic statistics

The 2000 edition of *Annual Demographic Statistics* provides the most recent population estimates and projections up to 2005 by age group and sex, plus data on births, deaths and migrations. It groups the information by province and territory, census metropolitan area and census division, and also provides data on census families and marriages and divorces.

A CD-ROM, included with the publication, contains even more data than last year's edition. The historical series provide population data back to 1971 for provinces and territories, and to 1986 for census divisions and census metropolitan areas. The CD-ROM includes the population projections as well as animated age pyramids, which illustrate the aging of the population.

These time series can easily be captured and manipulated to create customized demographic analyses in any spreadsheet program. The population figures can be used to calculate per-capita rates for market research, quantitative analysis and planning.

Annual Demographic Statistics, 2000 (Catalogue no. 91-213-XPB, $125 including CD-ROM) is now available. An electronic version without the CD-ROM (Catalogue no. 91-213-XIB, $56) is also available. For more information, contact Lise Champagne, Demography Division, at (613) 951-2320; fax: (613) 951-2307; chamlis@statcan.ca.

Educational Planning

The vast majority of Canadian parents hope their children will get some form of college or university education, according to a new survey. However, in the case of more than half of these children, their parents have not set aside savings for their post-secondary schooling. The parents of 87% of children aged 18 or under reported to the 1999 Survey of Approaches to Educational Planning (SAEP) that they wanted their children to get an education beyond high school. However, parents of only 41% had savings in 1999 devoted expressly for college or university.

Not surprisingly, the gap between aspirations and savings behaviour was widest in households at the lowest end of the income scale. In addition, the amount of money parents have been putting aside for the post-secondary education of most children is substantially short of the current estimated total average cost of attendance.

And even if they had savings, most parents expected their children would require additional financial resources to pay for their post-secondary education. Half of all parents expected their children would need to take out a loan; in the vast majority of cases, these loans were expected to take the form of government student loans, rather than bank loans or loans from family members.

The SAEP was conducted by Statistics Canada in partnership with Human Resources Development Canada. It is the first Statistics Canada household survey to collect detailed information on how Canadians prepare for their children's post-secondary education. The survey was conducted in October 1999 as a supplement to the Labour Force Survey. Data were collected concerning 20,353 children aged 18 years or under in 1999.

The SAEP collected detailed information concerning two key sets of practices. Financial preparation dealt with whether savings are being set aside for their children's post-secondary education; awareness of the cost of post-secondary schooling; types of savings vehicles; and expectations regarding other means of financing post-secondary studies, including potential demand for student loans.

Non-financial preparation included communicating their aspirations and expectations concerning participation in post-secondary studies to their children; the extent of parental involvement in their children's learning and schooling; and attitudes and practices concerning homework and television viewing.

Detailed information was collected for both children and households, allowing analysis by such characteristics as children's age, sex, grade in school, academic performance, number of children in the family, household income, and parental education, occupation, and labour force status.

There was a clear relationship between the amount of savings and a child's age. For those with educational savings, parents reported median accumulated savings of $1,500 for each child four or under and $5,000 for each child 14 to 18.

Median education savings for each child declined as the number of children in the household increased. In households with only one child, median accumulated savings were $3,600 in 1999. That fell to $3,000 per child in households with three children, and to $2,500 per child where there were four children or more. For all age groups, median savings tended to increase with household income.

Parents of 70% of children anticipated that their youngsters would help put themselves through college or university by working while in high school. And an even greater percentage of children, 86%, were expected to work while attending a post-secondary institution.

Households reporting savings used various types of savings plans. The most common were registered education savings plans, reported by parents of about 40% of children. These were followed by in-trust accounts, reported for 35% of children. Other types of savings plans, such as bank accounts and registered retirement savings plans, were reported for 48% of children.

For more information, or to enquire about concepts, methods or data quality, contact Client Services, Centre for Education Statistics, at 1 800 307-3382; educationstats@statcan.ca or Kathryn McMullen, Family and Labour Studies Division, at (613) 951-0203; kathryn.mcmullen@statcan.ca.

■ *Computers in the workplace*

Nearly one-quarter of all workplaces, accounting for more than one-third of private-sector employees, made a significant investment in new computer technology in 1999, according to a new survey. These investments were not associated with either higher employee layoff rates or slower employment growth, at least in the short run, but rather with a burst of computer-related training.

In the 12 months prior to March 1999, an estimated 24% of all establishments accounting for 37% of private-sector employees implemented a major new software application or hardware installation. These numbers exclude upgrades to existing software applications and hardware installations.

Not surprisingly, workplaces that adopted computer technology provided more computer-related training than did other establishments. However, other data in the survey indicated that employees most often turned to self-learning and on-the-job training to acquire skills applying to specific hardware or software.

While some speculate that the adoption of computer technologies may result in job losses or gains, establishments that adopted technologies had about the same rates of both permanent layoffs and employment growth as other establishments, at least during the year the technology was adopted.

These are initial findings of the 1999 Workplace and Employee Survey (WES), a new survey of 6,300 workplaces and 24,600 of their employees. It will follow workplaces for at least four years and employees for two years, supporting research on both employer and employee outcomes. Statistics Canada conducted the survey with the support of Human Resources Development Canada and the Policy Research Initiative. WES is designed to provide an integrated view of the activities of employers and their employees. The survey will enable researchers to link business policies, practices and outcomes with employee characteristics, activities and outcomes.

Employers are sampled by physical locations. Employees are then sampled from employer-provided lists within each location. The survey covers technology adoption, innovation, human resource practices, labour turnover and business strategies of employers, as well as wages, training, technology use, working hours and other workplace activities of employees.

Fifty-one percent of workplaces that adopted computer technology provided formal or informal computer-related training in 1999, almost three times the rate of about 18% among those that did not adopt such technology. Twenty-three percent of employees of hardware/software adopters received computer-related training, 1.4 times the 14% of employees of other establishments.

Despite the strong relationship between hardware or software purchases and computer-related training, computer technology implementations did not seem to have spillover effects into other forms of training. Employees in workplaces that invested in computer technology were no more likely to receive other types of formal or informal training than were their counterparts in other establishments.

Establishments adopting computer technologies typically incur not only the direct costs of the hardware and software, but also the elevated formal training costs associated with the implementation. And formal training activities represent only a part of all training activities related to computer applications. Time spent by employees on informal training activities also bear consideration (see *Working with computers* in this issue).

Other issues that will be examined in forthcoming studies include an overview of work place practices in Canadian companies, including "family-friendly" practices; the effect of foreign competition on the productivity-enhancing behavior of companies; a study of job vacancies; and the link between the education level of an establishment's work force and its technology adoption and innovation practices.

For more information on this report, contact Ted Wannell, Business and Labour Market Analysis Division, at (613) 951-3546. For information on the Workplace and Employee Survey, or to enquire about the concepts, methods or data quality of the survey, contact Howard Krebs, Labour Statistics Division, at (613) 951-4090; fax: (613) 951-4087; labour@statcan.ca.

■ *Arts and culture graduates*

The culture labour force has not been immune to the effects of the aging population. By the end of the 1990s, 50% of culture workers were between 35 and 54. Culture organizations have become increasingly concerned about their capacity to sustain the growth and vitality of their labour force.

Data from the National Graduates Survey showed that, in 1995, 84% of arts and culture graduates had found employment, compared with 79% in 1992. Despite this apparent success, between 1992 and 1995, the majority of these graduates did not find work in their chosen field. In 1995 alone, fewer than 30% of culture graduates reported that their job was directly related to their studies.

Income was also an issue. In 1995, university culture graduates from the class of 1990 earned an average $30,500, while the entire class of university graduates averaged $39,150.

Overall, between 1990 and 1995, arts and culture graduates were more likely to be moonlighting, be self-employed, earn lower pay, change employers and find only temporary work.

Labour Market Outcomes of Arts and Culture Graduates examines problems faced by the culture sector in replenishing a skilled, but aging workforce. It is published in the current issue of *Focus on Culture* (Catalogue no. 87-004-XIE, $7/$20 or Catalogue no. 87-004-XPB, $9/$27, Vol. 12, no. 3).

For more information, contact Marla Waltman Daschko or Pina La Novara, Culture, Tourism and the Centre for Education Statistics, at (613) 951-3028; marla.waltman-daschko@statcan.ca, or (613) 951-1573; pina.lanovara@statcan.ca, respectively; fax: (613) 951-9040.

■ *Literacy and the labour market*

Wage returns to literacy appear to be highest in countries such as Canada and the United States, where the demand for literacy skills is high and where literacy levels are highly variable. This study attempts to isolate the effect of literacy on the wages of Canadian workers. The findings confirm the importance of literacy to individual economic success in the labour market.

The study used Canadian data from the International Adult Literacy Survey to investigate the relationship between labour market success and literacy skills. The most commonly used and widely accepted measure of labour market success is earnings. Accordingly, this paper focused on the relationship between literacy and annual, weekly and hourly earnings. It also took into account other factors that influence labour market outcomes, such as educational attainment, sex and experience.

Literacy has a large effect on earnings, and accounts for about one-third of the estimated "return on education." Each additional year of education raises annual earnings by about 8.3%. Of that, about 3.1 percentage points result from the combined influences of education on literacy and, in turn, literacy on earnings.

Educational attainment appears to have a much larger effect on literacy than does work experience. Results suggest that general labour market experience has little net effect on literacy.

Individual earnings and parents' education levels are positively linked. However, there is little evidence that the educational attainment of parents exerts a positive influence on the child's earnings as an adult, once both educational attainment and literacy skills are taken into account. This suggests that the positive association between parents' education and individual earnings is due principally to the influence of parents' education on the child's literacy skills and educational attainment.

Literacy, Numeracy and Labour Market Outcomes in Canada (Catalogue no. 89-552-MPE, $10) is now available. An electronic version (Catalogue no. 89-552-MIE, free), as well as a paper summarizing the findings, *Highlights for Literacy, Numeracy and Labour Market Outcomes in Canada* (Catalogue no. 89F0125XIE or Catalogue no. 89F0125XPE, free) can be downloaded from Statistics Canada's Web site (www.statcan.ca). From the "Products and services" page, choose "Free publications," then "Education."

For more information, or to enquire about concepts, methods or data quality, contact Scott Murray, Institutions and Social Statistics Branch, at (613) 951-9035.

■ *Analytical Studies Branch research paper series*

Training as a Human Resource Strategy: The Response to Staff Shortages and Technological Change
J. Baldwin and V. Peters
Research Paper Series no. 154

This paper examines the ways that innovation and technology use affect the training activities of manufacturing plants. It looks at training that is introduced as a response to specific skill shortages versus training that is implemented in response to the introduction of advanced equipment. The study finds that plants that use advanced technology are more likely to have workers in highly skilled occupations, to face greater shortages for these workers, and to train workers in response to these shortages.

For more information, or to enquire about concepts, methods or data quality, contact Valerie Thibault, Analytical Studies Branch, at (613) 951-1804; thibaul@statcan.ca.

Job Tenure, Worker Mobility and the Youth Labour Market During the 1990s
A. Heisz, A. Nakamura and G. Picot
Research Paper Series no. 155

This research study examines trends in job stability and the low youth employment rate during the 1990s. According to the study, the 1990s labour market was characterized largely by decreased labour mobility.

That is, workers remained longer with their firms than they did during the 1980s. The expected average length of paid jobs increased 36% between the late 1980s and late 1990s.

Jobs that started between 1987 and 1989 had an expected duration of 37 months, and jobs starting between 1997 and 1999 were expected to last an average of 50 months. The increase was associated with a decline in the proportion of paid jobs that lasted six months or less. In 1999, 38% of jobs were expected to last less than six months, down from 55% in 1991 and 48% in 1996.

Job duration rose for both male and female job starters in all age groups, but not for workers with only high school education or less.

Jobs were more stable in the 1990s because workers were less likely to quit than they were during the 1980s. When comparing similar years in the business cycle, the rate of quitting jobs was lower during the 1990s than during the 1980s. Low rates of quitting were associated with the slow economic growth through the mid-1990s, and reflected equally sluggish hiring in paid jobs.

This study also examined labour market trends for young people aged 15 to 24 in the 1990s. At first glance, the youth labour market appears to have performed poorly over the decade. The proportion of young people employed—the employment-population ratio—fell during the 1990s. While there was some recovery between 1998 and 2000, it remained below values observed at the peak of the 1980s business cycle.

However, this long-term decline in the youth employment-population ratio was associated mainly with an increased tendency for this group to stay in school. Among non-students, the 1999 employment rate had returned to the level of the 1981 cyclical peak, but not up to the level of 1989.

For more information, or to enquire about concepts, methods or data quality, contact Andrew Heisz or Garnett Picot, Business and Labour Market Analysis Division, at (613) 951-3748 or (613) 951-8214, respectively.

The Analytical Studies Branch produces research papers on a variety of topics such as labour, business firm dynamics, mortality, immigration, statistical computing and simulation. These papers are based on research conducted by branch staff, visiting fellows and academic associates.

Electronic versions of these and other research papers can be downloaded from Statistics Canada's Web site (www.statcan.ca). From the "Products and services" page, choose "Research papers (free)," then "Social conditions."

■ *Farm family income*

Farm families obtained proportionally more income from non-farm sources in 1998 than they did in 1997, according to personal income tax data. Income from non-farming activities accounted for approximately 71 cents of every dollar in farm family income in 1998, two cents more than in 1997. On average, farm family income was $61,100 in 1998, up 3.2% from 1997, a slower pace of increase than the 4.2% gain in 1997.

This overall increase in 1998 resulted from a 6.1% gain in off-farm income, which offset a 3.3% decline in net farm operating income (before depreciation). Average off-farm income amounted to $43,700 in 1998, about 71% of total income. Average net farm operating income totalled $17,400, or 29% of total income.

Also contributing to the growth in average total income were a 7.3% increase in average pension income, and a 6.8% increase in other off-farm income, which included increased payouts from the Net Income Stabilization Account (NISA provides financial assistance to producers by stabilizing their net income).

Investment income of farm families fell 1.2% in 1998 due to a 5.4% drop in dividend income from taxable Canadian corporations. Average investment income declined at a slower pace than in 1997 (-3.7%) due to higher interest rates. Average interest income increased 0.7%. Three-quarters of farm families received investment income, unchanged from 1997.

Wages and salaries were still the most important source of off-farm income in 1998, accounting for 61% of the total. Pension income accounted for 12% of total off-farm income, and investment income, 10%.

Among the provinces, farm families in Alberta reported the highest average total income ($65,200), up 5.4% from 1997, slightly higher than the $64,500

posted in Ontario. Families in Prince Edward Island had the largest percentage gain, up 15.1% to $57,500. This growth was due to a substantial gain (39.8%) in average net farm operating income. Farm families in Newfoundland recorded the only decline, down 4.0%. They also had the lowest total income at $48,700.

Farm families in British Columbia reported the highest off-farm income ($54,500), followed by those in Alberta ($49,200). Farm families in Quebec again recorded the lowest off-farm income ($31,600).

For custom data requests, contact the Client Services Unit, Agriculture Division, at 1 800 465-1991; agriculture@statcan.ca. For more information, or to enquire about concepts, methods or data quality, contact Lina Di Piétro, Agriculture Division, at (613) 951-3171; fax: (613) 951-3868; lina.dipietro@statcan.ca.

■ *Agriculture Analysis Bulletins*

Measuring Economic Well-Being of Rural Canadians Using Income Indicators (No. 13)

This bulletin compares trends in income for rural families with trends among urban families. While rural families had lower incomes on average in the 1970-to-1997 period, the income gap between rural and urban families was closing. Rural families in the Atlantic Provinces and Quebec had relatively lower incomes, whereas rural families in Ontario and British Columbia had relatively higher incomes.

Employment Structure in Rural and Small Town Canada: An Overview (No. 14)

This bulletin uses census data to show the structure and change in employment in rural areas between 1981 and 1996.

In 1996, predominantly rural regions provided employment for 29% of Canadians, a share that has been virtually constant since 1981. The services sector accounted for 65% of all jobs in rural and small town Canada, ranking as one of the top two sectors in each province. It was followed closely by manufacturing. The lack of access to a metropolitan centre appears to constrain employment growth. Only rural regions adjacent to a major metropolitan centre reported employment growth above the Canadian average in each five-year period between 1981 and 1996.

These bulletins (Catalogue no. 21-006-XIE, nos. 13 and 14, free) are published in collaboration with the Rural Secrectariat of Agriculture and Agri-Food Canada, as part of a series of analysis bulletins profiling trends in rural Canada. They are available on Statistics Canada's Web site (www.statcan.ca): on the "Products and Services" page, choose "Free Publications," then "Agriculture." To order data, or for general information, call 1 800 465-1991. For more information, contact Roland Beshiri or Ray Bollman, Agriculture Division, at (613) 951-6506; roland.beshiri@statcan.ca or (613) 951-3747; ray.bollman@statcan.ca, respectively; fax: (613) 951-3868.

■ *Financial Security*

The Survey of Financial Security, which covered about 16,000 responding households, collected information on the assets and debts of families and unattached individuals from May to July 1999—providing the most comprehensive statistical portrait yet of Canadians' net worth. It obtained data on all major financial and non-financial assets, and on mortgage, vehicle, credit card, student loan and other debts. The survey was developed with the support of Human Resources Development Canada, Canada Mortgage and Housing Corporation and Industry Canada

In 1999, Canadians overall had an estimated $16 in debts for every $100 in assets. However, the debt burden was much higher for some types of families. For example, lone-parent families, most of which are headed by women, had a debt burden almost twice the national average, about $29 for every $100 of assets. Two-parent families with children owed $23 for every $100 of assets.

Canadians had debts estimated at $458 billion, three-quarters of which took the form of mortgages. Loans on owned vehicles amounted to about $29 billion, or 6% of the total, while student loans (3%) and credit card debt (3%) each exceeded $14 billion.

Total assets, everything from stocks and bonds to principal residences, amounted to almost $2.9 trillion. The single most important non-financial asset for Canadians was their principal residence, which accounted for about 38% of total assets. The most important financial asset was their registered retirement savings plans, which represented 12% of all assets. (The value of employer-sponsored pension plan benefits was not used to calculate assets.)

The median net worth of Canada's estimated 12.2 million family units was about $81,000: half of all family units had net worth more than this figure, and

half had less. Net worth is the amount an individual or family would clear after selling all assets and paying off all debts.

Substantial differences in the distribution of net worth were evident among family units in 1999. The 10% of family units with the highest net worth held 53% of all personal wealth in 1999. The 10% at the low end of the net worth scale actually owed more than they owned. By comparison, in 1998, the top 10% of families in the United States held about two-thirds of all personal net worth.

Median net worth was highest in 1999 for family units in Ontario, $101,400. Newfoundland families had the lowest net median worth, about $53,000. Income levels explain most of the wide variation in net worth. In Newfoundland, 31% of families had after-tax income in 1998 of less than $20,000, compared with only 21% in Ontario.

Education was one of the most important determinants of net worth. Family units in which the individual or major income recipient did not graduate from high school had a median net worth of $62,500. When the major income recipient had a bachelor's degree, median net worth almost doubled, to $117,500.

Occupation, like education, is a key determinant of net worth. Families in which the occupation of the unattached individual or major income recipient was classified as management had the highest net worth. Those with the lowest net worth worked in sales and service. This included childcare workers, retail salespersons, cashiers, chefs, cooks and persons providing food and beverage services, protective services and travel and accommodation services.

In addition, self-employed individuals had a much higher net worth than employees. Family units in which the major income recipient had earnings from self-employment had a median net worth of $216,200, about three times higher than the level of $71,300 among employees.

The Assets and Debts of Canadians: An Overview of the Results of the Survey of Financial Security (Catalogue no. 13-595-XIE, free) is now available on Statistics Canada's Web site (www.statcan.ca). On the "Products and services" page, choose "Free publications," then "Personal finance and household finance." Summary data tables are also available free of charge. On the "Canadian Statistics" page, choose "The people," then "Families, households and housing," then "Assets and debts."

Tabulations on the *Composition of Assets and Debts Held by All Family Units, Canada, Regions and Provinces, 1999* (Catalogue no. 13F0040XDB, $60); *Family Units and Net Worth by Net Worth Groups, Canada, Regions and Provinces, 1999* (Catalogue no. 13F0041XDB, $60); *Net Worth of Economic Families, Unattached Individuals and All Family Units by Selected Family Characteristics, Canada, Regions and Provinces, 1999* (Catalogue no. 13F0042XDB, $60) are also available.

For more information, or to enquire about concepts, methods or data quality, contact Client Services, Income Statistics Division, at (613) 951-7355 or 1 888 297-7355; fax: (613) 951-3012; income@statcan.ca.

■ *Income trends*

Income Trends in Canada on CD-ROM provides accurate and reliable statistics about income from employment and other sources, taxes, the impact of government transfers on family income, differences in earnings between women and men, seniors' incomes, income inequality and the depth of low income. It contains nearly two decades of data for Canada, the provinces and 15 metropolitan areas. This product enables users to easily view trends on-screen, quickly search data, create custom tables, and chart income data.

Income Trends in Canada (Catalogue no. 13F0022XCB, $195) is now available. More information about this product is available on Statistics Canada's Web site (www.statcan.ca) in *Income Trends in Canada (1980-1998)–User's Guide* (Catalogue no. 75F0002MIE01001, free). On the "Products and services" page, choose "Research papers (free)." For more information, contact Client Services, Income Statistics Division, at (613) 951-7355 or 1 888 951-7355; fax: (613) 951-3012; income@statcan.ca.

■ *Historical labour force data*

The latest annual *Labour Force Historical Review* on CD-ROM is a comprehensive database of Labour Force Survey estimates, containing thousands of cross-classified data series and spanning more than two decades from 1976 to 2000. Monthly and annual average series are available on a wide range of subjects,

including labour force status by demographic, education and family characteristics; trends in the labour markets of metropolitan areas and economic regions; industry and occupation estimates; and much more.

A total of 21 new tables have been added to this CD package. They include annual and monthly tables on hirings and separations, retirement age, labour force characteristics for rural and urban areas, wages of employees by job permanency and union coverage, and weekly and hourly wage distributions.

The 2000 *Labour Force Historical Review* (Catalogue no. 71F0004XCB, $195) is now available. LAN and bulk prices are available on request. To order this edition, contact your nearest Statistics Canada Regional Reference Centre or e-mail to order@statcan.ca.

For more information, contact Marc Lévesque, Labour Statistics Division, at (613) 951-2793, or refer to Statistics Canada's Web site (www.statcan.ca). From the "Canadian statistics" page, choose "The People," then "Labour, employment and unemployment," then "Labour force historical review."

Historical Labour Force Statistics is an annual publication that provides the seasonally adjusted employment and unemployment statistics presented each month in the media. It includes data going back 10 to 20 years on general labour market characteristics for Canada, the provinces and metropolitan areas. Each year, the series are updated and revised according to the latest information on seasonal models and factors.

Historical Labour Force Statistics, 2000 (Catalogue no. 71-201-XPB, $75) is now available. For more information, contact Jeannine Usalcas, Labour Statistics Division, at (613) 951-4720; fax: (613) 951-2869; usaljea@statcan.ca.

■ *Canada Year Book*

First published in 1867, the *Canada Year Book* has become the premier reference resource on the social and economic life of Canadians.

Enjoyable and easy to read, the *Canada Year Book* draws on various Statistics Canada surveys to describe leading Canadian social, economic and environmental trends. Works by some of the nation's best photographers and artists enrich the book's 15 chapters, while detailed tables and figures zero in on today's important issues.

Feature articles cover distinctive aspects of life in Canada: What does the average household spend most of its income on? How many men are now stay-at-home fathers? What percentage of Canadians exercise? What is the most commonly spoken mother tongue after English and French in Canada?

The 2001 edition of the *Canada Year Book* (Catalogue no. 11-402-XPE, $65) is now available. For more information, contact Nathalie Turcotte, Communications Division, at (613) 951-4673; fax: (613) 951-5116; turcnat@statcan.ca.

Key labour and income facts

Selected charts and analysis

This section presents charts and analysis featuring one or more of the following sources. For general inquiries, contact Joanne Bourdeau at (613) 951-4722; bourjoa@statcan.ca.

Administrative data

Small area and administrative data
Frequency: Annual
Contact: Customer Services
(613) 951-9720

Business surveys

Annual Survey of Manufactures
Frequency: Annual
Contact: Dissemination agent
(613) 951-9497

Business Conditions Survey of Manufacturing Industries
Frequency: Quarterly
Contact: Claude Robillard
(613) 951-3507

Census

Census labour force characteristics
Frequency: Quinquennial
Contact: Michel Côté
(613) 951-6896

Census income statistics
Frequency: Quinquennial
Contact: John Gartley
(613) 951-6906

Employment and income surveys

Labour Force Survey
Frequency: Monthly
Contact: Marc Lévesque
(613) 951-2793

Survey of Employment, Payrolls and Hours
Frequency: Monthly
Contact: Sylvie Picard
(613) 951-4090

Help-wanted Index
Frequency: Monthly
Contact: Sylvie Picard
(613) 951-4090

Employment Insurance Statistics Program
Frequency: Monthly
Contact: Sylvie Picard
(613) 951-4090

Major wage settlements
Bureau of Labour Information
(Human Resources Development Canada)
Frequency: Quarterly
Contact: (819) 997-3117
1 800 567-6866

Labour income
Frequency: Quarterly
Contact: Anna MacDonald
(613) 951-3784

Survey of Labour and Income Dynamics
Frequency: Annual
Contact: Client Services
(613) 951-7355 or
1 888 297-7355

Survey of Financial Security
Frequency: Occasional
Contact: Client Services
(613) 951-7355 or
1 888 297-7355

Survey of Household Spending
Frequency: Annual
Contact: Client Services
(613) 951-7355 or
1 888 297-7355

General social survey

Education, work and retirement
Frequency: Occasional
Contact: Client Services
(613) 951-5979

Social and community support
Frequency: Occasional
Contact: Client Services
(613) 951-5979

Time use
Frequency: Occasional
Contact: Client Services
(613) 951-5979

Pension surveys

Pension Plans in Canada Survey
Frequency: Annual
Contact: Patricia Schembari
(613) 951-9502

Quarterly Survey of Trusteed Pension Funds
Frequency: Quarterly
Contact: Bob Anderson
(613) 951-4034

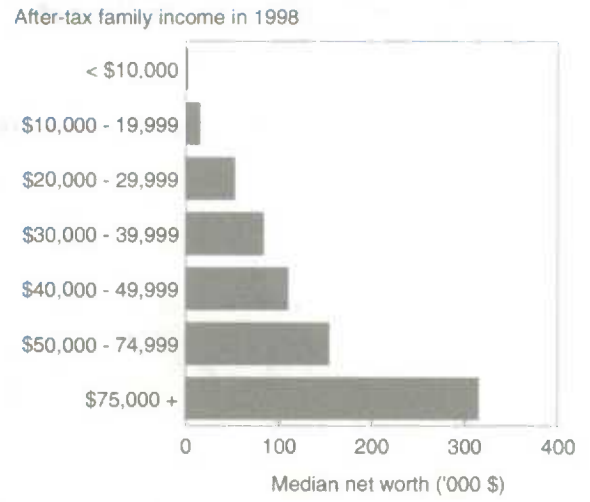
Special surveys

Survey of Work Arrangements
Frequency: Occasional
Contact: Ernest B. Akyeampong
(613) 951-4624

Adult Education and Training Survey
Frequency: Occasional
Contact: Client Services
(613) 951-7355 or
1 888 297-7355

Graduate Surveys
(Postsecondary)
Frequency: Occasional
Contact: Client Services
(613) 951-7608

Median net worth increased with income.



Source: Survey of Financial Security, 1999

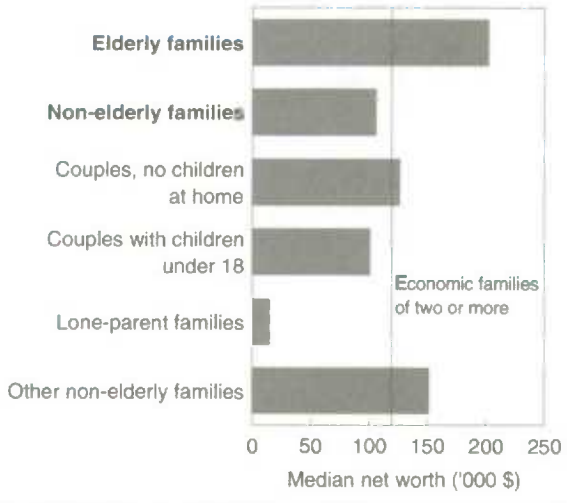
The median net worth of Canada's estimated 12.2 million "family units" was about $81,000 in 1998. This means that half of all family units had net worth more than this, and the other half had less. Net worth is the amount an individual or family would clear after selling all assets and paying off all debts. The term family unit includes both unattached individuals and families of two or more people related to each other living in the same dwelling.

There was a strong direct relationship between income and net worth. Family units who reported after-tax income of $75,000 or more in 1998 had a median net worth of $314,200. On the other hand, family units whose after-tax income was less than $10,000 had a median net worth of $1,700.

The median net worth of all families of two or more was $119,300. There were large differences, however, in the net worth of the two types of families with children under 18 years of age living at home. Lone-parent families had the lowest median net worth ($14,600); the median net worth of couples with children under 18 was a good deal higher ($100,500). Income appears to explain some of these differences. Lone-parent families had a median after-tax income in 1998 of $21,800, compared with $48,400 for two-parent families with children under 18.

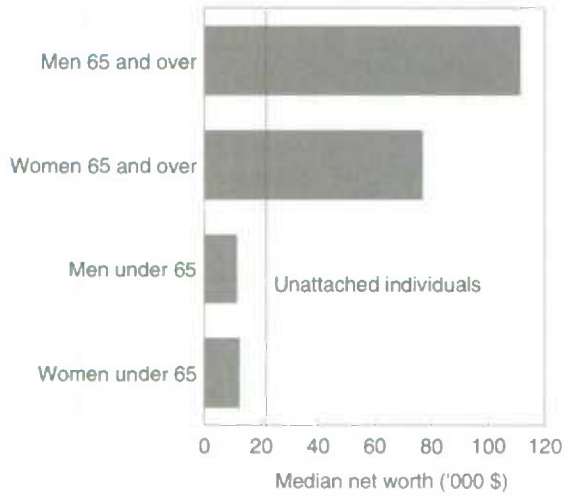
Elderly families in which the major income recipient was 65 or older had the highest estimated net worth of any type of family unit ($202,000), in part because many live in their own mortgage-free home. This should not be interpreted to mean that all elderly families have relatively high net worth. The relationship between income and net worth does not hold for those 65 and over. The median after-tax income of elderly families was in fact lower than for most other families of two or more. Their net worth is a reflection of previous income and purchases rather than of current income.

Lone-parent families had the lowest net worth.



Source: Survey of Financial Security, 1999

Men 65 and over had the highest net worth of the unattached.

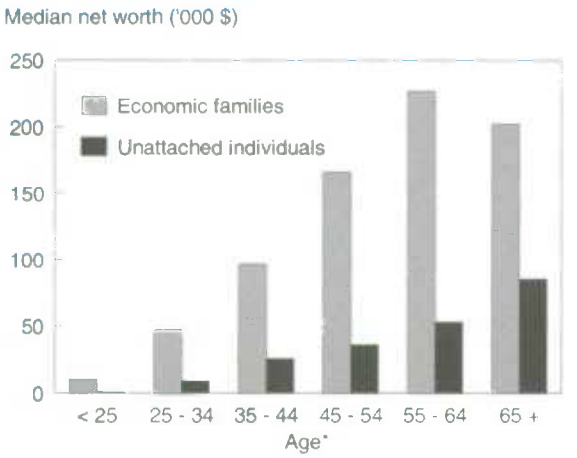


Source: Survey of Financial Security, 1999

The median net worth of unattached individuals ($21,700) was considerably lower than that of families of two or more. The unattached can be separated into two very different groups. The unattached elderly (those 65 and older) were much better off than the younger unattached. Elderly men had the highest median net worth of the unattached ($111,100) and men under 65 the lowest ($11,200).

The lower net worth of the non-elderly unattached in relation to that of non-elderly families can be explained in several ways. Income is one important reason. Twenty percent of the unattached under 65 had no earnings in 1998; this was the case for just 7% of non-elderly families. Also, many (71%) non-elderly families benefited from having two or more incomes from employment. Age is also a factor. A large proportion (44%) of non-elderly unattached were under 35; just 26% of non-elderly families had a major income recipient under 35.

Median net worth was highest for economic families with the major income recipient aged 55 to 64.



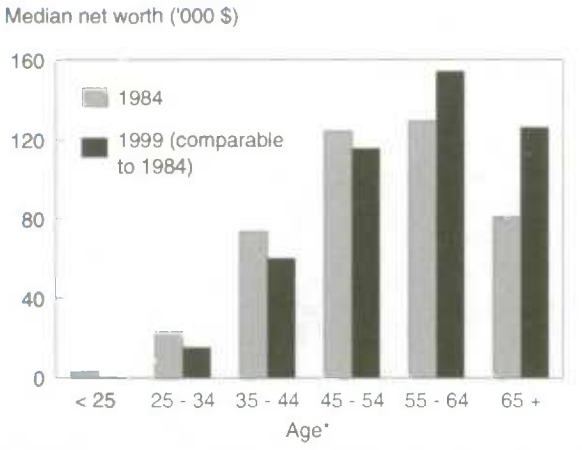
Source: Survey of Financial Security, 1999

* *For families, refers to major income recipient.*

In the case of families of two or more, elderly families had a higher net worth than non-elderly families overall. Median net worth was highest for those families in which the major income recipient was 55 to 64 years of age ($226,900). This is to be expected, as elderly families in many cases may need to use some of their assets to supplement their income.

The net worth of unattached individuals was well below that of economic families, for every age group. Although net worth increased with age for the unattached, the median net worth of all age groups under 65 was substantially lower than for those 65 and older. Many of the unattached 65 and older may have spent a large part of their lives as part of a family and their higher net worth may be a reflection of this.

Between 1984 and 1999, median net worth increased for those 55 and over.



Source: Survey of Financial Security
* *For families, refers to major income recipient.*

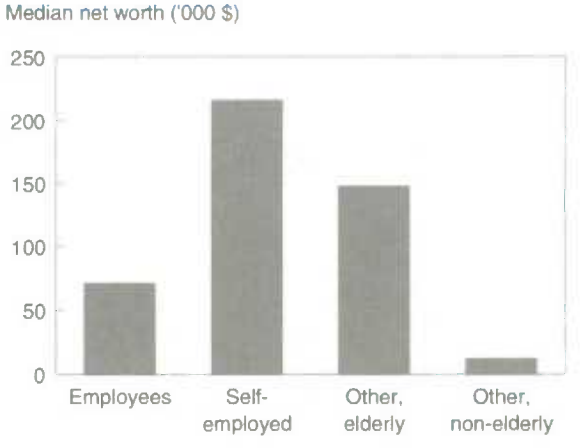
Between 1984 and 1999, couples with children fared less well than any other type of family; their net worth decreased, albeit slightly, over this period. Elderly family units and couples with no children at home fared the best. Unattached elderly individuals recorded a 69% increase from 1984, while elderly families and couples with no children at home experienced a growth of 42%.

Although lone-parent families gained between 1984 and 1999, relatively speaking they were, in both years, significantly less well off financially than any other type of family unit. The situation of the unattached non-elderly changed little from 1984 to 1999, in either relative or absolute terms.

Only those family units in which the major income recipient was 55 or older recorded an increase in median net worth from 1984 to 1999; for all younger age groups median net worth dropped. The median net worth of those family units in which the unattached individual or major income recipient was 65 or older increased the most, 56%.

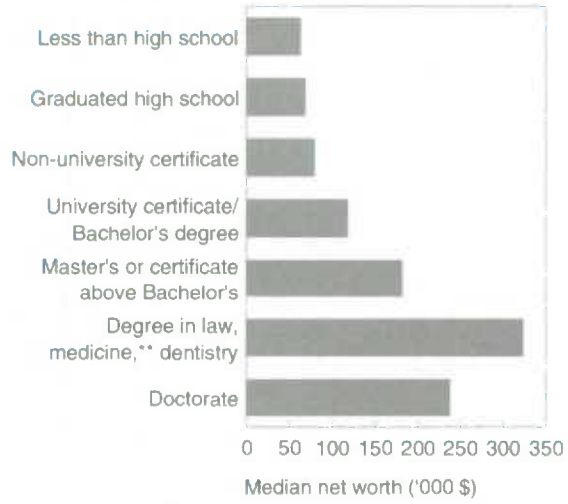
The median net worth of family units in which the major income recipient was self-employed was three times greater than if that person was an employee ($216,200 compared with $71,300). This was not related as much to income as to business equity, which was a much more important asset for the self-employed than for employees; for the self-employed business equity represented 33% of total assets, compared with 8% for employees. The value of employer pension plan benefits is not included in this estimate of net worth. Including this value would change the overall distribution of net worth; it would increase the net worth of employees but not that of the self-employed.

The self-employed* had higher net worth.



Source: Survey of Financial Security, 1999
* *For families, refers to major income recipient.*

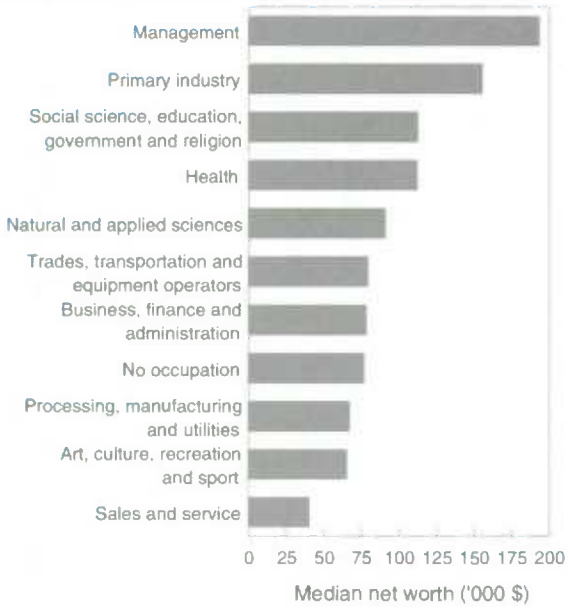
Education* makes a difference.



Source: Survey of Financial Security, 1999
* *For families, refers to major income recipient.*
** *Includes veterinary medicine and optometry.*

The level of education of the individual, or the major income recipient in the case of families, makes a significant difference to the financial situation of the family unit. It is one of the most important determinants of net worth, as it affects both income and occupation. Median net worth rose from $62,500 for family units in which the individual or major income recipient in the family had not graduated from high school to $323,000 if that person had a professional degree in law, medicine, dentistry, veterinary medicine or optometry. Relative to those whose highest level of education was high school graduation, the median net worth of those with a Bachelor's degree was 1.7 times higher, with a Master's degree 2.7 times higher and with a Doctorate 3.5 times higher.

Workers in management occupations* had the highest net worth.



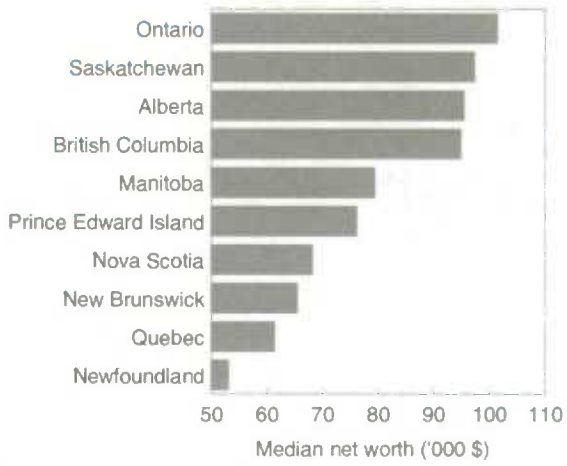
Source: Survey of Financial Security, 1999
* *For families, refers to major income recipient.*

Occupation, like education, is a key determinant of net worth. Family units in which the occupation of the unattached individual or major income recipient was classified as management had the highest net worth. Those with the lowest net worth worked in sales and service occupations. This included childcare workers; retail salespersons; cashiers; chefs, cooks and food and beverage services; protective services; and travel and accommodation services. For the most part, family units in which the major income recipient was in an occupation associated with higher (after-tax) income also had higher net worth. This was not true for occupations, other than labourers, related to primary industry (which includes agriculture, fishing and forestry). Their net worth is related less to recent income than to their business equity, that is, the value of the property and equipment required to conduct their business.

The median net worth in Ontario and the western provinces was higher than in the provinces east of Ontario. Family units in Ontario had the highest median net worth ($101,400) and those in Newfoundland the lowest ($53,000). Income again helps to explain this. In Newfoundland, 31% of family units had after-tax income of less than $20,000 in 1998, compared with 21% in Ontario.

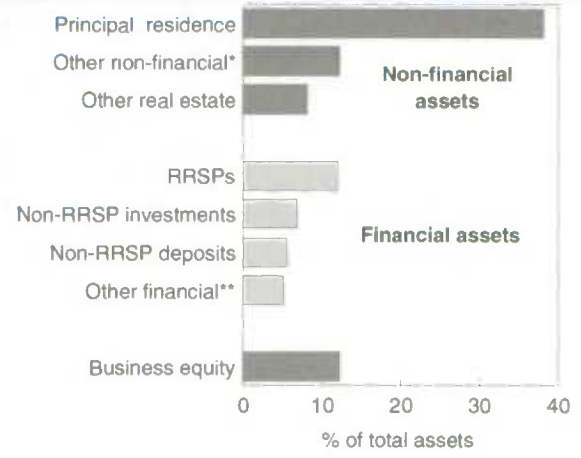
Although Newfoundland had the highest proportion of family units that owned their principal residence (73% versus 60% for all provinces), the median value of the homes in Newfoundland was less than half the median for all provinces ($60,000 versus $125,000). This has a major effect, as principal residence is the largest contributor to the net worth of most family units.

Median net worth was highest in Ontario and the three westernmost provinces.



Source: Survey of Financial Security, 1999

A family's principal residence was their greatest asset.



Source: Survey of Financial Security, 1999

* *Includes vehicles.*

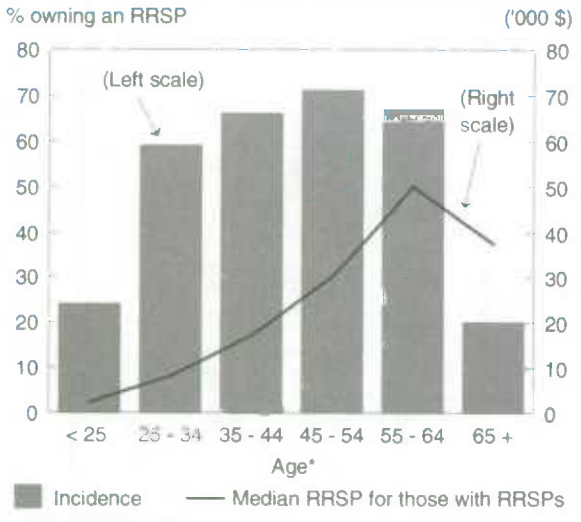
** *Includes other registered plans.*

Assets can be subdivided into three main categories: financial assets, non-financial assets and equity in business. Non-financial assets accounted for the largest proportion of the total, 58%, financial assets 29% and business equity 12%.

The most important non-financial asset was the principal residence, which accounted for 38% of total assets. The median value of the principal residence, for homeowners, was $125,000. The median net worth of those family units who did not own their principal residence was $8,200, much lower than for those who owned with a mortgage ($111,800) or without a mortgage ($259,200).

The "other" non-financial assets comprise other real estate, owned vehicles, contents of the principal residence, collectibles and valuables. Other real estate (most commonly vacation or second homes, or rental property) was owned by 16% of family units; over three-quarters owned at least one vehicle.

Median value of RRSPs peaked among persons 55 to 64.



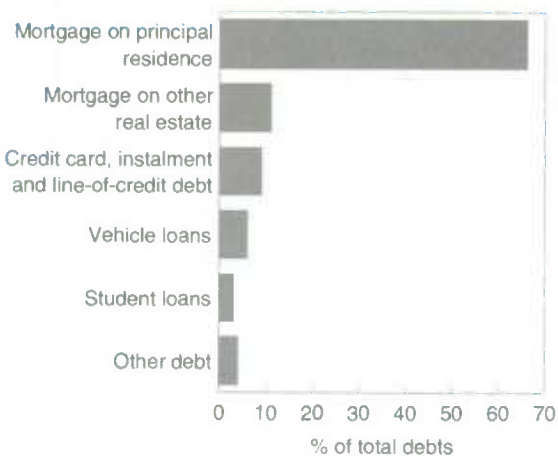
Source: Survey of Financial Security, 1999

* *For families, refers to major income recipient.*

The single most important financial asset for Canadians in 1999 was the amount held in registered retirement savings plans (RRSPs). They accounted for 12% of total assets, compared with 4% in 1984.

Fully 55% of family units had RRSPs. The proportion reached 71% when the major income recipient was 45 to 54. The amount many held in RRSPs, however, was still relatively modest. The median amount of the RRSP held by family units, for those having them, was $20,000; family units 55 to 64 had the highest median savings in RRSPs: $50,000. The average amount held in RRSPs was much higher than the median: $51,200 for all family units and $96,900, for those 55 to 64 years of age. The difference between the average and the median arises because some family units had significant savings in RRSPs.

Mortgages were the largest source of debt.



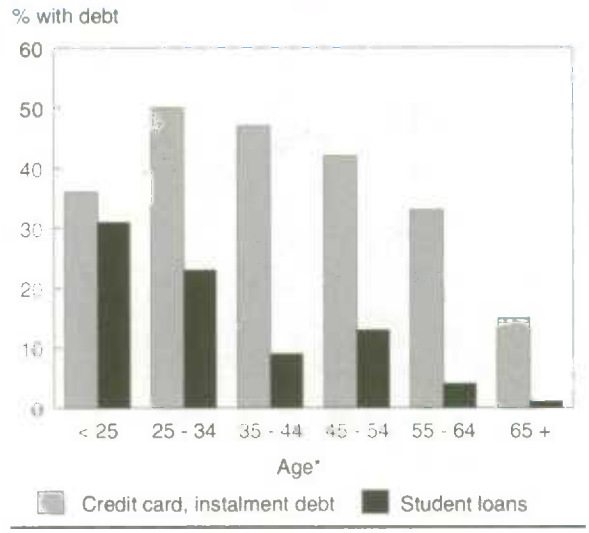
Source: Survey of Financial Security, 1999

Mortgages, on both the principal residence and other real estate, accounted for over three-quarters (78%) of the debt of family units. The remaining debt was in the form of student loans (3%) and consumer credit. The latter comprised credit card and line-of-credit debt (9%), vehicle loans (6%) and other debts (4%).

Student loans were reported by 12% of family units, and by as much as 31% of family units in which the major income recipient was under 25. The median student loan owed by family units reporting them was $7,300. Student loans represented 52% of the debt of those under 25 who did not own their principal residence (88% of that age group).

Credit card or instalment debt was reported by 50% of major income recipients aged 25 to 34. The older age groups were much less likely to carry such debt; only 15% of individuals or families 65 and older reported credit card or instalment debt.

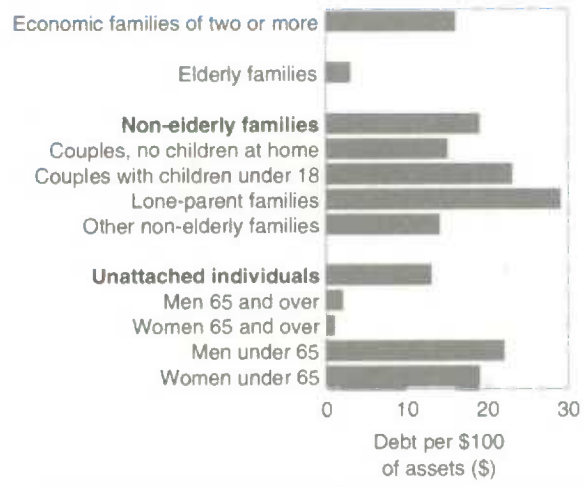
Half of those 25 to 34 have credit card or instalment debt; 30% under 25 have student loan debt.



Source: Survey of Financial Security, 1999

* *For families, refers to major income recipient.*

Lone-parent families had the highest debt to asset ratio.



Source: Survey of Financial Security, 1999

Overall, for every $100 of assets, Canadian family units had $16 in debts. This amount was much higher for some types of families. Lone-parent families owed $29 for every $100 owned and two-parent families with children owed $23. Elderly family units owed the least: unattached elderly men owed $2 for every $100 of assets, elderly women $1 and elderly families $3.

The largest debt burden was carried by younger people. Family units under 25 owed $31 for every $100 of assets. Among those 25 to 34, mortgage holders faced the heaviest debt burden—about $46 for every $100 of assets.

Charts and text were adapted from "The Assets and Debts of Canadians: An Overview of the Results of the Survey of Financial Security" (Statistics Canada, Catalogue no. 13-595-XIE). For more information, contact Client Services, Income Statistics Division, at 1 888 297-7355 or (613) 951-7355; income@statcan.ca.

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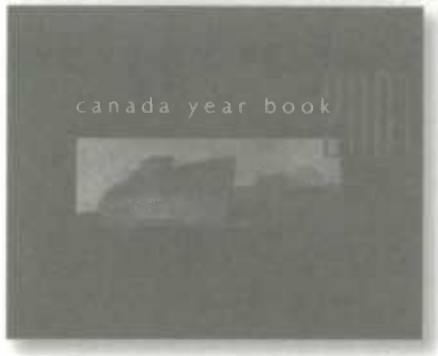

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