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PERSPECTIVES

ON LABOUR AND INCOME

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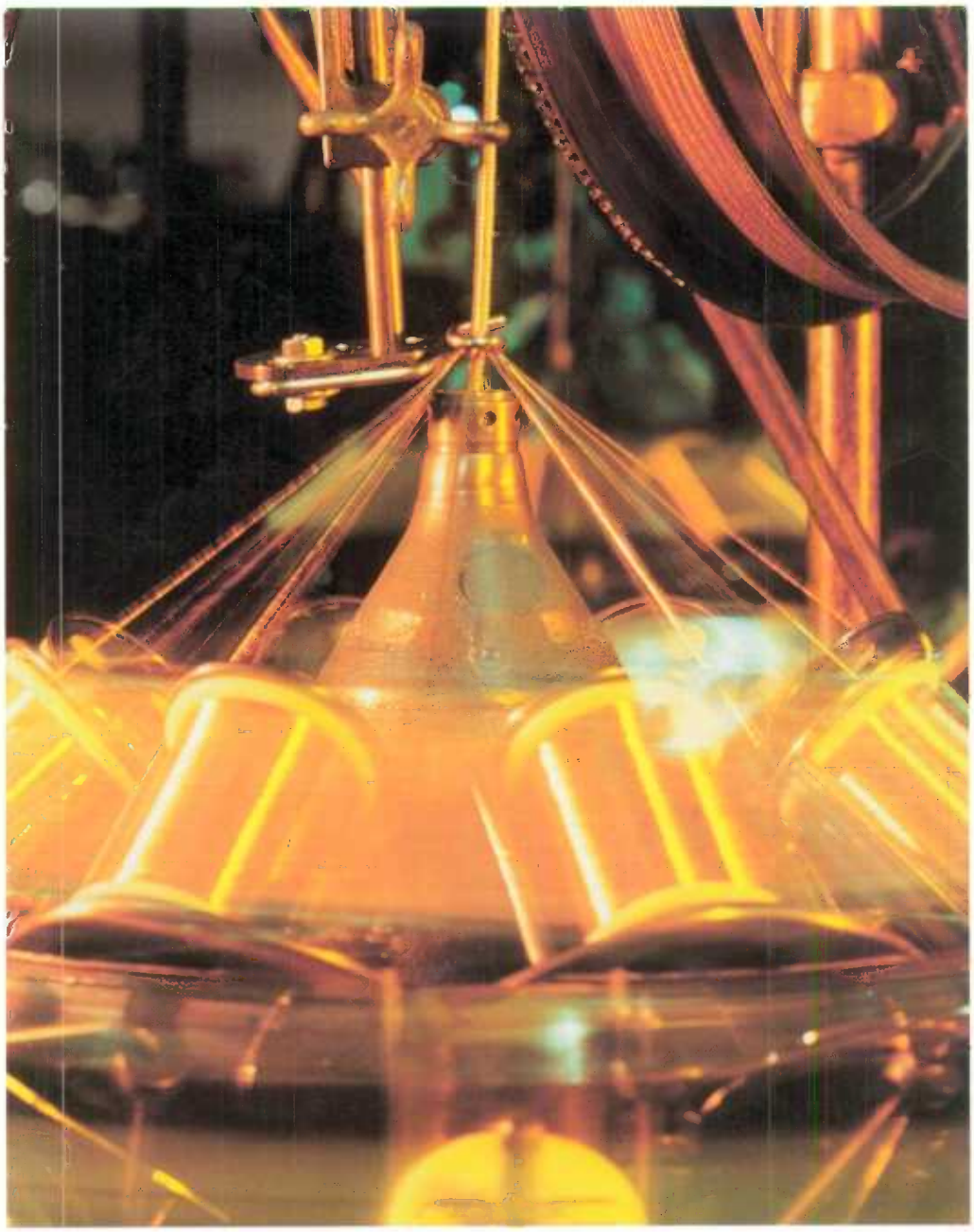

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Autumn 1997 Vol. 9 No. 3

PERSPECTIVES

ON LABOUR AND INCOME

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Articles

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PERSPECTIVES
ON LABOUR AND INCOME

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

The labour market: Mid-year review ... p. 7

- In the first six months of 1997, employment grew by 193,400, significantly better than last year's pace (56,400) and slightly greater than the 186,300 gained over all of 1996. This year's employment gain nearly matches that of the first six months of 1994, which so far has been the best year of the decade for overall employment growth.
- Quarter-to-quarter growth in real gross domestic product (GDP) was about 0.8% in the last two quarters of 1996 and the first of 1997. While this performance does not match 1994, it nonetheless suggests that the better-than-3% growth forecasted by some analysts may be plausible.
- Merchandise exports, personal expenditures on consumer goods and services, and business investment in machinery and equipment were the three greatest contributors to the first-quarter growth in GDP, essentially mirroring most years of the 1990s.
- Self-employment continued to grow, with gains totalling 145,600 by June. From December 1989 to June 1997, self-employment represented 88% of the increase in employment, although it declined slightly as a proportion of overall growth in 1996 (79%), as it has so far in 1997 (75%).
- Most employment growth was full-time, making way for the third (and second consecutive) year of the nineties in which this has been the case. As in 1996, gains have favoured adults, while losses have most affected the young.
- Ontario and Quebec contributed most to the employment increase over the December 1996-to-June 1997 period. The latter province, along with Saskatchewan and New Brunswick, demonstrated impressive growth rates. British Columbia was the only province to experience a decline in employment during this period.
- The unemployment rate fell from 9.7% in December 1996 to 9.1% in June 1997. The rate for adults dropped from 8.5% to 7.5%, while that for youths (15 to 24) continued the upward trend that began in February 1995, to reach 17.5% this June. Those aged 15 to 19 have been particularly hard hit, with a June unemployment rate of 23.5%.
- The employment rate is showing signs of revival. After a slow decline to 58.3% by February, the employment surge raised the rate to 58.9% by June. This rise matches the best four-month gain of the decade (January to May 1994).

Non-permanent paid work ... p. 21

- In November 1995, paid workers who described their main job as non-permanent accounted for 11% (or almost 1.3 million) of the Canadian paid workforce.
- The most common arrangements of non-permanent work were temporary, contract and term jobs, representing one in two workers with non-permanent jobs. Casual and on-call jobs were also frequently cited, representing one in three non-permanent job holders. One in seven non-permanent job holders was a seasonal worker.
- The prevalence of non-permanent work varied across the country. Newfoundland had the highest percentage of paid workers with non-permanent jobs at 26%, while British Columbia had the lowest (9%).
- Workers in non-permanent jobs were more likely than those in permanent jobs to be young, single or female, or to have shorter job tenure.
- The average weekly earnings of workers with permanent jobs were 55% higher than those of workers with non-permanent jobs. Furthermore, each major type of non-wage benefit was available to a higher percentage of workers in permanent jobs.
- Further analysis shows that job permanency does not seem to be related to an employee's hourly rate of pay, however, but to the number of hours usually worked in a week. Employees with permanent jobs usually had longer work weeks (roughly six more hours on average) than employees with non-permanent jobs when all else was equal. Because workers in non-permanent jobs had fewer weekly hours of work than those in permanent jobs, they had lower weekly earnings.

Facing the future: Adults who go back to school

... p. 32

- Adult education is growing. From October 1976 to October 1996, the number of adults attending school full time more than tripled from 107,000 to 344,000. This increase vastly outpaced the rate of growth in the adult population itself. As a result, the percentage of adults attending school full time more than doubled, from 1.0% to 2.1%.
- Improving one's work prospects is the dominant reason for going back to school full time. According to the 1994 Adult Education and Training Survey, 8 in 10 students cited "present or future job" as the main reason for returning to school full time.
- Many of those who would appear to have the greatest need for improved economic prospects are not participating in adult education. People who go back to school are largely already in favourable economic circumstances.
- University graduates are the most likely to upgrade their qualifications later on, while people who did not complete high school are the least likely to do so. The presence of young children also makes a difference. Among adults living with partners, having children seems to discourage a return to school for both men and women up to age 40.
- Young women who are single parents stand out: 10.4% of female single parents under age 30 go back to school, more than young adults as a whole (6.7%), and over four times the rate of young mothers with husbands present (2.4%).
- The link between unemployment experience and going back to school is not strong. This is true for various population subgroups, particularly older men with lower education. Also, except for Newfoundland, provinces with relatively high unemployment rates do not have high percentages of adult students.

Intergenerational equity in Canada

... p. 40

- The theme of intergenerational equity touches a variety of social and economic issues, from the transfer of wealth between generations to the direction of these transfers and the relative status of persons in successive generations.
- These concerns were the focus of "Intergenerational Equity in Canada," a conference co-sponsored in February of this year by Statistics Canada and Human Resources Development Canada. This report is a selection of highlights from the conference sessions.

An overview of permanent layoffs

... p. 46

- Permanent layoffs are an ongoing aspect of a market economy in which there is "creative destruction." Workers are being laid off and hired in large numbers, more than a million per year.
- Permanent layoffs are much less cyclically sensitive than the other methods firms use to adjust their workforce, like temporary layoffs, quits and hires.
- There is no evidence that permanent layoffs played a larger role (relative to temporary layoffs) in firms' adjustments to changing demand in the 1990s recession than they did during the 1980s recession.
- Also, industries with rapid employment growth do not necessarily have low layoff rates, nor do those with declining employment necessarily experience high rates.
- Small- and medium-sized firms account for most permanent layoffs. Small firms have three to four times the permanent layoff rate of large firms, a difference that persists over the course of the business cycle.

What's new?

... p. 53

- *Household Facilities and Equipment, 1997* takes stock of heating equipment and fuel, and of appliances or features like dishwashers, microwave ovens, air conditioning, computers, colour television sets and automobiles. Information on other household items, recreational equipment, supplementary heating equipment and fuel, and dwelling condition is included on a rotational basis.
- *Income Distributions by Size in Canada, 1996,* a Survey of Consumer Finances report, looks at family and individual incomes by source of income, province, sex and other characteristics. Income shares by quintile and incidence, and estimated numbers and characteristics of individuals and families with low incomes are also presented, as is the extent to which certain family incomes fall short of the low income cut-offs.

- The second issue of *Labour Force Update* examines hours of work. Specific issues studied include trends in hours worked, underemployment, voluntary part-time employment, paid and unpaid overtime, moonlighting and the work hours of business owners.

- *Agricultural Financial Statistics, 1995*, the product of a joint venture between Statistics Canada and Agriculture and Agri-Food Canada, gives a picture of the financial performance of farms in Canada. It provides key statistics on operating revenues and expenses by province, type of farm and revenue class, as well as income distribution. Data on off-farm income for operators and families involved in a single unincorporated farm add perspective to this financial picture.

- *Successful Entrants: Creating the Capacity for Survival and Growth*, released by the Analytical Studies Branch, is the second study in a series on small- and medium-sized enterprises. It profiles the characteristics of new firms that survive and investigates the differences between those that survived but achieved little growth, and those that survived and grew rapidly.

- The Analytical Studies Branch has also released two more research papers. *An Experimental Canadian Survey That Links Workplace Practices and Employee Outcomes: Why It Is Needed and How It Works* outlines the need for the proposed Workplace and Employee Survey, an experimental survey sponsored by Human Resources Development Canada. *Working More? Working Less? What Do Canadian Workers Prefer?* uses data from the 1995 Survey of Work Arrangements to determine which workers would prefer more hours for more pay and which would prefer fewer hours for less pay.

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The labour market: Mid-year review

Jeffrey Smith

Many analysts have predicted that 1997 would be a good year for the Canadian economy and labour market. While a range of forecasts was offered, optimists called for as many as 350,000 new jobs, GDP growth near 4%, and an unemployment rate below 9% by year's end. Even those less exuberant expected improvements over last year. Is 1997 living up to expectations?

This article reviews the major economic and labour market developments in the first half of 1997. Results are compared with other years in the 1990s, and a few forecasts are reviewed.

This article is based mainly on information from the Labour Force Survey (LFS) available as of July 11, 1997. Unless otherwise noted, monthly data have been seasonally adjusted to provide a better picture of underlying trends. Seasonal movements are those caused by regular annual events such as climate, holidays, vacation periods, and cycles related to crops and production. Seasonally adjusted series still contain irregular and longer-term cyclical variations.

LFS estimates for January 1997 are the first to be based totally on a new questionnaire, phased in since September 1996. All its seasonally adjusted series have been revised back to 1976, reflecting changes in methodology. In addition, the LFS has introduced several new variables. Details of these changes can be found in two documents available on the Internet (Statistics Canada; Sunter et al.).

Unless otherwise stated, figures quoted for the gross domestic product (GDP), or any of its components, are expenditure-based, at market prices, expressed in 1986 dollars.

The economic environment

Strong signals early in 1997

After relatively slow growth during 1995 and for the first half of 1996, growth in real gross domestic product (GDP) strengthened substantially. Following six quarters of 0.4% or less, the last two quarters of 1996 and the first of 1997 each posted gains of about 0.8% (Chart A). On an annualized basis, this year's first-quarter growth was 3.4%. Stated another way, the first quarter of 1997 represents a 2.8% increase over the first quarter of 1996. While this recent performance does not quite match 1994, it nonetheless suggests that the better-than-3% growth forecasted by some may be plausible (see *Overview of forecasts for 1997*).

The first-quarter gain was associated with increases in merchandise exports (6.3%), personal expenditures on consumer goods and services (1.3%), and business investment in machinery and equipment (5.9%, following 8.1% and 6.9% gains in the

Jeffrey Smith is with the Labour and Household Surveys Analysis Division. He can be reached at (613) 951-6894.

Overview of forecasts for 1997

Around the beginning or end of each year, forecasts concerning the economy and the labour market abound. After a very good 1994, a weak 1995 and 1996, many banks, consultants and other organizations were optimistic about 1997. They called for improved economic and employment growth, continuing low inflation and interest rates, and some relief from stubbornly high unemployment rates. No particular forecasts are singled out here, but a general summary recalls the mood and range of predictions made for the country as a whole.

GDP: Most predictions for 1997 growth were in the 2.6% to 3.8% range, with 3.0% to 3.3% being typical. For the most part, annual GDP growth in the 1990s has been more modest. The 4.1% gain posted in 1994 was the strongest, followed by 1995 (2.3%) and 1993 (2.2%). GDP grew by 1.5% in 1996.

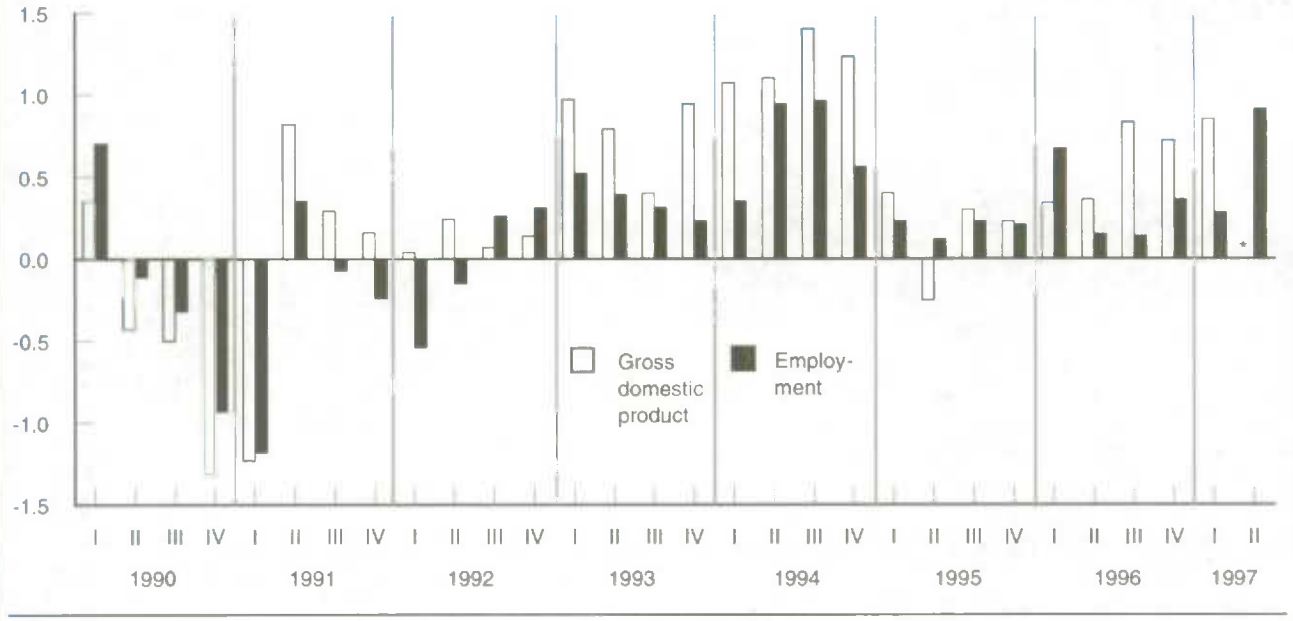
Employment: A range of opinion on employment growth suggested estimates of 1.9% to 2.6%, yielding a level 260,000 to 355,600 higher than last year's 13,676,200 (annual average). Based on the December 1996 figure (13,753,700) rather than the annual average, these growth rates would imply an employment gain of 261,300 to 357,600. The mid-point of either range is about 310,000. As with GDP, such growth would be the best since 1994, when employment rose by 276,900 (2.1%) on an annual average basis and about 381,200 (2.9%) on a December-over-December basis.

Unemployment rate: Most commentators were calling for some slight downward movement in the national unemployment rate over the course of the year, to approach 9% by year end (a few even predicted a rate below 9% by December 1997). Typical were average rates in the 9.4%-to-9.6% range, close to that of 1995 (9.5%). The 1996 annual average was 9.7%, which was also the rate recorded for December 1996.

Inflation: The relatively low levels seen recently were expected to continue in 1997. Typically, the 1.5% annual change in the Consumer Price Index (CPI) seen in 1996 was expected to repeat in 1997, with forecasts of 1.4% to 1.6% common.

General: Forecasters also saw continuing low interest rates and some strengthening in consumer spending and exports.

Chart A
Employment growth in the second quarter of 1997 was the best since 1994.



Sources: Labour Force Survey, and National Accounts and Environment Division
* *Second-quarter GDP figures not available.*

previous two quarters). These were the three greatest contributors (in the order given) to the first-quarter change in GDP, essentially mirroring most years in the 1990s.[1]

Opinions differ on whether exports or consumers are leading current economic growth.[2] On the one hand, consumer spending is the largest component of real GDP (59.7% as of the first quarter of 1997) and its gains in the last two quarters (each greater than 1%) are the first consecutive ones of this magnitude for the decade (Chart B). On the other hand, merchandise exports have been posting greater quarterly gains in the 1990s and have increased their share of real GDP by a factor of 1.6 (to 39.7% in the first quarter of 1997).[3]

Preliminary indications for the second quarter are also strong. On a monthly basis, real GDP at factor cost rose 0.8% in April. Manufacturers, wholesalers and retailers (all of whom suffered losses in March) accounted for about 60% of the gain in production. Financial and related services and the mining sector also contributed significantly to the advance.

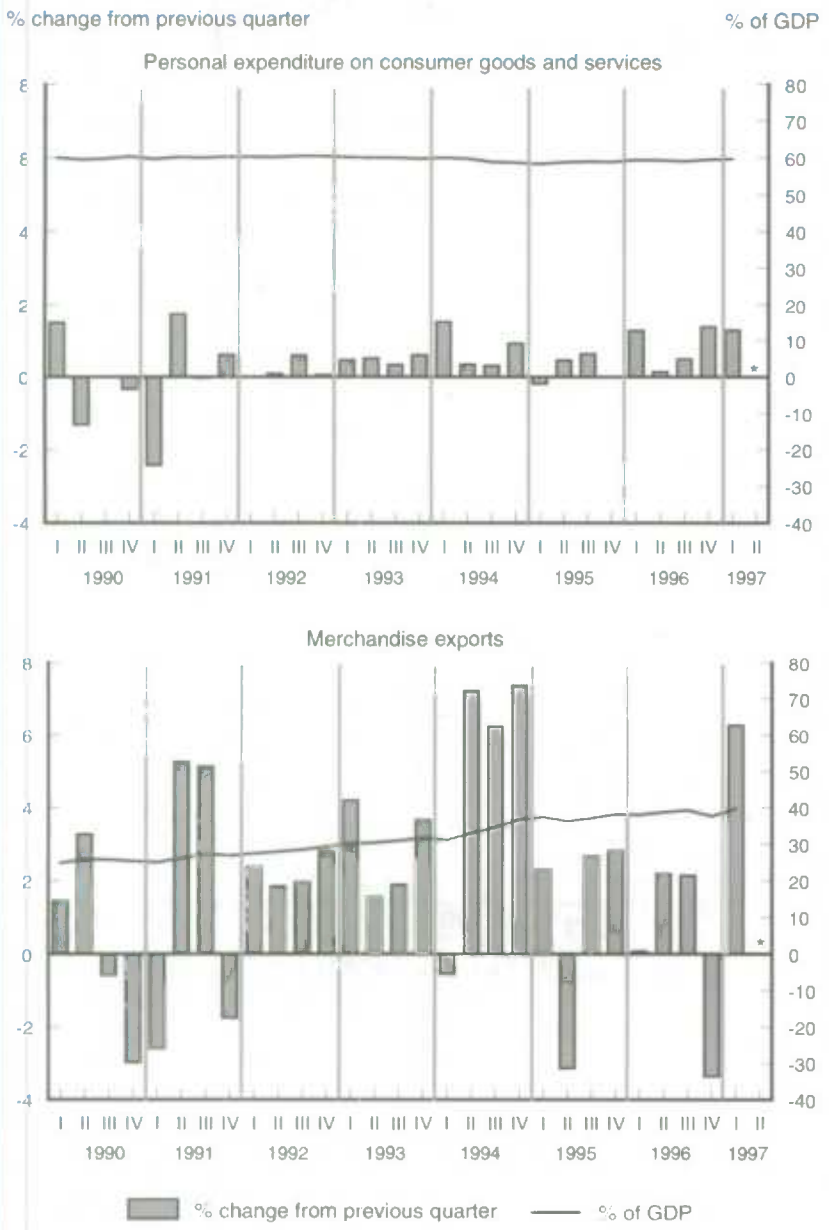
Other economic indicators

Continuing low interest rates and low inflation have no doubt been a factor in the resurgence of spending on consumer goods and services and housing. For most of 1996, the change in the seasonally adjusted monthly Consumer Price Index over the same month in the previous year stayed near 1.5%. It began to rise in November, reaching 2.3% this January and February. Since then, the increases have been tapering off (to 1.7% in June), returning to levels seen for much of the post-recession nineties.[4]

The prime rate averaged 6.06% in 1996, but finished the year at 4.75% (December average). The average for each of the first 6 months of 1997 held steady at 4.75%. For 1996, conventional mortgage rates averaged 6.19% and 7.93% for one and five years, respectively, but were 5.20% and 6.95% in December. Mortgage rates have stayed relatively low this year (June averages were 5.20% and 7.00%). In June, a one-quarter point rise in the bank rate (from 3.25% to 3.50%) failed to trigger a rise in other rates. And in July, the U.S. Federal Reserve Board decided not to raise interest rates. This move should help to keep Canadian rates steady, at least in the short term.

Similarly, part of the export strength over the 1990s can be attributed to the steady weakening of the Canadian dollar against the U.S. dollar. In 1990, the exchange rate

Chart B
Merchandise exports account for an increasing share of GDP.



Source: National Accounts and Environment Division
* *Second-quarter figures not available.*

averaged 1.167 (Canadian dollars per U.S. dollar). It rose from 1992 to 1995 and has held more or less steady since. The average for the first 6 months of 1997 was 1.372.

Based on early indications, 1997 seems to be unfolding as forecasters predicted. Usually, economic growth is associated with positive results for employment. So, with a good performance in the first quarter, and with the stage seemingly set for solid second-quarter results,[5] how has the labour market fared in the first half of the year?

The labour market

Overall employment

By June of this year, employment had grown by 193,400, significantly better than last year's pace (56,400) and slightly greater than the 186,300 gained over all of 1996.[6] The advance in average employment in the second quarter of this year resembles the quarterly growth rates posted in the middle two quarters of 1994 – so far the leaders in the 1990s (Chart A). The employment change over the first 6 months of 1997 is equivalent to a compound growth rate of 0.23% per month. Over the long term, this is a strong performance (see *Employment growth in historical context*), exceeding the growth in two-thirds of all 6-month periods since January 1976.

So, although the year began very slowly, with the February employment level dipping below that of December 1996, it has so far been relatively strong and stands as one of the better "first halves" of the 1990s for overall employment growth (Chart C). In fact, employment in June was 1.4% above the December 1996 level; only 1994 had a better performance at the midway point. (June 1994 was 1.5% higher than December 1993. The first half of 1994 accounted for 193,800 of the 381,200 employment gain that year.)

The 1980s employment downswing was "deeper but briefer" than the one in the 1990s, but with a stronger recovery/expansion phase. However, January to November 1994 (months 45 through 55 on Chart D), and November 1995 to April 1996 (months 67 through 72) were both good periods. The first half of 1997 has produced another (so far quite steep) employment surge, from February to June (months 82 through 86).

Employment growth in historical context

In order to place this year's employment to date into context, comparisons are made with other years (full or part) in the decade. As well, this review sometimes compares a period (such as December 1996 to June 1997) with all periods of that length since January 1976, using the calculated compound monthly rate of growth (or decline) over the period. For example, compound monthly rates of growth for 6-month periods (n=6), are calculated as

$100((E_{t-n}/E_t)^{(1/n)} - 1)$, where E = employment;
t = Jan. '76, Feb. '76, ... , Dec. '96;

Jan. '76 to Jul. '76: $100((9{,}798.1 / 9{,}711.9)^{(1/6)} - 1) = 0.147\%$
Feb. '76 to Aug. '76: $100((9{,}812.5 / 9{,}694.2)^{(1/6)} - 1) = 0.202\%$
....
Dec. '96 to Jun. '97: $100((13{,}947.1 / 13{,}753.7)^{(1/6)} - 1) = 0.233\%$

Since there are 258 months in the series of seasonally adjusted monthly employment from January 1976 to June 1997, 252 six-month periods can be identified. Such calculations can be done for other period lengths by using values other than n=6 in the formula. Once all calculations are done for the periods chosen, a variety of statistics can be calculated to describe how a particular period, such as the one most recently ended, fits in.

Although the monthly seasonally adjusted LFS data go back to January 1976, the analysis could be restricted to certain subsets of the data. For example, if the period to be assessed falls in an expansionary phase, the set of compound monthly growth rates could be computed only for periods of that length that happen to fall into expansionary phases, and then compared with the period of interest. However, this would necessitate defining these phases, which could be difficult in itself, and even more complicated if several different comparisons were done. (For instance, different types of employment or different provinces could each require different inclusions and exclusions.) Thus, for simplicity, where this technique is used, the base for comparison is all periods of the length in question dating from January 1976. The table below illustrates some results and their interpretation.

The 6-month column shows that the employment change over the December 1996-to-June 1997 period was positive and equivalent to a 0.23% monthly rate of growth compounded over the 6 months. The next value in the column tells where this period falls in the distribution of all such periods since January 1976. Specifically, it shows a relatively high growth period, since 67% of all 6-month periods had rates below 0.23%. In other words, the observed 0.23% falls at the 67th percentile (the xth percentile is the value in a distribution of values such that x% of the values lie below it). The next eight numbers in the column give selected percentiles and the arithmetic mean, which roughly describe the distribution. (The periods corresponding to the worst and best periods are given for interest.) Finally, the proportion of the periods with zero or negative compound growth rates is shown. For example, for 6-month periods about 16% have experienced decline or no growth (not common, but not rare either).

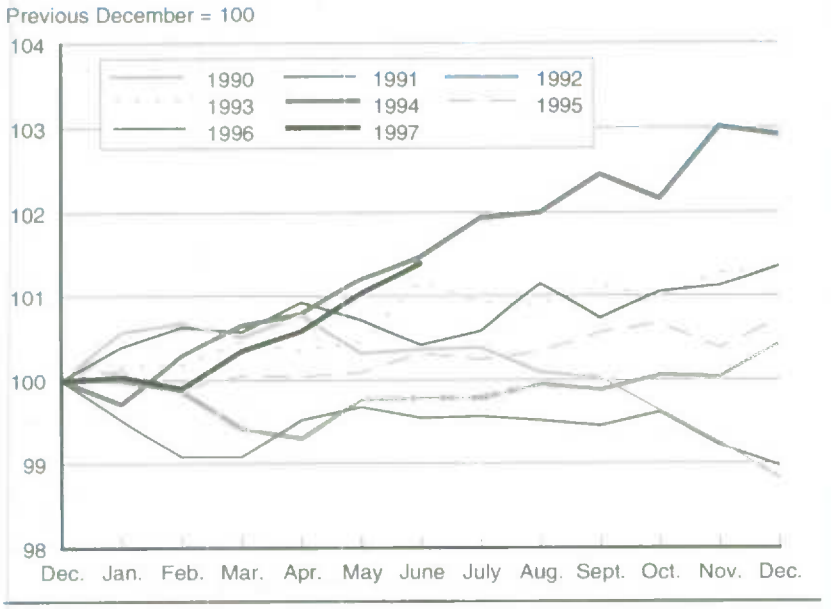
The 3-month and 12-month columns are interpreted similarly and are shown for comparison. Generally speaking, the longer the period, the narrower the distribution. The 12 months ending in June 1997 were about average in terms of employment growth, but the growth has been gathering momentum (the percentile ranking is increasing as periods become shorter).

Compound monthly growth rates, overall employment, selected statistics

Period length	3-month	6-month	12-month
No. since Jan. '76	255	252	246
		%	
Most recent	0.35 (Mar. '97 to June '97)	0.23 (Dec. '96 to June '97)	0.20 (June '96 to June '97)
% ≤ most recent	82.2	66.9	57.5
0th %ile(minimum)	-0.61 (Mar. '82 to June '82)	-0.49 (Mar. '82 to Sept. '82)	-0.39 (Nov. '81 to Nov. '82)
10th %ile	-0.13	-0.10	-0.10
25th %ile	0.04	0.06	0.09
50th %ile(median)	0.15	0.15	0.17
75th %ile	0.29	0.29	0.25
90th %ile	0.41	0.35	0.31
100th %ile(maximum)	0.62 (Jan. '78 to Apr. '78)	0.54 (Jan. '78 to July '78)	0.41 (Jan. '78 to Jan. '79)
Mean	0.14	0.14	0.14
% ≤ 0%	20.0	15.9	17.1

Source: Labour Force Survey

Chart C
This year could eclipse 1994 for best employment growth in the 1990s.



Source: Labour Force Survey

These bright spots can be seen more clearly in the movements of the employment rate. Although overall employment has risen by over three-quarters of a million in the 1990s (up 798,600 as of June 1997 over December 1989), the rate of increase has not kept up with population growth. The employment rate declined dramatically in the early 1990s, although moderate employment gains in 1992 and 1993 slowed the decline (Chart E). January 1994 saw the rate hit its low point of the decade at 57.8%. The employment surge that year boosted the rate to its post-recession high of 59% before the latter resumed its downward trend and fell to 58.4% in November 1995. A second employment surge brought the rate back to 58.8% by April 1996. After a slow decline to 58.3% in February 1997, it climbed to 58.9% (June 1997), thanks to renewed employment growth early this year. This 0.6 percentage-point rise matches the January-to-May 1994 increase as the best 4-month rise of the 1990s. It remains to be seen whether the present upturn will sustain itself, or prove to be another short-lived burst typical of the 1990s.

Goods and services

In the 1990s, employment growth has come primarily from the service sector.[7] In the decade's two strongest years (1994 and 1996), both goods and services contributed to the growth, with goods accounting for just over half of the total gains those years. In the first 6 months of 1997, employment grew by 127,900 in the service-producing industries (1.3% growth over December 1996). Although employment in the goods sector also gained (65,500 or 1.8% since December 1996), this was the result of the June increase of 73,800. Over the first 5 months of the year, employment in this sector actually fell by 8,300.

Employment in manufacturing rose by 89,100 (4.3%), with much of that (52,400) also coming in June. Both durable and non-durable manufacturing contributed to the rise (durables accounted for about 61%). This growth is not unexpected, given the strength in consumer spending and exports already noted. Construction also posted a gain (22,300 or 3.0%), linked to low interest rates and increased housing starts, especially in Ontario. However, these gains were tempered by declines of 38,700 (-5.1%) in primary industries (mostly agriculture, which dropped 39,700 or 8.6%) and 7,200 (-5.0%) in utilities.

While service sector employment was generally upbeat after its relatively sluggish year in 1996, some industries lost while others gained in the first half of 1997. Big gains were seen in the large community, business and personal services (CBPS) group (129,000 or 2.5%), fuelled largely by business and personal services (up 3.7%, to contribute 103,200 or about four-fifths of the total CBPS gain). Employment was also up in transportation, storage and communication (47,500 or 5.6%). On the other side of the ledger, public administration continued its general downward slide, dropping 23,100 (-2.8%), while employment in finance, insurance and real estate declined by 19,700 (-2.5%). In trade, the remaining major group, employment was little changed over the first half of 1997 (-5,700 or -0.2%). This was the result of offsetting movements in wholesale and retail: wholesale trade employment was up 18,100 (2.8%) while retail was down 23,700 (-1.4%). Employment growth in the former is consistent with its strong sales (in turn, consistent with the advances in exports, imports and manufacturing). While retail sales also posted gains in the first part of the year, restructuring in this sector may account for some of its recent employment weakness.

Self-employment continues to grow

Since December 1996, employment has grown by just 47,800 for paid workers (employees) (0.4%), owing to growth in private paid employment

(up 72,900 or 0.8% since December 1996) and a drop in public employment (-25,200 or -1.2%, almost all of it in June). For private employees, gains in the latter part of the period, especially March (56,000) and June (57,000), outstripped the losses at the start of the year. Meanwhile, self-employment[8] has grown each month, with gains totalling 145,600 (6.1%) by June.

The strength in self-employment growth is not new. Self-employment grew by almost 6% between December 1989 and July 1990. And since July 1996, 11 consecutive months have seen increases, most of them large (Chart F).[9] As a result, self-employment has moved from 13.8% of total employment in December 1989, to 18.1% as of June 1997. Over the same period, the share of total employment represented by private employees dropped from 70.0% to 67.1%, and by public employees, from 16.1% to 14.7%.

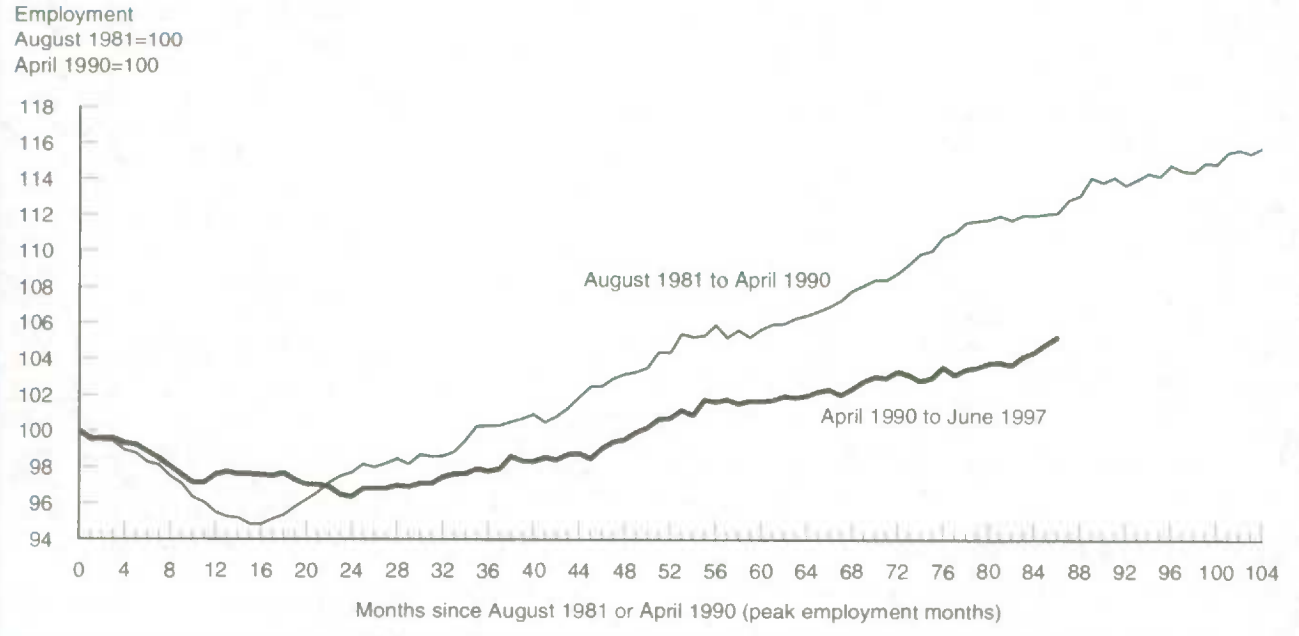
For employees, weak growth is familiar. In February 1997, the number of private employees was just 8,400 (0.1%) above that of December 1989. However, in March, April, May and June, growth in private employment more than offset the losses in the first two months of 1997.[10]

Throughout the nineties, self-employment has increased every year (December-to-December measure). Other than in 1993 and 1994, its gains have exceeded those for employees. From December 1989 to June 1997, self-employment represented 88.3% of the increase in employment. However, since the end of 1995 it has accounted for a somewhat smaller (though still substantial) proportion of the overall growth: 78.6% in 1996 and 75.3% so far in 1997.

Youths still hurting

Since the end of the last recession, the beneficiaries of employment growth have been adult men and women. Aside from a little spark around the end of 1994, youths' employment growth has yet to be rekindled. As of this June, 17,900 fewer persons aged 15 to 24 were employed (-0.9%) than had been in December 1996. On the other hand, adult employment rose over the same period by 211,300 (1.8%). Although adult men accounted for two-thirds of this gain (up 141,300 or 2.2%), adult women's gain was also strong (70,000 or 1.3%).

Chart D
Employment growth spurts have been fewer and shorter in the 1990s.



Source: Labour Force Survey

Chart E
Sustained rises in the employment rate have been rare in the nineties.

Source: Labour Force Survey

Growth in full-time employment

Overall, employment growth since December 1996 has been full-time (defined as 30 hours or more per week at one's main or only job). Full-time employment rose by 229,700 (2.1%) while part-time dropped 36,300 (-1.4%). As previous reviews have noted, part-time employment growth has characterized the decade. From 1990 through 1996, part-time employment posted gains in all but one year (1994), while full-time did so in only three of the seven (1993, 1994 and 1996). Over the period, part-time employment rose about 423,000 while full-time gained about 182,000. Consequently, full-time as a percentage of total employment dropped from 83.2% in December 1989 to 80.8% in December 1996. By June 1997, the proportion had risen to 81.4%. If this pattern continues, 1997 will be only the third year of the decade in which full-time growth has dominated.

Adults' employment gains so far have been largely full-time: of men's 141,300 rise, 134,400 (or 95.1%) were full-time; of women's overall 70,000 gain, 84,000 were full-time, offset by a loss of 14,000 in part-time. For adult men, the proportion of employment that is full-time has fallen through the 1990s, from 95.7% (December 1989) to 94.0% in December 1996. With their robust growth so far this year, the slide appears to have been arrested, with the proportion holding at 94.0% in June. For women the picture is similar. After hovering at 76% or a little above throughout the 1990s, the proportion of women's employment that was full-time fell in late 1996 to reach 74.7% in December. In 1997, the decline seems to have halted and even reversed, with the proportion reaching 75.3% in June.

Like adults, youths have seen their full-time proportion fall during the 1990s, but more sharply. From 64.4% in December 1989, the proportion of youth employment that was full-time fell to 54.5% in December 1996. However, while part-time employment fell 29,200 (-3.2%) in the first half of 1997, full-time rose by 11,300 (1.0%), bringing the proportion back up to 55.6% in June, the highest since March 1995 (when it was 55.9%).

Provincial picture

Ontario and Quebec contributed most to the employment change from December 1996 to June 1997 (Table 1). Quebec, Saskatchewan, New Brunswick and British Columbia provided some notable results. Quebec's showing of 69,900 additional employed is an impressive 2.2% growth, a turnaround from 1996 when employment slipped by 20,100 for the year (December-to-December change). The compound growth rate of 0.36% per month over the first 6 months of 1997 ranks in the 90th percentile for all 6-month periods since 1976. However,

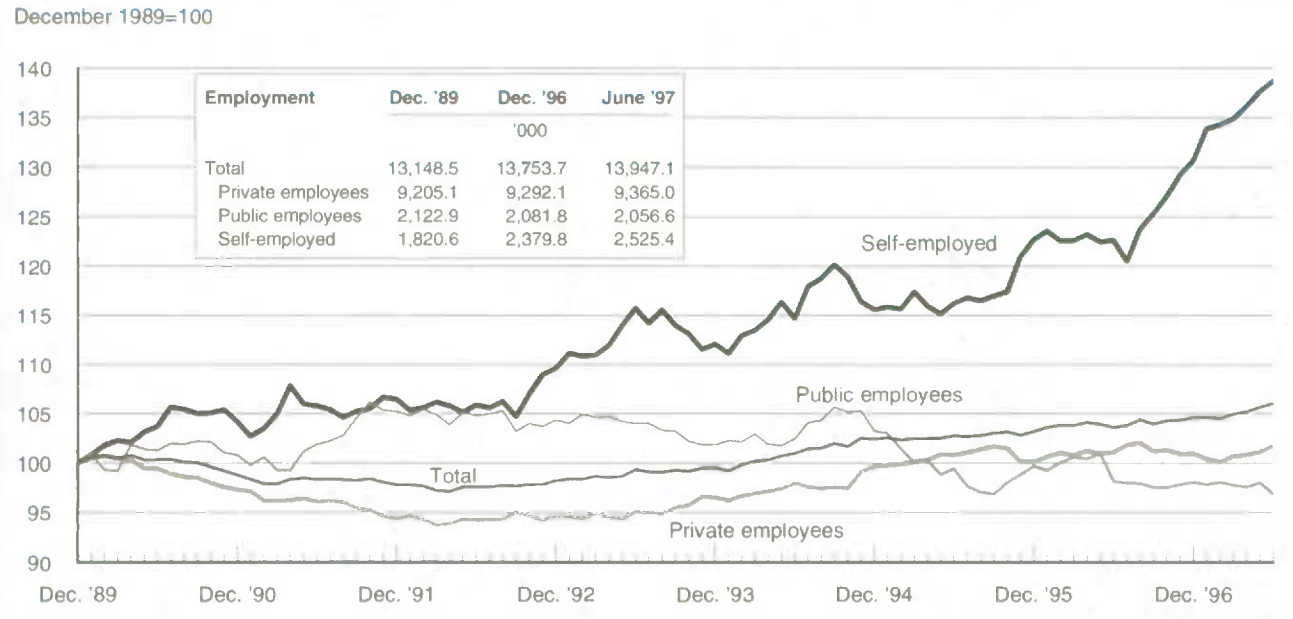
because this strong performance follows a period of decline, it leaves the province's employment just 21,700 (0.7%) ahead of its most recent high in February 1996 (Chart G). Quebec's gains so far have come in the service sector (primarily in community, business and personal services). Goods sector employment has been weak, although declines in agriculture and construction masked a strong showing in manufacturing. Saskatchewan also posted a strong first half, coming in with growth of 2.7% or 12,500. In fact, the compound monthly growth rate of 0.45% puts this 6-month performance in the 93rd percentile for all 6-month periods since January 1976 (that is, only 7% have been better). As in Quebec, gains in service sector employment provided the growth, thanks mainly to community, business and personal services; and finance, insurance and real estate. The goods sector was weak, with gains in manufacturing employment being offset by a drop in agriculture. New Brunswick experienced fluctuations during the first half of 1997, though overall employment growth was strong. The addition of 9,300 employed since December offset the declines of the second half of 1996, but still left the province below its December 1994 peak. The employment gains in the first half of 1997 were spread over almost all industry groups, although business and personal services did see noticeable declines.

Table 1
December 1996-to-June 1997 employment change

	Change	% change	Compound monthly growth rate %	Compound monthly growth rate Percentile
Canada	***193,400***	***1.4***	**0.23**	**67th**
Newfoundland	*700*	*0.4*	0.06	47th
Prince Edward Island	*100*	*0.2*	0.03	38th
Nova Scotia	*4,500*	*1.2*	0.19	59th
New Brunswick	*9,300*	*3.0*	0.50	92nd
Quebec	*69,900*	*2.2*	0.36	90th
Ontario	*90,900*	*1.7*	0.28	70th
Manitoba	*2,100*	*0.4*	0.07	45th
Saskatchewan	*12,500*	*2.7*	0.45	93rd
Alberta	*15,100*	*1.1*	0.17	46th
British Columbia	*-11,600*	*-0.6*	-0.11	10th

Source: Labour Force Survey

Chart F
Self-employment continues as the main vehicle for employment growth.



Employment	Dec. '89	Dec. '96	June '97
		'000	
Total	13,148.5	13,753.7	13,947.1
Private employees	9,205.1	9,292.1	9,365.0
Public employees	2,122.9	2,081.8	2,056.6
Self-employed	1,820.6	2,379.8	2,525.4

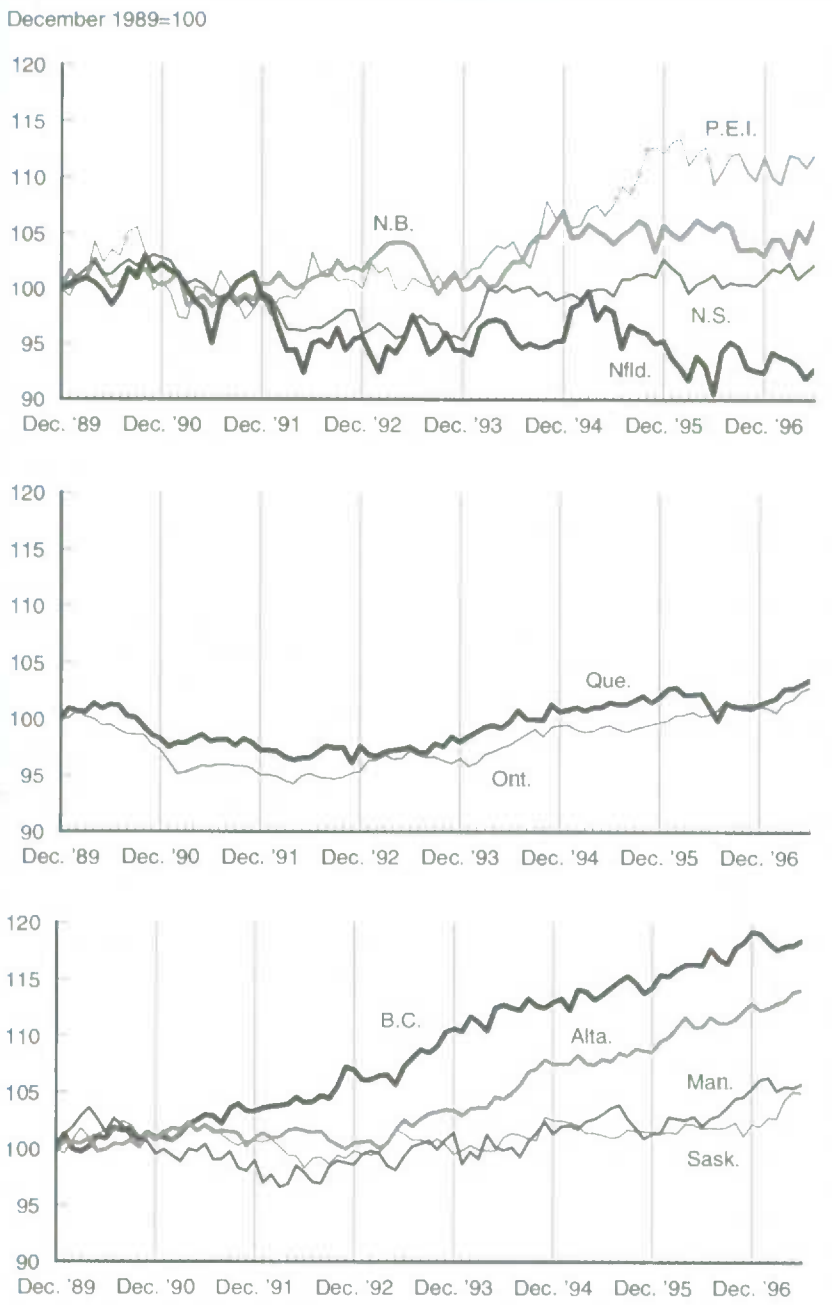
Source: Labour Force Survey

At the other extreme, after a long run as the leading job generator among provinces, British Columbia may have cooled down: a decrease of 11,600 brought employment levels down 0.6% in the first half of the year. The service-producing industries accounted for most of the decline, particularly in trade; finance, insurance and real estate; and public administration. (Community, business and personal services did gain, but not enough to offset the other losses.) While a 6-month net employment decline is not unheard of in British Columbia, the period ending in June 1997 was poor. The compound monthly growth rate of -0.11% corresponds to the 10th percentile for all 6-month periods in the province since 1976. It should be added, though, that this follows the province's peak employment level of the decade in December 1996, and that the losses occurred in the first quarter of the year, with small gains coming in April, May and June. (The compound monthly growth rate for that 3-month period was 0.23%, or the 50th percentile.)

Aside from New Brunswick, the picture in the three other Atlantic provinces was mixed during the first half of the year. In Newfoundland, manufacturing and construction posted gains (possibly a lingering effect of the construction phase of the Hibernia project), which were nearly offset by losses in the service sector. Nova Scotia saw alternating employment gains and losses during the period, leaving employment up 4,500 in June compared with December 1996, still slightly below its post-recession peak (attained in December 1995). As in Newfoundland, manufacturing and construction gained, and the service sector lost ground. Prince Edward Island's unchanged employment level was the result of small, offsetting movements across industries.

Ontario began the year with two months of employment decline, but rebounded strongly to surpass its previous peak of November 1996. In fact, the gains of March, April, May and June produced a compound growth rate of 0.55% per month for the 4 months ending in June, putting it in the top 5% of all 4-month periods since 1976 (95th percentile). Employment gains in the first half came largely in business and personal services;

Chart G
Although 1997 started slowly for some provinces, most gained employment.



Source: Labour Force Survey

transportation, storage and communication; and construction.

In Manitoba, employment made small gains and losses across industries, leaving the overall level little changed. After a decline in January, employment in Alberta resumed the growth that has been typical of the last several years. In fact, the compound monthly growth seen from December 1996 to June 1997 places this period just below the median for all 6-month periods in Alberta since 1976. Gains in the first half of the year were concentrated in community, business and personal services; manufacturing; and trade.

Table 2
Selected labour force indicators

	Dec. '96	June '97	Change	
	'000		'000	%
Population (15 and over)	23,507.4	23,678.0	*170.6*	*0.7*
Labour force	15,239.1	15,343.6	*104.5*	*0.7*
Employment	13,753.7	13,947.1	*193.4*	*1.4*
Unemployment	1,485.4	1,396.5	*-88.9*	*-6.0*
	%		% point	%
Participation rate	64.8	64.8	-	-
Employment rate	58.5	58.9	*0.4*	*0.7*
Unemployment rate	9.7	9.1	*-0.6*	*-6.2*

Source: Labour Force Survey

Unemployment

Overall

Employment growth in the first 6 months has been strong (193,400), so even with a fairly large increase in the labour force (104,500), the number of unemployed dropped by 88,900 (Table 2). The unemployment rate fell from 9.7% to 9.1%. Until this year, recent upturns in employment have tended to encourage people to join the labour force, keeping unemployment high. [11]

The Help-wanted index[12] is a measure of employers' intentions to hire new workers. The index rose in June for the 11th consecutive month, to reach 121 (based on June 1996=100), up from 99 in July 1996. The last time the index was that high was in March 1991 (120). The steep rise in late 1996 and early 1997 is consistent with employment gains over the period and, to the extent that positive changes in the index anticipate future hiring, bodes well for the rest of 1997. The recent rise in the index may also partly explain the upward movement in the labour force participation rate since March, since persons who had left the labour market earlier might have returned if they thought more work was available. In fact, after declining steadily from 65.0% in October 1996 to 64.5% in March (the lowest since November 1995), the overall (both sexes aged 15 and over) participation rate rose to reach 64.8% by mid-year, the same as in December 1996. Also, the sustained rise in the index may suggest further increases in the participation rate.

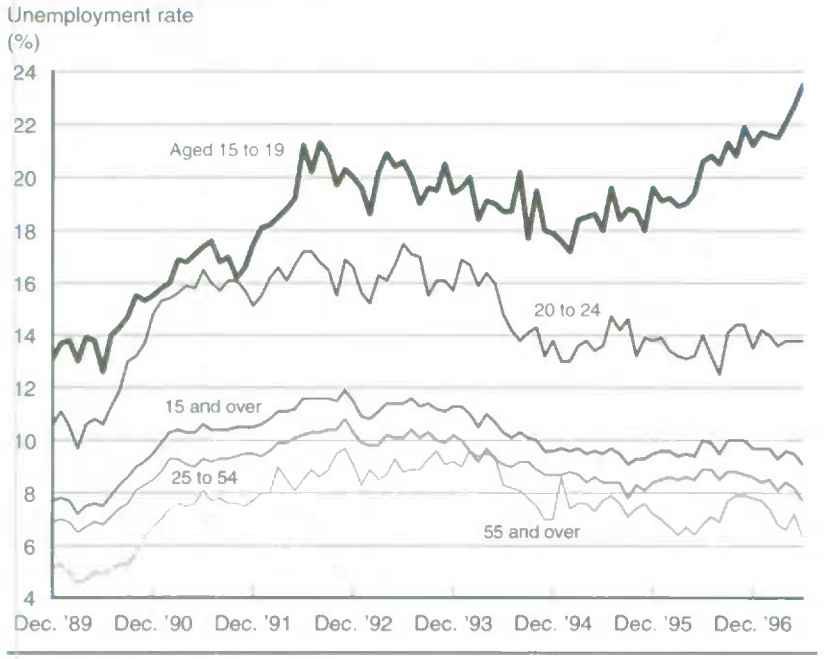
Rising rate for youths

While the overall unemployment rate declined over the first half of the year, not all age groups enjoyed lower rates. By June, workers aged 25 to 54 had shaved 0.9 percentage points off their December 1996 rate, to reach 7.7%, only the second time since 1990 that their rate had dipped below 8% (Chart H). The rate for older adults (55 and over) also trended downward. Their June rate of 6.3% returned them to their early 1996 position. Unemployment rates declined for both adult men and women from December 1996 to June 1997. Altogether, the unemployment rate for adults dropped from 8.5% in December 1996 to 7.5% in June 1997. Throughout the 1990s, adult men's rate has been generally higher than that of adult women, though the two have tended to rise and fall together. The gap was greatest in 1992, but has diminished considerably since then (Macredie, 1996).

Meanwhile, the unemployment rate for youths (15 to 24) continued the upward trend that began in February 1995. Since September 1996, the rate has been close to 17.0%, although steady increases advanced it to 17.5% by June. Differences emerge if the youths are split into younger (15 to 19) and older groups (20 to 24) (Chart H). The unemployment rate for the older group has held its position for almost three years (around 14%). On the other hand, after having moved more or less in parallel with that of older youths (though at a higher level), the rate for younger youths seemed to take a different course in early 1995. From February 1995 to December 1996, the rate for 15 to 19 year-olds gained 4.0 percentage points to reach 21.2%. By June 1997, the rate hit 23.5%.

As a result of these trends, the ratio of youth-to-adult unemployment rates continued to climb in 1997. It has been between 1.6 and 2.6 since January 1976 (median 1.9). In the nineties, this ratio has been between 1.7 and 2.3 (median 1.8). From May 1996 to February 1997 it was 1.9 or 2.0, but by June had risen to 2.3. The ratio for older youths, which has ranged between 1.5 and 1.9 this decade (median 1.7), crept up to 1.8 this year, essentially because of the falling adult rate. The younger youth-to-adult ratio, however, hit its 1990s high point in June (3.1). Although this is not the highest ever – the range since 1976 has been from 1.6 to 3.4 (median 2.2) – ratios of 3 or more have been rare,

Chart H
The long-awaited decline in unemployment rates may have arrived, except for youths.



Source: Labour Force Survey

even for this young age group. June's is the first of the 1990s; the last one was in January 1982 (3.0).

Provincial unemployment

At the national level, employment growth in the first 6 months of 1997, combined with a reduction in the number of unemployed, resulted in labour force growth that just matched working-age population growth. In other words, the participation rate remained unchanged. (Of all 6-month periods in the 1990s, the participation rate has fallen in two-thirds.) And, given the labour force growth, the decline in unemployment translated into a rather large drop in the unemployment rate.

Aside from Saskatchewan, each province saw its number of unemployed and its unemployment rate lower in June 1997 than in December 1996. In Alberta, Nova Scotia, Ontario, Quebec and New Brunswick, the situation was similar to the national pattern; that is, the reduction in the number unemployed was more than matched by increased employment (Table 3). However, in the latter three provinces (especially New Brunswick), employment growth was sufficiently strong to promote growth in the labour force that outpaced that in the working-age population (a rising participation rate). Despite the labour force growth in Alberta, its participation rate fell. This was because the province's high rate of growth in the working-age population overshadowed its modest labour force growth. In Nova Scotia, as in Canada overall, labour force growth was just enough to offset growth in the working-age population (the participation rate remained unchanged).

In Newfoundland, Prince Edward Island, and Manitoba, the labour force shrank, owing to a combination of relatively large declines in the number unemployed, but only modest employment growth. The labour force contraction contributed to the decline in the participation rate in these provinces.

From December 1996 to June 1997, British Columbia saw just a modest drop in unemployment. In addition, it was the only province where employment declined over the period. As a consequence, the unemployment rate dipped only slightly. The shrinking labour force, paired with a quickly growing population, produced a large decline in the participation rate.

Finally, Saskatchewan was the one province with a rise in unemployment over the 6 months. However, its strong employment growth meant a relatively large increase in the labour force, absorbing the additional unemployment and leaving the unemployment rate essentially unchanged. The participation rate rose substantially, since the labour force grew more than five times faster than the working-age population.

Looking ahead

According to the April 1997 quarterly Business Conditions Survey,[13] some 15% of all manufacturing firms expected to increase employment, while 11% expected to decrease employment, for a positive balance of 4% (74% said "little change"). This result is a bit more encouraging than that of January 1997 (balance of +1%) or April 1996 (-4%). As has been the case since 1991, no firms reported production difficulties due to a shortage of unskilled labour, though in April 1997, 5% did cite a shortage of skilled labour, matching the highest quarterly value of the 1990s. The survey also showed a positive balance of orders received and a smaller proportion of finished product inventories that were "too high" (continuing recent trends). Along the same lines, recent results from the Monthly

Table 3
Changes in selected indicators, December 1996 to June 1997, by province

	Population 15+	Labour force	Employment	Unemployment	Participation rate	Employment rate	Unemployment rate
	'000 (%)				% points		
Canada	**170.6 (0.7)**	**104.5 (0.7)**	**193.4 (1.4)**	**-88.9 (-6.0)**	**-**	**0.4**	**-0.6**
Newfoundland	-0.9 (-0.2)	-3.6 (-1.5)	0.7 (0.4)	-4.3 (-8.9)	-0.7	0.2	-1.6
Prince Edward Island	0.2 (0.2)	-0.7 (-1.0)	0.1 (0.2)	-0.8 (-7.0)	-0.7	-	-1.0
Nova Scotia	3.0 (0.4)	1.9 (0.4)	4.5 (1.2)	-2.6 (-4.5)	-	0.4	-0.6
New Brunswick	1.8 (0.3)	8.6 (2.4)	9.3 (3.0)	-0.7 (-1.5)	1.3	1.4	-0.5
Quebec	30.0 (0.5)	39.8 (1.1)	69.9 (2.2)	-30.1 (-6.8)	0.3	0.9	-0.9
Ontario	65.8 (0.7)	59.2 (1.0)	90.9 (1.7)	-31.8 (-6.0)	0.2	0.6	-0.6
Manitoba	3.7 (0.4)	-2.0 (-0.3)	2.1 (0.4)	-4.0 (-9.2)	-0.5	-	-0.7
Saskatchewan	3.8 (0.5)	13.6 (2.8)	12.5 (2.7)	1.2 (4.2)	1.5	1.3	0.1
Alberta	27.2 (1.3)	5.5 (0.4)	15.1 (1.1)	-9.5 (-9.9)	-0.7	-0.2	-0.7
British Columbia	36.1 (1.2)	-17.8 (-0.9)	-11.6 (-0.6)	-6.2 (-3.5)	-1.3	-1.1	-0.2

Source: Labour Force Survey

Survey of Manufacturing (through April) indicated rising shipments, soaring levels of unfilled orders, increases in new orders and a falling inventories-to-shipments ratio. Both surveys suggest that, at least in manufacturing (which *directly* accounts for about 16% of total employment and provided 46% of the employment growth in the first 6 months of 1997), growth seen so far this year will likely continue.

The composite index, which paints a broader picture of the economy,[14] rose 0.8% in June, the 21st consecutive monthly increase. While this index generally trends upward, the monthly increases in late 1996 and so far in 1997 have been slightly above average.[15] With 9 of the 10 components advancing in June, the economy seems poised for sustained growth, which could in turn augur well for employment growth over the rest of the year.

Summary

The labour market got off to a slow start in 1997. However, the employment gain in the first 6 months very nearly matched that of the first half of 1994, which at least for now retains its position as the best year of the 1990s for overall employment growth.

Self-employment continued to post strong gains, although not quite as impressive as those of late 1996. Overall employment growth in 1997 has so far been full-time, making way for the third (and second consecutive) year of the nineties in which this has been the case. The first 6 months also saw the service sector add substantially to its employment, after a relatively modest increase in 1996. Compared with last year, when Ontario and the West gained employment while Quebec and the East lost, employment gains in the first half of 1997 have been more centralized, with Quebec and Ontario providing the bulk of the growth. As was the case in 1996, gains have favoured adults, while losses have most affected the young.

While mid-year results offer no guarantees, barring major reversals this year could meet expectations held by many forecasters. □

Notes

1 In the nineties (except for 1991), merchandise exports have been the largest contributor to the annual percentage change in GDP, usually by a wide margin over the next largest contributor, which has generally been consumer spending. Since 1994, business investment in machinery and equipment has also made a large contribution to GDP growth.

2 See, for example, Bond (1997) and Little and Bourette (1997). The latter article notes that the 1997 first-quarter rise in the Conference Board of Canada's quarterly index of consumer attitudes was the fifth straight quarterly rise, the first time this has happened in 15 years. Although the levels are approaching those seen in 1994, they are still far from those of the late 1980s.

3 Because of the rapid price decline in machinery and equipment (especially computers) in recent years, any spending component with a large portion of these will see its relative importance inflated when measured in 1986 prices. For this reason, trends in share of GDP may be presented in current rather than constant dollars. In the case of consumer spending and merchandise exports, doing so yields results not very different from those

shown. Measured on a current dollar basis, consumer spending's share of nominal GDP was nearly flat over the period shown on Chart B: it rose from 59.5% in the first quarter of 1990 to 60.8% in the first quarter of 1997. For merchandise exports, the share of nominal GDP still rose by a factor of 1.6, from 21.5% in the first quarter of 1990 to 34.2% in the first quarter of 1997.

4 Unadjusted CPI figures show the same pattern: a rise to 2.2% in January and February 1997, falling off to 1.8% in June.

5 Although the economic picture is generally positive, certain trends may indicate lingering weakness. For example, consumer bankruptcies hit a record high in 1996 (79,631 or 3.4 per 1000 Canadians aged 15 and over). So far in 1997, the trend seems to be continuing. The first quarter of 1997 saw 21,141 consumer bankruptcies, versus 19,146 for the same period in 1996 (up 10.4%). In April 1997, a further 8,507 consumers filed for bankruptcy, bringing the 1997 total to 29,648, well above the 25,922 at the same point in 1996. Consumer bankruptcies rose sharply in 1990 and 1991 and have stayed high since. The number of business bankruptcies has fluctuated over the decade, but increased again in 1995 and 1996, reaching 14,229. As of April 1997, 4,517 businesses had filed, down from the 5,259 seen in the first 4 months of 1996. Nevertheless, bankruptcy announcements involving major companies such as Eaton's (February) and Interlink Freight Systems Inc. (July) may influence public perception about the economy. At the time of the announcement, Eaton's had about 6,000 full-time and 9,000 part-time employees, some of whom were expected to lose their jobs. Interlink employed about 2,000 at the time of its filing. The links between economic conditions, bankruptcies and employment are complex and require further study.

Also, household borrowing remains high while growth in personal disposable income is lethargic. This, combined with another fall in the ratio of personal saving to disposable income in the first quarter of 1997 (to about 2%), suggests that consumer spending is being financed by savings and borrowing.

6 As one might expect, on average about half the employment change in a 12-month period occurs in the first 6 months. For all 12-month periods since January 1976, the first 6 months have accounted for about 49% (median) of the total 12-month change. A similar result holds for the 1990s (48%). If only calendar years are considered, the medians are 46% for all years from 1977 to 1996 and 42% for years in the 1990s. Recently, the first half of the calendar year contributed the following proportions of the whole year's employment growth: 88% (1993), 51% (1994), 42% (1995) and 30% (1996).

7 Service-producing industries as a group have gained employment every year this decade (1990 through 1996) for a total of 775,200 (December 1996 minus December 1989). Over the same years, goods-producing industries lost in four out of seven years, for a total decline of 170,000 (Table). Three years have been strong for employment growth in the 1990s. Two of these, 1994 and 1996, are the only ones of note for goods, which contributed just over half of total gains those years. The other year was 1993, which, unlike the other two, relied almost totally on service sector growth. This year could prove to be the fourth big year of the decade, perhaps led by the service sector.

Table (note 7)
Employment gains/declines (Dec. minus previous Dec.)

Year	Total	Goods	Services
		'000	
'90	-154.7	-216.6	62.0
'91	-133.9	-176.9	42.9
'92	55.5	-65.9	121.4
'93	172.3	13.1	159.2
'94	381.2	206.7	174.5
'95	98.5	-35.7	134.2
'96	186.3	105.3	81.0
'97 *	193.4	65.5	127.9
'89 to '96	605.2	-170.0	775.2
'89 to '97 **	798.6	-104.5	903.1

Source: Labour Force Survey
* *June 1997 minus Dec. 1996.*
** *June 1997 minus Dec. 1989.*

8 Self-employment includes working owners of incorporated and unincorporated businesses, plus unpaid family workers (persons who work without pay on a farm or in a business or professional practice owned and operated by another family member living in the same dwelling).

9 For the 11-month period ending June 1997, self-employment in Canada grew at a compound rate of 1.28% per month, the highest (100th percentile) for any 11-month period measured since January 1976. For all 11-month periods since January 1976, the median compound monthly growth rate for self-employment was 0.27% per month. However, the rate of self-employment growth so far in 1997, while still very high, has not been record-setting. For the 6 months ended June 1997, the compound rate of growth was 0.99% per month (96th percentile for all 6-month periods since January 1976) and for the 3 months ending June 1997, the rate was 0.94% per month (85th percentile).

10 The weakness in private employment growth shows up in the compound monthly growth rates. For example, the compound rate of growth for private employees was -0.01% per month for the 11 months ending June 1997 (22nd percentile for all 11-month periods). The momentum is building, however. Private employment grew at 0.13% per month for the 6-month period ending June 1997 (42nd percentile), and the rate for the 3 months ended June 1997 was 0.34% (72nd percentile, well above the median of 0.16% for 3-month periods).

11 For example, in the 24 months between December 1994 and December 1996, employment grew by 284,800, while the labour force grew by 333,500. The number of unemployed increased and the unemployment rate rose slightly (Table).

12 The Help-wanted index is compiled from the number of help-wanted ads published in 22 newspapers in 20 major metropolitan areas. The index is seasonally adjusted and smoothed to ease month-to-month comparisons. With its June release, the index has been reweighted using the 1996 Census estimates, and the series has been revised historically from January 1981.

Table (note 11)
Selected labour force indicators

	Dec. '94	Dec. '96	Change	% change
	'000		'000	%
Population (15 and over)	22,862.4	23,507.4	*645.0*	*2.8*
Labour force	14,905.6	15,239.1	*333.5*	*2.2*
Employment	13,468.9	13,753.7	*284.8*	*2.1*
Unemployment	1,436.7	1,485.4	*48.7*	*3.4*
	%		% point	%
Participation rate	65.2	64.8	*-0.4*	*-0.6*
Employment rate	58.9	58.5	*-0.4*	*-0.7*
Unemployment rate	9.6	9.7	*0.1*	*1.0*

Source: Labour Force Survey

13 Each January, April, July and October, the quarterly Business Conditions Survey asks manufacturing firms to provide opinions about expected production volume, possible employment changes over the next 3 months, orders, inventories and so on.

14 The composite index (also called the composite leading indicator) is made up of 10 components; the housing index (a composite of housing starts and MLS house sales); business and personal services employment; the TSE 300 stock index; the money supply (M1); the U.S. composite leading indicator; the average work week (hours); new orders for durable goods; the shipments-to-inventory ratio for finished goods; furniture and appliance sales; and other durable goods sales. The composite index is based to 1981=100, and is available as a smoothed (referred to in this review) or unsmoothed series.

15 From March 1952 to June 1997, the median monthly change in the smoothed composite index was 0.45% (mean = 0.35%). In the 1990s (December 1989 to June 1997) the median change was 0.47% (mean = 0.33%). From October 1995 to October 1996 (the initial resumption of the upward trend in the index after its downturn in mid-1995), the median was 0.45% (mean also = 0.45%). Finally, from November 1996 to June 1997, the median change was 0.89% (mean = 0.89%).

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Non-permanent paid work

Lee Grenon and Barbara Chun

Some 87% of Canadian paid workers (9.7 million) have permanent employment. However, the pace of change in the workplace over the past decade means that many people no longer expect to remain with the same employer until they retire. Indeed, temporary work arrangements appear to be a growing trend.

Several earlier studies, working with relatively narrow definitions of non-permanent work, examined change in temporary work over time (see *Related studies*). This study, using concepts and data sources that have been developed to track new work arrangements, examines and compares the characteristics of permanent and non-permanent jobs and the workers[3] in these jobs. In particular, it makes use of the (expanded) 1995 Survey of Work Arrangements (SWA), which provides comprehensive information on this topic (see *Data sources, concepts and definitions*). The following observations are based on this survey.[4]

Newfoundland has highest rate

In November 1995, paid workers who described their main job as non-permanent accounted for 11% of the Canadian paid workforce. However, the prevalence of non-permanent work varied across the country. Workers with non-permanent jobs were more common in Newfoundland than in any other province, at 26% of all paid workers. British Columbia had the lowest rate (9%). Rates in Ontario and the Prairie provinces generally

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Related studies

Temporary or contract work has increased

In 1989 and 1994, the General Social Survey (GSS) studied temporary or contract workers, defined as paid workers with a specified end-date for their job. The self-employed and independent contractors were excluded. Among employees aged 15 to 64 years, workers with temporary or contract jobs were slightly more common in 1994 (9% or 970,000) than in 1989 (8% or 799,000) (Krahn, 1995).[1] This increase was greater in some industries than others. From 1989 to 1994, temporary or contract workers increased from 17% to 22% in construction, from 10% to 13% in social services, and from 8% to 11% in public administration. On the other hand, in the retail sector they dropped from 7% (88,000) in 1989 to 4% (52,000) in 1994. Over the same period, in "other consumer services,"[2] they decreased from 13% of all employees (136,000) to 11% (128,000). This change by industry may be more related to the business cycle downturn during the early nineties than to a broader structural change in the use of temporary or contract workers.

Temporary help services industry has grown

In the 1950s, the temporary help services industry emerged primarily to provide clerical, secretarial and manual workers as replacements for permanent employees who were temporarily absent from work (Akyeampong, 1989). The industry has evolved with the changing needs of business and a more diversified clientele. Today, businesses call on temporary help services, also known as personnel suppliers, to provide a wide range of workers (Hamdani, 1996). Employers need workers to supplement the core labour pool as well as to fill in for absent workers. They want a reliable supply of supplementary labour to meet unanticipated changes or seasonal fluctuations. Temporary help can also be used to fill a gap in staffing while employers decide how to commit long-term resources.

One way of measuring the growth of the personnel supplier industry is to track revenue, which reflects the number and duration of assignments (volume of work) and the type of service (skill level) provided (Hamdani, 1996). The industry experienced strong revenue growth throughout the 1980s and peaked in 1989. The increasing use of labour-saving technologies and the growing demand for workers with skills in short supply contributed to a decline in revenues that continued over the next three years. Despite an increase in 1993, personnel suppliers saw revenue remain close to 16% below the 1989 peak.

Short-term job tenure on the rise

The increase in temporary workers and temporary help services coincides with the growth of jobs with short-term tenure. Although the average complete duration of jobs did not show any significant trend between 1981 and 1994, job tenure became more polarized between long- and short-term jobs. This occurred across the entire workforce. It appears that many firms are using a core of long-term employees along with supplementary, short-term employees as the need arises (Heisz, 1996).

matched the national average, while those in Quebec and the Atlantic provinces exceeded it (Table 1).

Temporary, contract and term jobs most common

The range of non-permanent work arrangements is much broader than the usual image of "temps." In fact, temporary help agency workers were only a small segment of workers with non-permanent jobs in November 1995 (2%).[5] Most common arrangements were temporary, contract and term jobs. Casual and on-call jobs were also frequently cited. The other major type of non-permanent job was seasonal paid work.[6] Self-employed workers with a seasonal business by definition had a permanent job.

Data sources, concepts and definitions

Data sources

The **General Social Survey** (GSS) provides information on work and related characteristics. Its 1989 and 1994 cycles yielded data on temporary or contract workers with a specific end-date. Because the 1989 survey (Cycle 4) was conducted in January and February, and the 1994 survey (Cycle 9), over all 12 calendar months, possible seasonal effects in 1989 should be borne in mind if comparisons between the two cycles are made.

The **Survey of Employment Agencies and Personnel Suppliers** is an annual business survey. A redesigned questionnaire was introduced in 1993 to increase the information collected from each firm and to improve the existing measures from the survey.

The **Survey of Work Arrangements** (SWA), sponsored by Human Resources Development Canada, was conducted in November 1995 as a supplement to the Labour Force Survey. The objectives of the 1995 SWA were to update 1991 SWA estimates, to fill in data gaps identified since the 1991 survey, and to extend coverage to the self-employed. Some of the redefined concepts pertained to permanent and non-permanent jobs, and types of non-permanent jobs.

All sample survey estimates will have some level of sampling error. Measurement of the standard error of an estimate is expressed as the coefficient of variation (CV), which is expressed as a percentage of the estimate. For the SWA, an estimate of 40,500 or more at the Canada level will have an acceptable CV of less than 16.5%. Estimates of 18,000 to 40,499 must be **qualified**, or used with greater caution, because their CV is likely to fall between 16.6% and 33.3%, which means the estimate is subject to high levels of error. Estimates between 10,000 and 17,999 are not reliable and are considered confidential, while those under 10,000 are not releasable. Release criteria vary by province and region.

SWA concepts

Data for **permanent and non-permanent jobs** were collected in November 1995 by the Survey of Work Arrangements. Questions about job permanency were not asked of the self-employed. The survey asked employees about their main job (that is, the job in which they worked the most hours in the reference week):

"Is...'s job permanent, or is there some way that it is not permanent?"

The distinction between a permanent and non-permanent job applies to the job, and not to the worker's intentions. For example, a student working at a permanent job is considered permanent, even though he or she may intend to remain only temporarily in this job.

Permanent jobs are sometimes referred to as indeterminate since they have no specified date of termination.

A job that is *not* permanent will end on a predetermined date or as soon as a specified project is completed. Non-permanent jobs include term positions, casual work, seasonal work, and contract work. Unless otherwise stated, the analysis of non-permanent work in this study excludes seasonal workers and workers who did not state the type of non-permanent work that best described their job.

Respondents who reported that their main job was in some way not permanent were asked a follow-up question:

"In what way is...'s job not permanent?"

The response is classified as follows:

Seasonal jobs last only a limited period(s) at the same time each year. They are structured by the annual labour demands of industries such as agriculture, fisheries, forestry, construction and tourism.

Temporary, term or contract (non-seasonal) jobs are defined by the employer prior to hiring, to be terminated at a specified date or at the completion of a specified task or project.

On-call or casual jobs have work hours that vary substantially from one week to the next, no pre-arranged schedules (in other words, employees are called to work as the need arises), no usual pay for time not worked, and limited prospects for regular work over the long-term.

Work done through a temporary help agency is arranged and paid for by the agency.

Definitions

Personnel suppliers or temporary help services are firms in the personnel supplier industry (classified in the 1980 Standard Industrial Classification system as code 7712). The Survey of Employment Agencies and Personnel Suppliers provides financial and services statistics for the industry. Employment data from the Survey of Employment, Payrolls and Hours are available only for the combined industries of employment agencies and personnel suppliers. However, employment agencies are distinct from personnel suppliers. The former provide an intermediary service of matching job seekers with employers seeking workers, while the latter place their own

employees in other firms on temporary assignments.

Temporary or contract workers are those reporting a job with a specific end-date. The analysis of these workers is restricted to paid workers aged 15 to 64. Data are also available from the 1991 SWA; however, the definition of temporary or contract jobs for this survey was limited to jobs with a specified end-date within six months.

Hourly rate of pay and **weekly earnings** were derived from information collected by the Survey of Work Arrangements. Both hourly rate of pay and weekly earnings apply to all paid workers. This includes both hourly paid and salaried workers.

Usual weekly hours of work at main job as defined by the Labour Force Survey prior to January 1997 were the number of hours worked by the respondent in a typical week, regardless of whether all these hours were paid.

Industry analysis in this study uses the 1980 Standard Industrial Classification. Some industry groups have been combined to facilitate the analysis. Primary industries include agriculture, fishing, forestry and mining. Community, business and personal services also include miscellaneous services.

Occupation analysis in this study uses the 1980 Standard Occupational Classification. Some occupational groups have been combined to facilitate the analysis. Professional and technical occupations include natural and social sciences, religion, teaching, medicine, and artistic.

Table 1
Job permanency and non-permanent job type by region and province

		All paid workers **	Workers with permanent jobs	Workers with non-permanent jobs			
				Total †	Temporary, term and contract	Casual and on-call	Seasonal
Canada	'000	**11,084.5**	**9,683.5**	**1,271.6**	**633.6**	**415.8**	**182.2**
	%	**100**	**87**	**11**	**6**	**4**	**2**
Atlantic provinces	'000	787.2	627.7	153.8	59.5	49.7	42.2
	%	100	80	20	8	6	5
Newfoundland	'000	163.0	120.2	41.9	16.5	14.2 *	9.9 *
	%	100	74	26	10	9 *	6 *
Prince Edward Island	'000	45.3	35.6	9.2	2.9 *	2.6 *	3.4 *
	%	100	79	20	6 *	6 *	7 *
Nova Scotia	'000	320.8	272.1	47.1	19.5	14.6	12.9 *
	%	100	85	15	6	5	4 *
New Brunswick	'000	258.2	199.8	55.7	20.6	18.3	16.0
	%	100	77	22	8	7	6
Quebec	'000	2,670.5	2,277.6	369.3	192.0	113.5	49.9
	%	100	85	14	7	4	2
Ontario	'000	4,407.2	3,940.7	425.9	230.7	132.7	46.0 *
	%	100	89	10	5	3	1 *
Prairies	'000	1,812.6	1,599.0	192.5	87.4	72.7	27.1 *
	%	100	88	11	5	4	1 *
Manitoba	'000	418.7	371.2	41.0	19.2 *	15.8 *	--
	%	100	89	10	5 *	4 *	--
Saskatchewan	'000	326.0	285.9	36.5	18.0	12.6 *	--
	%	100	88	11	6	4 *	--
Alberta	'000	1,067.9	941.8	115.0	50.2	44.3	16.4 *
	%	100	88	11	5	4	2 *
British Columbia	'000	1,406.9	1,238.5	130.1	64.0	47.3	--
	%	100	88	9	5	3	--

Source: Survey of Work Arrangements, 1995

* *Qualified data (see* Data sources, concepts and definitions*).*

** *Includes workers who did not state their job permanency status.*

† *Includes workers in temporary help services and in other types of non-permanent jobs not listed above, as well as those who did not state their type of non-permanent job.*

Workers in non-permanent jobs are diverse

The increase in temporary and contract jobs, along with the growth in temporary help services, has raised concerns about a growing "disposable" workforce (Castro, 1993). The conventional image of workers in non-permanent jobs is that of young and low-skilled persons in clerical, service or manual jobs with limited opportunities for advancement and few benefits. However, applying such descriptors to all such jobs and workers masks their diversity.

Using cluster analysis, this study grouped together workers with common job and personal characteristics (see *Statistical techniques*). Four groups (or clusters) of workers with non-permanent jobs were identified on the basis of sex, age, level of education, marital status, job tenure, occupation group and weekly earnings. These clusters are of roughly equal size.

Cluster One workers are primarily young (15 to 24 years), single, male and students with short job tenure. These workers are broadly employed in sales; service; primary; transportation; and fabricating, material handling and processing occupations. On average, they have a low hourly rate of pay with less than full-time hours at the main job, and relatively low weekly earnings (Table 2).

Cluster Two consists mostly of married, adult (25 to 69 years) men. These workers are also broadly employed in managerial and administrative; natural sciences; teaching; primary; construction; transportation; and fabricating, machining, processing and other crafts occupations. They generally have longer job tenure than other workers with non-permanent jobs. Most people in this group also have a postsecondary certificate or university degree. Relatively high hourly rates of pay, longer work weeks, and high weekly earnings are characteristic of this group of workers.

Statistical techniques

Cluster analysis

Cluster analysis groups similar observations into a specified number of clusters. The use of four clusters in this study produced the most distinct groups of workers. This analysis is purely descriptive and is used simply to see how the data in the sample might be grouped.

The analysis was based on unweighted survey data. Each observation was included in only one cluster. The averages for hourly rate of pay, usual weekly hours worked, and weekly earnings by cluster (Table 2) were from weighted survey data.

Multiple linear regression

A linear regression model, $E(y) = \beta X$, was fit to the data to examine the relationship between a dependent variable, y, and a set of independent or explanatory variables, X. The set of parameters, β, was to be estimated from the data. In this analysis, the dependent variables were hourly rate of pay, weekly earnings, and usual hours worked.

When all explanatory variables are categorical, a special case of linear regression occurs, called analysis of variance (ANOVA). This forms the basis of this analysis. The explanatory variables investigated were permanent/non-permanent work status, age, sex, marital status, level of education, industry, occupation, job tenure, size of firm, contract coverage or union membership, school enrolment, province, and class of worker. As well, interactions involving permanent/non-permanent work status were included in the model. Hypothesis tests for the coefficients ($\hat{\beta}$) were conducted to determine whether the coefficient was not zero, that is, whether the independent variable explained a statistically significant proportion of the total variance of the dependent variable. In particular, the relationship between permanent and non-permanent work status and the dependent variables was evaluated.

Because of the intercorrelations among the explanatory variables, these coefficients must be interpreted within the context of the model. The explanatory variables were chosen on the basis of subject matter interest and statistical significance of their relationship with the dependent variables.

The exploratory analysis determined which variables of interest entered into the model at a significance level of $\alpha = 0.05$, and detected any problems arising from correlations among the explanatory variables. The regression coefficients were estimated and hypotheses tested, taking into account the stratified, multi-stage, clustered sampling design of the Survey of Work Arrangements. (Regression analysis procedures, which assume simple random sampling, may lead to invalid inferences.) For hourly rate of pay, weekly earnings, and usual hours worked, the coefficients for all variables appear in Table 7. The intercept is the baseline value of the dependent variable (hourly rate of pay, weekly earnings, or usual hours worked), that is, the mean value of the dependent variable when the independent variables are equal to the reference levels. The estimated regression coefficients ($\hat{\beta}$) for the independent categorical variables give the differential increase or decrease in the mean or expected value of the dependent variable for each level of the categorical variable versus the reference level.

For more information about techniques and software used, contact Barbara Chun at (613) 951-4687.

Table 2
Attributes of non-permanent jobs by shared characteristics of workers *

	Hourly rate of pay	Usual weekly hours	Weekly earnings **
	$		$
Cluster † 1	9.40	25.0	258
2	17.28	35.8	625
3	11.16	22.7	259
4	12.85	25.5	350

Source: Survey of Work Arrangements, 1995
* *Excludes seasonal workers and workers who did not describe their type of non-permanent job.*
** *See note 7.*
† *See* Statistical techniques.

Young, single, female students with short job tenure typify Cluster Three. Their principal occupations are in social sciences, clerical work, sales and service. A relatively low hourly rate of pay, shorter work week and lower weekly earnings are typical of this group.

Married and adult women with a postsecondary certificate or university degree, working in managerial and administrative, social sciences, teaching, medicine and health, clerical, or service occupations, form much of Cluster Four. Most of these workers have medium-to-long job tenure. Their moderately good weekly earnings are the result of relatively high hourly pay rates but less than full-time work.

Average earnings and hours worked are lower for adult women (Cluster Four) than for their male counterparts (Cluster Two). Weekly earnings for the two "younger" clusters (One and Three) are similar to one another.

How do permanent and non-permanent jobs compare?

Generally, higher rates of pay and more hours of work were offered with permanent jobs in November 1995 (Table 3). As a consequence, the average weekly earnings of workers with permanent jobs were 55% higher than those of workers with non-permanent jobs. As well, each major type of non-wage benefit was available to a higher percentage of workers in permanent jobs (Table 4).

These differences in job characteristics are cited by some theorists as evidence of a division of the labour market into segments with "good jobs" and "bad jobs" (Hipple and Stewart, 1996). They argue that one segment provides supplementary jobs with lower wage rates, fewer hours of work and, consequently, lower weekly earnings and fewer non-wage benefits than those offered by the other. However, job characteristics other than permanency may also influence these attributes.

Several factors may account for the discrepancies. For instance, the higher concentration of workers with permanent jobs in larger firms, and with union membership or collective agreement coverage, may account for some of their higher pay and hours worked (Table 5).

Occupation also makes a difference. Of all employees with permanent jobs, for example, 16% were in managerial and administrative positions in November 1995, compared with 6% of workers with non-permanent jobs.

Characteristics of workers make a difference

Workers in non-permanent jobs are more likely to be young, single or female, or to have shorter job tenure than workers in permanent jobs (Table 6 and Chart). These differences between workers could explain some of the differences between permanent and non-permanent jobs.

Job permanency is related to weekly hours and earnings

To see how job permanency is related to hourly rate of pay, hours worked

Table 3
Average earnings and hours by job permanency

	Paid workers with	
	Permanent jobs	Non-permanent jobs *
Hourly rate of pay ($)	15.39	12.70
Usual weekly hours worked	36.9	27.2
Weekly earnings ($)	579	374

Source: Survey of Work Arrangements, 1995
* *Excludes seasonal workers and workers who did not describe their type of non-permanent job.*

Table 4
Percentage of workers with non-wage benefits, and type of work schedule, by job permanency

	Paid workers with	
	Permanent jobs	Non-permanent jobs *
	%	
Employer-provided benefits		
Pension plan or group RRSP	55	20
Supplementary health care plan	64	19
Dental care plan	60	16
Paid sick leave	62	20
Paid vacation leave **	78	29
Flexible time schedule	24	22
Work schedule		
Regular daytime	70	52
Regular evening, night or graveyard shift	7	9
Rotating or split shift	11	10
On-call or casual	1	11
Irregular or other schedule	11	18

Source: Survey of Work Arrangements, 1995
* *Excludes seasonal workers and workers who did not describe their type of non-permanent job.*
** *See note 8.*

and usual weekly pay, it is necessary to control for possible effects due to other job and personal characteristics. This study used three multiple linear regression models to obtain the difference (coefficient) between the expected value of each of the above for each level of the explanatory (independent) variables, and the reference level. (see *Statistical techniques*).

The following interpretation also identifies which other job and personal characteristics were found to have statistically significant relationships with these three dependent variables.

Hourly rate of pay

No statistically significant difference was found for average hourly rate of pay between workers with permanent jobs and those with non-permanent jobs when other characteristics were held constant. These include age, sex, marital status, education, job tenure, firm size, class of worker, province, industry, occupation, and union membership or collective agreement coverage. The intercept term of $9.64 (column 1 in Table 7) represents the expected value of hourly rate of pay for the reference group; each subsequent coefficient ($\hat{\beta}$) represents the difference in hourly rate of pay relative to the reference level for each explanatory variable.

Usual number of weekly hours worked

Employees with permanent jobs usually had longer work weeks (roughly six more hours on average) than those with non-permanent jobs when all else was equal. This difference held across the workforce, which means that for this dependent variable no interactions between independent variables were found. The expected number of hours worked for the reference group was around 29.

Weekly earnings

Although job permanency was not related to hourly rate of pay, it was related to weekly earnings, which were, in turn, a function of hourly rate of pay and number of hours worked. The expected value for the reference group was approximately $282.

Average weekly earnings of workers in permanent and non-permanent jobs varied by workers' sex and education level. (In other words, these independent variables interacted.) The difference was greater for men than for women. When all other conditions were the same, high school-educated women with permanent jobs earned approximately $34 more each week than those with non-permanent jobs. Among men, the gap increased by approximately $61 to a cumulative difference of $95. The difference between workers in permanent and non-permanent jobs was greater for university graduates than for those with any other level of education.

Related characteristics

A number of other job and personal characteristics had a statistically significant relationship with at least one of the dependent variables.

When all other conditions were equal, hourly rate of pay, weekly hours usually worked, and weekly earnings were each related to job tenure, occupation, industry, union or collective agreement coverage, local firm size, marital status and province. Public workers had higher rates of pay and weekly earnings than private sector workers. As expected, students with jobs had fewer weekly hours and lower weekly earnings than workers not in school. Higher average earnings and longer average hours were

Table 5
Job characteristics by job permanency

	Paid workers with	
	Permanent jobs	Non-permanent jobs *
	%	
Union coverage		
Union member and/or covered by a collective agreement	39	31
Neither union member nor covered by a collective agreement	61	69
Class of worker		
Public employee	18	24
Private employee	82	76
Occupation		
Managerial and administrative	16	6
Professional and technical †	19	29
Clerical	17	16
Sales	8	10
Service	12	16
Primary ††	2	--
Construction	4	5
Transportation	4	3 **
Fabricating, material handling, machining, processing and other crafts	18	13
Industry		
Primary and construction	7	7
Manufacturing	19	9
Transportation, communication and other utilities	8	5
Trade	17	17
Finance, insurance and real estate	6	3 **
Community, business and personal services	36	51
Public administration	7	8
Local firm size		
Under 20 employees	34	43
20 to 99 employees	33	28
100 to 500 employees	22	17
Over 500 employees	11	11

Source: Survey of Work Arrangements, 1995

* *Excludes seasonal workers and workers who did not describe their type of non-permanent job.*

** *Qualified data (see* Data sources, concepts and definitions*).*

† *Natural sciences, social sciences, religion, teaching, medicine and health, and artistic occupations.*

†† *Farming, fishing, forestry and mining.*

also more likely for workers who were male, married, university-educated, in a managerial or administrative occupation, or in a long-term job.

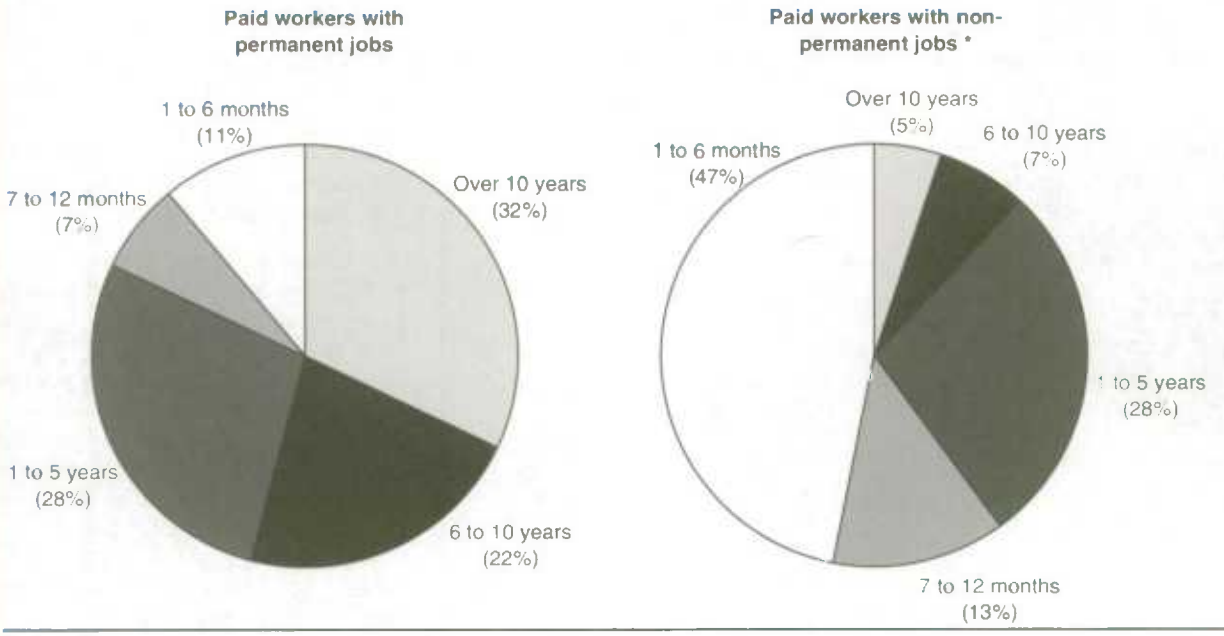
Conclusion

A growing number of workers have temporary jobs. Together with a thriving temporary help services industry and a polarization in job tenure, this suggests that new work arrangements are gaining ground.

According to the 1995 Survey of Work Arrangements, workers with non-permanent jobs included men and women of all ages and levels of education in many different occupations and industries. Generally, adult women in non-permanent jobs had lower averages than adult men for hourly rates of pay, usual number of weekly hours worked, and weekly earnings, while younger women and men had similar averages. Women tended to be concentrated in a narrower range of occupations than did men.

Job permanency does not seem to be related to an employee's hourly rate of pay, but rather to the number of hours usually worked in a week. Because workers in non-permanent jobs have fewer weekly hours of work, they have lower weekly earnings than workers in permanent jobs. The difference in weekly earnings is greater among men than women, and among university graduates. □

Chart
Workers with permanent jobs are more likely to have long job tenure.



Source: Survey of Work Arrangements, 1995

* *Excludes seasonal workers and workers who did not describe their type of non-permanent job.*

Contingent workers in the United States

The U.S. Bureau of Labor Statistics (BLS) defines contingent work as any job in which an individual does not have an explicit or implicit contract for long-term employment; it is a job structured to be of limited duration (Polivka, 1996). The BLS conducted a special supplementary survey on alternative work arrangements as part of the Current Population Survey (CPS) in February 1995. That survey provided the first measure of contingent workers in the United States using this definition. With various levels of restrictions on the definition, three measures of the contingent workforce were produced.

The broadest definition of contingent workers includes all employees who do not expect their job to last indefinitely, as well as self-employed or independent contractors who have worked as such for a year or less and who expect to continue working this way for only another year or less. According to this definition, six million Americans (5% of the U.S. workforce) are contingent workers. This broad definition is most similar to that of non-permanent jobs used in this study. However, while the BLS definition includes self-employed workers, the SWA does not.

A second BLS measure includes wage and salaried workers and self-employed and independent contractors who expect to be and have been in such employment for one year or less. Some 3% (3.4 million) of the American workforce fit this definition.

The most restrictive BLS definition includes only wage and salaried workers who expect to work in their current jobs for one year or less and who have worked for their current employer for one year or less. Under this definition, 2% or 2.7 million Americans are contingent workers.

Table 6
Selected characteristics of paid workers by job permanency

	Paid workers with	
	Permanent jobs	Non-permanent jobs *
	%	
Men	53	43
Women	47	57
Age		
15 to 16	1	3 **
17 to 19	4	11
20 to 24	9	19
25 to 34	27	28
35 to 44	31	22
45 to 54	20	12
55 to 64	7	4
65 to 69	--	--
Highest level of education		
0 to 8 years	4	4
Some secondary	14	14
High school graduation	23	19
Some postsecondary	9	12
Postsecondary certificate or diploma	32	29
University degree	18	23
Marital status		
Married or common-law union	66	49
Single and never-married	26	46
Other	8	5
School enrolment		
Not enrolled	91	74
Enrolled full- or part-time	8	25
Not applicable †	--	--

Source: Survey of Work Arrangements, 1995
* *Excludes seasonal workers and workers who did not describe their type of non-permanent job.*
** *Qualified data (see* Data sources, concepts and definitions).
† *Respondents aged 65 years or older were not asked for their enrolment status.*

Notes

1 The GSS Cycle 4 was conducted in January and February of 1989, and Cycle 9, over all 12 months of 1994. Comparisons between the two may be affected by seasonal factors.

2 These industries included in Krahn's study are food, beverages and accommodation; recreation; and other personal services.

3 These are paid workers whose main job is not permanent. A paid worker's main job is the one with the greatest number of usual weekly hours of work. In this study, analysis of multiple jobholders is limited to the main job.

4 The redesigned Labour Force Survey began providing monthly estimates of permanent and non-permanent jobs and types of non-permanent jobs in January 1997. Its new data at the time of writing were for the early months of 1997, and thus were not seasonally comparable with the SWA estimates from November 1995.

5 This estimate is qualified (see *Data sources, concepts and definitions*).

6 Seasonal jobs have been an important form of work throughout Canada's labour market history. In 1995, roughly 182,000 or 2% of all paid workers had main jobs that were seasonal. Two out of three non-permanent main jobs in primary industries were seasonal, as were nearly half (47%) of all non-permanent jobs in construction and 39% in transportation. However, many of these employees have been able to count on having work at specific periods of the year. So this study concerns, instead, the more recent emergence of non-permanent main jobs that are not seasonal.

7 For individual workers, weekly earnings are the hourly rate of pay multiplied by the weekly hours of work. An estimated average is calculated for all workers who reported *both* their hourly rate and weekly hours worked. Simply multiplying the averages for hourly rate and hours worked will not necessarily yield the average for reported weekly earnings, however, as some workers did not report their rate of pay (recorded as "not stated").

8 Some workers who were expected to take pay in lieu of vacation time may have responded negatively to the relevant question.

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Table 7
Estimated regression coefficients ($\hat{\beta}$)

Variable	Hourly rate of pay	Usual hours worked	Weekly earnings
	$		$
Intercept	9.64	28.55	281.80
Job permanency			
Permanent job	**	5.97	34.03
Reference level: non-permanent job			
Sex			
Male	2.65	4.92	116.89
Reference level: female			
Marital status			
Married and common-law	1.57	0.01 *	56.69
Other	1.12	1.01	53.21
Reference level: single and never-married			
Highest level of education			
0-8 years	-2.27	0.14 *	-60.05 *
Some secondary	-0.90	-0.82	16.11 *
Some postsecondary	0.55	-0.46 *	66.56
Postsecondary certificate or diploma	1.32	0.06 *	62.91
University degree	4.59	2.06	143.44
Reference level: high school graduation			
Industry			
Agriculture and other primary	3.18	3.86 *	170.33
Manufacturing	0.70	4.94	64.76
Construction	2.96	5.12	144.96
Transportation	1.41	2.24 *	85.05
Communication and other utilities	2.00	2.08 *	91.37
Trade	-0.92	-1.62 *	-30.64
Finance, insurance and real estate	1.10	3.52	42.82
Public administration	1.01	4.20	49.05
Reference level: business, community and personal services			
Occupation			
Managerial and administrative	3.69	3.71	193.52
Professional and technical †	2.99	0.79	107.53
Sales	0.12 *	0.32 *	12.86 *
Service	-1.28	-0.99	-43.37
Primary ††	-1.37	4.26	-13.39 *
Construction	1.31	1.32	85.89
Transportation	-0.41 *	3.94	24.16 *
Fabricating, material handling, machining, processing and other crafts	0.28 *	1.07	23.89
Reference level: clerical			
Job tenure			
1 to 6 months	-0.61	-1.90	-40.03
7 to 12 months	-0.61	-0.27 *	-26.22
6 to 10 years	1.46	0.42 *	63.01
11 to 20 years	2.70	0.81	117.50
Over 20 years	3.74	1.07	166.78
Reference level: 1 to 5 years			

* *Not significant at the $\alpha = .05$ level.*
** *In the initial estimation of the model, none of the levels for this variable was significant. The variable was excluded and the model was re-estimated.*
† *Natural sciences, social sciences, religion, teaching, medicine and health, and artistic occupations.*
†† *Farming, fishing, forestry and mining.*

Table 7
Estimated regression coefficients ($\hat{\beta}$) (concluded)

Variable	Hourly rate of pay	Usual hours worked	Weekly earnings
	$		$
Firm size (employees) at location where respondent works			
Under 20	-2.09	-0.59	-94.16
20 to 99	-1.24	0.11 *	-47.35
Over 500	1.37	0.25 *	51.56
Reference level: 100 to 500			
Age			
15 to 19	-0.85	-8.71	-71.08
20 to 24	-1.28	-1.96	-61.94
35 to 44	1.06	-0.80	33.75
45 to 54	1.58	-0.79	59.04
55 to 64	0.43 *	-2.07	-10.64 *
65 to 69	-1.09 *	-6.85	-154.55
Reference level: 25 to 34			
School enrolment			
Enrolled	**	-9.12	-92.45
Reference level: not enrolled			
Province			
Newfoundland	-2.36	1.11	-78.78
Prince Edward Island	-3.27	0.43 *	-118.98
Nova Scotia	-2.92	0.47 *	-107.39
New Brunswick	-2.55	1.15	-83.76
Quebec	-0.98	-0.88	-54.70
Manitoba	-2.10	-0.18 *	-81.50
Saskatchewan	-1.78	-0.55 *	-78.08
Alberta	-1.06	0.71	-30.71
British Columbia	0.95	-0.52 *	24.54
Reference level: Ontario			
Union membership or collective agreement coverage status			
"Yes"	0.65	-0.87	**
Reference level: "no"			
Class of worker			
Public sector employee	1.40	**	50.77
Reference level: private sector employee			
Interaction effects			
Permanent job, male	**	**	61.02
Permanent job, highest level of education			
0 to 8 years	**	**	-21.15 *
Some secondary	**	**	-53.18
Some postsecondary	**	**	-44.83 *
Postsecondary certificate or diploma	**	**	-10.47 *
University degree	**	**	83.29

Source: Survey of Work Arrangements
* *Not significant at the $\alpha = .05$ level.*
** *In the initial estimation of the model, none of the levels for this variable was significant. The variable was excluded and the model was re-estimated.*

Facing the future: Adults who go back to school

Dave Gower

Two decades ago, most Canadians finished their schooling as teenagers, or went on to college or university until their early twenties. They then entered adult life and left the classroom behind them.

Today, things are not so simple. When many of today's workers entered the workforce, the electric typewriter was state of the art. Today, spreadsheets and wordprocessors are standard office tools, and computerized controls and advanced communications are features of both factory work and construction. To keep up, an increasing proportion of Canadian adults have returned to school.

The number of adults (defined here as aged 25 to 64) attending school full time more than tripled between October 1976 and October 1996 (107,000 to 344,000).[1] This increase vastly outpaced the rate of growth in the adult population itself. As a consequence, the percentage of Canadian adults attending school full time more than doubled, from 1.0% to 2.1%. Over time, the cumulative number of adults upgrading their education would be far higher, although the data to calculate this effect are not readily available.

Adults can upgrade their skills and knowledge in many different ways. They can take in-house training provided by the employer. They can take part-time courses at night or on weekends.[2] Or they can return to school full time, which is the subject of this article (see *About the data*).

Full-time studies require a commitment of both time and money, often in short supply, especially when family obligations vie for attention. Many people may see no other way to obtain future employment, however.

This study addresses the following questions: Are the programs related to potential employment? Is adult education in some sense a substitute for unemployment, and does it affect the measured level of unemployment? Is adult education being pursued in regions with high unemployment? Does it help disadvantaged people "come from behind," or is it a mechanism for educated workers to maintain their advantage? Finally, do family responsibilities and the resulting financial need increase or decrease the likelihood of going back to school?

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About the data

Data sources

The monthly Labour Force Survey (LFS) asks respondents whether they attended school during the reference week. The interviewer's instructions specify that persons should be included if they were taking credit courses in a recognized educational institution, such as a high school, vocational college or university. People who attended school "full-time" [3] are the subject of this study.

The Adult Education and Training Survey (AETS), a supplement to the regular LFS, has been sponsored by Human Resources Development Canada (HRDC) a number of times over the years. The data used here are derived from the survey conducted in January 1994, which asked about activities during 1993. An extensive report on the findings was recently published (Statistics Canada, 1997).

This supplement asked many questions, including type of course, reason for enrolment, and source of funding. It covered all people aged 17 to 64 who said they took any training. For this study, tabulations were run using a subset of the respondents to the supplement. This subset consisted of all those who reported on the regular LFS questionnaire that they were full-time students. This serves to isolate those respondents to the AETS who are in this study.

Age cut-off

The federal *Adult Occupational Training Act* of 1967 defined an adult returning to school as anyone who was one year past the normal school leaving age and who had been out of school for at least a year. This implies a minimum age of 19 or 20.

This age was considered too low for this study, for two reasons. First, it would include most people who proceed directly to university and graduate in their early twenties. Second, it would conflict with Statistics Canada's usual definition of adult (aged 25 and over).

For both these reasons, age 25 is used here as the lower cut-off. This being said, many people who have been out of school for some time and have returned and left again before age 25 will be lost. However, the advantage of this trade-off is perhaps a "tighter" definition of the term "adult." In contrast, some people who should not be captured will be included; for example, university graduate students aged 25 and over who have been in the school system continuously and thus are not, strictly speaking, returning to school.

Because the LFS does not ask about school attendance of people older than 64, this age is the maximum for "adult student." While there are anecdotal reports of increasing numbers of seniors taking university and other programs, it is unlikely that many would apply their education in future jobs.

Major increases since the 1970s

Over the past two decades, going back to school has greatly increased in popularity, especially among women. In 1976, men were close to one-and-a-half times more likely than women to be attending school full time. By the start of the 1990s, however, around 20,000 more women than men were in school (Chart A).

This shift may be related to the steady rise in women's labour force participation rates over the period. Their attendance trends appear more volatile than men's, however (witness the sharp but temporary drops in 1984 and 1990), and by the mid-1990s men and women were found in the classroom in roughly equal numbers.

Most adult education is job-related

In January 1994, the Adult Education and Training Survey (AETS) asked people taking courses at any time during 1993 about the main reason for doing so.

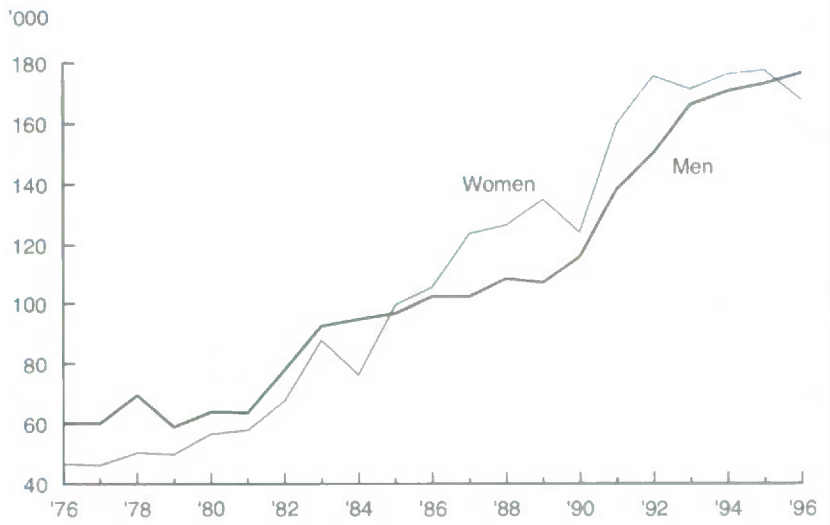
The 346,000 full-time students[4] aged 25 to 64 who participated in the survey reported taking 429,000 separate programs or courses. Of these, the main reason given in 83% of the cases was "present or future job." "Personal interest" was the reason in another 15%.

Improving one's work prospects is clearly the pervasive and dominant reason for going back to school full time. At least 76% of respondents from all subgroups gave a positive response to the question about job-related motivation. Over 90% of men over 40 did so (Table 1).

Younger adults were much more likely to go back to school full time: those in their late twenties were more than twice as likely as people in their early thirties to do so (6.7% versus 3.0%), and ten times as likely as people aged 40 to 64 (0.7%) (Table 2). These findings are more marked for

Chart A

Since the mid-1980s, adult women attending school full time have generally outnumbered men.



Source: Labour Force Survey, average of Octobers (see note 1)

Full-time attendance is the exception

Adults who go back to school full time are a select few. While many adults take some form of training or education, most do not commit to a full-time program.

According to the Adult Education and Training Survey, 5.8 million persons aged 17 and over attended an educational course or program in 1993 (this figure excluded young people who were regular full-time students). Some 4.9 million of these were aged 25 and over (Statistics Canada, 1997).

Regardless of their age or employment status, the bulk of adults' studies were related to work rather than personal interest (by a ratio of 5:3).Of those who took job-related training, 2.9 million or 70% received some assistance from their employer. Of the 5.8 million people taking adult education, 4.6 million were working.

These three facts together indicate that job-related training is very common. In contrast, the number of adult students measured in the Labour Force Survey is much smaller. In October 1993, 820,000 persons aged 25 to 64 went to school, 483,000 on a part-time basis, and 337,000, full-time.

This difference occurs for two reasons. One is that the AETS measures training and education at any time during 1993, whereas the LFS records activity during a particular week. At present, long-term information on the duration of training activity is unavailable. This gap, among others, will be filled eventually by longitudinal data from the Survey of Labour and Income Dynamics.

The second reason is that people who attend training during working hours are unlikely, when interviewed by the LFS, to say they are attending school. People who respond positively to the LFS question are a subset of all adults taking training. And those who go to school full time are only a minority of that subset.

Among adult students, going to school full time is gaining in popularity. During the late 1970s and early 1980s, well over two-thirds of adult students were attending school part time. By October 1996, the ratio was approaching one-half.

Table 1
Number of programs and courses, and proportion taken for job-related reasons, by students' age, sex and education *

	Both sexes		Men		Women	
	'000	%	'000	%	'000	%
Aged 25 to 64	**429**	**83**	**210**	**85**	**218**	**81**
Aged 25 to 29	159	86	91	87	67	85
Aged 30 to 34	133	79	74	80	59	76
Aged 35 to 39	52	81	10	85	42	81
Aged 40 to 64	85	86	35	91	50	82
Grades 0 to 8 / some high school	43	83	14	85	29	81
High school graduation	63	82	17	87	46	81
Some postsecondary	96	86	55	87	41	86
Postsecondary certificate or diploma	129	82	79	86	50	77
University degree	97	82	45	82	53	81

Source: Adult Education and Training Survey, 1994
* *Education refers to level already acquired, not to current studies.*

men than for women. In their late twenties, a moderately higher proportion of men were in school (7.1% versus 6.3%); by their late thirties, a higher proportion of women had gone back (2.3% versus 1.8%).

While this could be related to women's preparation for the workforce after staying home to raise children, the data do not support this theory. Women who had "not worked in the past year" – which would apply to most who had been caring for children full time for an extended period – were not as likely to go back to school full time as were women with recent work histories, regardless of age. This pattern was the opposite of men's.

Long-term joblessness not a factor

Have adults who return to school been out of work for some time? To address this question rigorously would require longitudinal data not currently available. At present, the data give information only on employment in the past year. It is not known when these people started their studies, nor, consequently, how long they

Table 2
Number of adults and proportion attending school full time, by age, sex and employment status

	Number of adults				Adults attending school full time			
			Not employed				Not employed	
	Total	Employed	Worked past year	Did not work past year	Total	Employed	Worked past year	Did not work past year
	'000				%			
Both sexes								
Aged 25 to 64	**15,594**	**11,195**	**1,296**	**3,104**	**2.2**	**0.8**	**8.8**	**4.5**
Aged 25 to 29	2,259	1,687	270	302	6.7	2.8	20.9	16.1
Aged 30 to 34	2,599	1,993	236	370	3.0	0.9	11.0	9.4
Aged 35 to 39	2,468	1,928	195	344	2.1	0.5	7.8	7.3
Aged 40 to 64	8,269	5,585	596	2,087	0.7	0.2	2.8	1.5
Men								
Aged 25 to 64	**7,787**	**6,194**	**639**	**954**	**2.1**	**0.7**	**9.5**	**6.5**
Aged 25 to 29	1,132	908	139	85	7.1	2.8	23.1	26.6
Aged 30 to 34	1,306	1,100	112	93	3.0	0.9	12.3	15.9
Aged 35 to 39	1,238	1,052	94	92	1.8	0.4	7.4	12.2
Aged 40 to 64	4,111	3,134	293	683	0.6	0.2	2.7	1.9
Women								
Aged 25 to 64	**7,807**	**5,001**	**657**	**2,150**	**2.2**	**0.9**	**8.1**	**3.6**
Aged 25 to 29	1,127	780	130	217	6.3	2.8	18.5	11.9
Aged 30 to 34	1,293	894	123	277	3.1	0.9	9.8	7.2
Aged 35 to 39	1,230	877	101	252	2.3	0.7	8.2	5.5
Aged 40 to 64	4,157	2,451	302	1,404	0.8	0.3	2.9	1.3

Source: Labour Force Survey, average of Octobers, 1992 to 1996

might have been jobless before returning to school. However, if being out of work for long periods of time gives people a strong push toward school, those who had not worked in the past year would be expected to have higher school attendance rates than those who had.

One subset of those who worked in the past year is the group currently employed. School attendance rates of people with jobs are very low (less than 1%; Table 2), undoubtedly because full-time studies demand considerable attention. As evidence of this, almost three-quarters of employed adult students work part time. Put another way, only about 7% of full-time adult students reported holding down a full-time job while going to school. Even this may be an overstatement. Some of these cases may reflect co-operative arrangements in which work and study are combined. In others, people may have been on educational leave.[5]

To investigate the relationship between length of joblessness and going back to school, it is better to concentrate on those who are not currently employed, comparing those who had not worked at any time in the past year with those who had. Contrary to expectations, only around 5% of all those who had not worked in the past year went back to school, compared with almost 9% of those not currently working but who had worked in the past year.

If age, sex and education are considered, this difference is substantially reduced, though still evident (see Appendix). For whatever reason, adult education becomes less likely with prolonged joblessness.

Effect on unemployment potentially important

If past employment history does not seem to correlate with the decision to go back to school, does the other widely used measure of labour market difficulty: unemployment?

There are two aspects to this question. One has to do with the way Statistics Canada defines unemployment and school attendance. This raises the question of whether unemployment is "hiding" among the ranks of adult students.

Another issue concerns adult education's effectiveness as a defence against unemployment in a "real" rather than statistical sense. For example, if adult students came from segments of the population that already had low unemployment rates, would adult education make much difference in the battle against unemployment?

Statistics Canada defines unemployment in accordanee with standard international conventions. Accordingly, full-time students are considered unemployed only if they are looking for a part-time job, and very few are. In October 1996, for example, only 9,000 full-time adult students were officially unemployed. Therefore, full-time student status drastically reduces the chance of a person's being counted among the unemployed.

What would the potential effect on unemployment be if full-time students were suddenly to re-enter the labour force? In the 1990s, the number of adult students was around one-third the size of the official unemployment count of people aged 25 to 64. Not all would join the ranks of the unemployed upon leaving the classroom, but the effect could nevertheless be substantial.

Trends are only roughly related

Have adult education rates followed unemployment trends over time, or have they moved in different directions? The relationship may give an idea of whether adult education fluctuates in response to economic conditions.

At the onset of the recessions of the early 1980s and 1990s, unemployment and adult education increased simultaneously. However, this does not necessarily mean that the two trends are closely related. For one thing, unemployment numbers rose much more than student totals. Perhaps more significantly, unemployment dropped from 1982 to 1989 and from 1992 to 1995, but the number of full-time adult students continued to climb.

It would be instructive to ask whether adult education seems to be more common where most needed; that is, in groups and regions with high unemployment.

Adult students and provincial unemployment rates

Since by definition one cannot easily be a full-time student *and* unemployed, an inverse relationship might be expected between the two; that is, the more adult students, the fewer unemployed. On the other hand, if adults return to school because of high unemployment, a positive correlation might exist. One appropriate statistic to compare with the percentage of adult students would be provincial unemployment rates for this age group (Chart B).

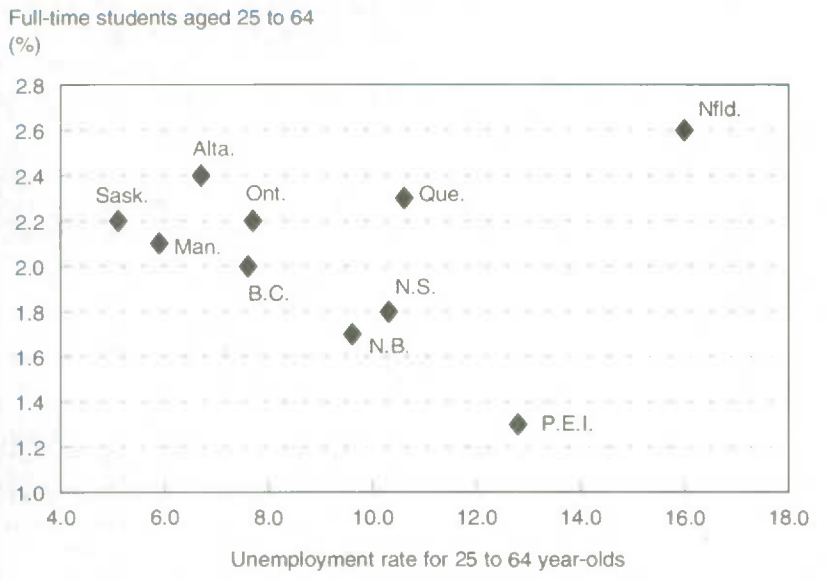
In general, with the exception of Newfoundland, and to a lesser degree Quebec, provinces with higher unemployment rates tend to have lower percentages of full-time students.

This is not to say that unemployment is negatively correlated with adult education, merely that other, more important factors are probably at play. Further analysis might involve an examination of the adult education programs and policies of the various provinces.

Coming from behind?

Up to this point, the focus has been on the relationship between unemployment and adult education. But the data can also be used to address adult education as a vehicle for reducing economic disadvantage. Are adult

Chart B
Provinces with higher unemployment rates tend to have lower percentages of full-time adult students.



Source: Labour Force Survey, average of Octobers, 1992 to 1996

students from relatively privileged groups simply improving their position even further?

Up to the end of the 1980s, adult students tended to have above-average levels of schooling (Haggar-Guénette, 1991). This implies that adult education was not a means of reducing economic inequality; if anything, it may have had the opposite effect, by polarizing educational attainment.

Because the Labour Force Survey fundamentally altered its education classification in January 1990 (Gower, 1993), direct comparison of current and earlier data is difficult. However, the basic pattern observed earlier seems to be applicable today.

Adults with a postsecondary certificate or diploma have lower school attendance rates than others with some form of post high school qualification. One reason may be that many of the latter have trades certificates or apprenticeship qualifications, rather than academic backgrounds.

Adult students aged 25 to 29 with university graduation account for less than one-sixth of adult students (53,000 out of 341,000). Many of these are undoubtedly in graduate studies; some may never have left the academic setting (except perhaps for summer jobs), so would not really fit the category of "going back." Because the available data cannot measure this, interpretation of this subgroup is difficult.

Adult students are usually high school graduates

Adults who did not complete high school are more likely than other groups to be economically disadvantaged. Their unemployment rate is nearly three times that of university graduates (12.5% versus 4.8%) (Table 3). Furthermore, the percentage of high school leavers who return to school full time is much lower than that of graduates. This finding resembles the patterns for on-the-job training (de Brouker, 1997). It appears that people who leave school while young are least likely to upgrade their qualifications later.

The difference is substantially greater among men than women. Men who do not finish high school are much less likely to return as adults than those who graduate (0.8% versus 1.3%). In contrast, women who return do so whether they finished high school or not (1.2%).

Why high school graduation should affect men's decisions to go back to school is not immediately obvious. Different occupation mixes might explain some of the difference between the sexes.[6] Perhaps female leavers are simply more willing to "start over." Regardless of the reason, during the 1990s less than 1% of male leavers were taking full-time studies.

Family situation makes a difference

On the one hand, people with children have an obvious incentive to upgrade their income earning skills. On the other hand, family responsibilities may reduce their freedom to take such a step.

Among adults living with partners, having children seems to discourage a return to school. This is true for both men and women up to age 40 (Table 4). After that age, the relationship changes: those with children are more likely to return to school than are people with partners but without children under 18. However, the children of these older adults are probably older themselves, so child-care arrangements are not likely a consideration. In addition, people without children are more likely to be at the upper end of the 40-to-64 age range, which may explain their decision not to pursue full-time studies.

One group stands out: young women who are single parents. One in 10 female single parents under age 30 goes back to school (10.4%), more than young adults as a whole (6.7%), and over four times the rate of young mothers with husbands present (2.4%).

Table 3
Unemployment rates (UR), and proportion of full-time students, by age, sex and education

	Both sexes		Men		Women	
	UR	FT students	UR	FT students	UR	FT students
		%		%		%
Aged 25 to 64	**8.4**	**2.2**	**8.3**	**2.1**	**8.6**	**2.2**
Grades 0 to 8 / some high school	12.5	1.0	11.8	0.8	13.5	1.2
High school graduate	8.6	1.3	8.2	1.3	8.9	1.2
Some postsecondary	9.5	6.3	9.7	6.3	9.2	6.4
Postsecondary certificate or diploma	7.7	1.9	7.8	1.9	7.6	1.8
University degree	4.8	3.9	4.7	3.7	4.9	4.1
Aged 25 to 29	**10.8**	**6.7**	**11.4**	**7.1**	**10.1**	**6.3**
Grades 0 to 8 / some high school	19.2	3.5	17.6	2.8	22.2	4.4
High school graduate	11.9	3.2	11.5	3.3	12.4	3.1
Some postsecondary	12.3	14.4	14.0	15.2	10.2	13.7
Postsecondary certificate or diploma	9.4	4.8	10.3	5.5	8.5	4.1
University degree	6.0	12.0	6.3	13.3	5.8	10.8
Aged 30 to 34	**9.3**	**3.0**	**9.0**	**3.0**	**9.7**	**3.1**
Grades 0 to 8 / some high school	16.4	1.9	14.8	1.5	19.4	2.4
High school graduate	10.0	1.9	9.7	1.7	10.4	2.1
Some postsecondary	9.8	7.6	9.5	7.5	10.2	7.8
Postsecondary certificate or diploma	7.9	2.3	7.4	2.3	8.5	2.4
University degree	4.9	4.8	5.0	5.3	4.8	4.2
Aged 35 to 39	**8.5**	**2.1**	**8.3**	**1.8**	**8.7**	**2.3**
Grades 0 to 8 / some high school	13.8	1.6	13.0	1.3	15.0	2.0
High school graduate	8.3	1.1	7.9	--	8.7	1.3
Some postsecondary	9.8	5.3	10.4	4.9	9.1	5.7
Postsecondary certificate or diploma	7.4	1.7	7.0	1.5	7.9	2.0
University degree	5.2	2.9	5.5	2.7	4.8	3.0
Aged 40 to 64	**7.4**	**0.7**	**7.1**	**0.6**	**7.6**	**0.8**
Grades 0 to 8 / some high school	10.1	0.4	9.7	0.3	10.8	0.5
High school graduate	7.0	0.5	6.5	0.6	7.5	0.4
Some postsecondary	7.8	2.2	7.3	1.7	8.3	2.7
Postsecondary certificate or diploma	7.1	0.7	7.4	0.6	6.8	0.8
University degree	4.1	1.1	3.9	0.8	4.5	1.4

Source: Labour Force Survey, average of Octobers, 1992 to 1996
Note: Education refers to level already acquired, not to current studies.

It is not difficult to understand why young female single parents resume full-time studies. Their unemployment rate is 27.1%, by far the highest of all the groups studied. This finding is even more dramatic, given the dampening effect on the unemployment rate of their high full-time school attendance rates.

Summary

Adult education is a growing trend, particularly in the past decade. Most of it seems to be motivated by a desire to improve job prospects.

The link between unemployment experience and going back to school is not strong. This is true for various population subgroups, particularly older men with lower education. Also, except for Newfoundland, provinces with relatively high unemployment do not have high percentages of adult students. This is not to say that adult education is completely unrelated to unemployment, simply that it is not concentrated in the same segments of society.

Adult education does not seem to be the chosen means for reducing economic inequality. People who go back to school are largely already in favourable economic circumstances. Also, with the notable exception of young single mothers, the presence of young children seems to be a deterrent to full-time schooling.

Overall, many of the people who appear to have the greatest need for improved economic prospects are not participating in adult education. □

Table 4
Unemployment rates (UR), and proportion of full-time students, by age, sex and family composition

	Men			Women		
	Total	UR	FT students	Total	UR	FT students
	'000		%	'000		%
Aged 25 to 64	**7,787**	**8.3**	**2.1**	**7,807**	**8.6**	**2.2**
Husband-wife family, children < age 18	3,048	6.4	1.4	3,012	8.4	1.6
Husband-wife family, no children	2,901	7.4	1.9	2,904	7.2	1.7
Single-parent family, children < age 18	108	15.5	3.2	524	16.4	6.2
All other	1,730	13.3	3.8	1,366	8.8	3.3
Aged 25 to 29	**1,132**	**11.4**	**7.1**	**1,127**	**10.1**	**6.3**
Husband-wife family, children < age 18	283	10.7	3.8	419	11.6	2.4
Husband-wife family, no children	449	9.8	7.5	391	7.5	7.3
Single-parent family, children < age 18	9	--	--	88	27.1	10.4
All other	392	13.5	9.0	229	8.9	10.3
Aged 30 to 34	**1,306**	**9.0**	**3.0**	**1,293**	**9.7**	**3.1**
Husband-wife family, children < age 18	611	7.1	1.8	748	9.7	1.8
Husband-wife family, no children	324	9.1	3.4	254	7.2	3.6
Single-parent family, children < age 18	14	--	--	118	20.8	7.7
All other	357	12.1	4.5	173	7.9	4.9
Aged 35 to 39	**1,238**	**8.3**	**1.8**	**1,230**	**8.7**	**2.3**
Husband-wife family, children < age 18	745	6.0	1.4	783	7.5	1.6
Husband-wife family, no children	200	9.3	2.0	174	8.2	2.0
Single-parent family, children < age 18	25	16.3	--	133	15.3	6.1
All other	268	13.9	2.7	139	9.7	3.0
Aged 40 to 64	**4,111**	**7.1**	**0.6**	**4,157**	**7.6**	**0.8**
Husband-wife family, children < age 18	1,409	5.4	0.8	1,062	7.0	1.0
Husband-wife family, no children	1,928	6.2	0.4	2,085	7.1	0.4
Single-parent family, children < age 18	60	12.6	--	185	11.3	3.2
All other	714	13.6	0.9	825	8.7	1.0

Source: Labour Force Survey, average of Octobers, 1992 to 1996

Notes

1 October was chosen since it seems to have had the highest and least volatile levels of full-time school attendance over the past two decades.

2 For a look at adults' enrolment in part-time credit courses, see Haggar-Guénette, 1991.

3 Respondents were asked to report student status based on the institution's definition, not their own.

4 In this study, the data from the 1994 AETS (conducted in January) refer only to those people who stated on the regular LFS that they were full-time students. The LFS data, used elsewhere in the article, refer to October of various years.

5 About a quarter of adult students working full time reported having a job from which they were absent. Although education leave and co-op student status are not included in the LFS as reasons for being absent from work, it is likely that a large proportion of this group had been excused from their obligations. The remainder, however, seem to be putting in the hours.

6 The LFS does not produce data on the occupational history of an individual, merely on the occupation of either the current or the most recent job in the preceding year, if any. For most purposes, this is useful. For full-time students, it is more problematic. Some may have part-time jobs, and others may have gone back to school because they could no longer find work in their previous field. In either case, the last occupation may not reflect past jobs.

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Appendix

Number of adults and proportion attending school full time, by age, sex, education and employment status

		Adults attending school full time			
				Not employed	
	Number of adults	Total	Employed	Worked past year	Did not work past year
	'000		%		
Both sexes					
Aged 25 to 64	**15,594**	**2.2**	**0.8**	**8.8**	**4.5**
Grades 0 to 8 / some high school	3,962	1.0	0.1	2.6	1.9
High school graduate	3,357	1.3	0.3	5.2	3.3
Some postsecondary	1,175	6.3	2.0	21.7	15.6
Postsecondary certificate or diploma	4,501	1.9	0.6	8.8	5.2
University degree	2,600	3.9	1.9	20.2	12.2
Aged 25 to 29	**2,259**	**6.7**	**2.8**	**20.9**	**16.1**
Grades 0 to 8 / some high school	349	3.5	--	6.4	7.9
High school graduate	488	3.2	1.0	10.7	8.5
Some postsecondary	243	14.4	5.8	37.4	33.6
Postsecondary certificate or diploma	733	4.8	1.8	17.3	16.9
University degree	446	12.0	6.0	43.2	42.0
Aged 30 to 39	**5,067**	**2.6**	**0.7**	**9.5**	**8.4**
Grades 0 to 8 / some high school	966	1.8	--	3.9	4.5
High school graduate	1,201	1.5	--	6.3	5.5
Some postsecondary	427	6.5	1.7	20.1	21.3
Postsecondary certificate or diploma	1,594	2.0	0.5	10.0	9.0
University degree	880	3.9	1.8	18.7	16.9
Aged 40 to 64	**8,269**	**0.7**	**0.2**	**2.8**	**1.5**
Grades 0 to 8 / some high school	2,648	0.4	--	--	0.7
High school graduate	1,668	0.5	--	--	1.3
Some postsecondary	505	2.2	--	8.7	6.0
Postsecondary certificate or diploma	2,174	0.7	0.2	3.5	1.8
University degree	1,274	1.1	0.4	5.3	4.1
Men					
Aged 25 to 64	**7,787**	**2.1**	**0.7**	**9.5**	**6.5**
Grades 0 to 8 / some high school	2,003	0.8	--	2.7	2.2
High school graduate	1,524	1.3	--	5.9	6.3
Some postsecondary	573	6.3	2.0	23.9	20.3
Postsecondary certificate or diploma	2,274	1.9	0.5	10.0	7.3
University degree	1,413	3.7	1.7	21.3	17.2
Women					
Aged 25 to 64	**7,807**	**2.2**	**0.9**	**8.1**	**3.6**
Grades 0 to 8 / some high school	1,959	1.2	--	2.6	1.8
High school graduate	1,833	1.2	0.3	4.6	2.4
Some postsecondary	601	6.4	2.0	19.6	13.5
Postsecondary certificate or diploma	2,227	1.8	0.6	7.7	4.3
University degree	1,187	4.1	2.1	19.2	9.1

Source: Labour Force Survey, average of Octobers, 1992 to 1996
Note: Education refers to level already acquired, not to current studies.

Intergenerational equity in Canada

Report on a conference

Since 1951, the proportion of Canadians aged 65 and over has grown. The growth in this group, coupled with a gradual decline in the group aged 19 and under, will likely continue well into the next century (see *Demographic trends*).

This demographic circumstance affects relations between older, younger and future generations. For example, in the 1990s older workers are worried about financing their impending retirement. Younger workers are concerned not only about financing their own retirement but also about supporting their predecessors'. Young people entering the labour force are having a difficult time finding full-time or lasting employment. Labour market trends such as declining labour force participation or the polarization of job tenure and of working hours are generally considered another aspect of this problem. These diminishing opportunities could have cumulative effects on the ability of younger generations to support themselves and their families.

The theme of intergenerational equity touches a variety of these social and economic issues, from the transfer of wealth between generations to the direction of these transfers and the relative status of persons in successive generations.

These concerns were the focus of "Intergenerational Equity in Canada," a conference co-sponsored by Statistics Canada and Human Resources Development Canada, and held at Statistics Canada in Ottawa on February 20 and 21, 1997. The conference was organized around eight principal topics and one consultation, which provide the section titles for this report. (See Appendix for a complete list of presentations and presenters.) What follows is a selection of highlights from the conference sessions.

This report was prepared by Ralph MacDonald of the Labour and Household Surveys Analysis Division. He can be reached at (613) 951-6893.

Impact of government programs across generations

What are the intergenerational effects of government expenditure and taxation decisions? Chantal Hicks' study suggested that the Canadian tax and transfer system aids seniors most, although children also benefit through education transfers.

Brian Murphy affirmed the benefit to the elderly, adding that between 1984 and 1994 those aged 15 to 24 also experienced slight increases in net transfers (government cash transfers less income and payroll taxes). Individuals with low incomes were disproportionately represented in these two age groups. Those aged 40 to 59 saw large decreases in net transfers.

Generational accounting

The technique of generational accounting measures the lifetime net tax burden of present and future generations while anticipating changes to fiscal policy and demographics. It is a long-term measure of fiscal policy preferred by some experts over annual deficit measures.

Philip Oreopoulos presented findings from a study that applied generational accounting to Canadian fiscal policy. While the analysis determined Canada's fiscal policy to be nearing a state of sustainability, the authors cautioned against using generational accounting to draw conclusions about intergenerational equity.

Chris Matier employed simulation models to consider the social welfare implications of reducing transfers from future to current generations. The study found that the effect on current generations varied with how quickly and by what method (lump-sum or wage/tax mixes) this reduction was implemented.

Similarly, Marcel Mérette discussed the effects of government debt reduction across generations, focusing on growth in human capital rather than gross domestic product. This study suggested that young and future generations would benefit most if debt reduction were achieved through taxes on wages or consumption.

Summarizing initial analytical results of a sequence of overlapping birth cohorts, Michael Wolfson noted that cohorts born before 1940 were net beneficiaries of the government taxes and expenditures under study. Redistribution tends to be from men to women, and about half of the population are net gainers. He also noted that inequalities between generations could not be accurately assessed without an understanding of the inequalities within generations.

Structure of labour markets and their interaction with social programs

Garnett Picot addressed the factors underlying low income trends for four generations: children (aged 0 to 14), young adults (25 to 34), the older working-age population (45 to 54) and the elderly (65 and over). Low income is dependent on individual earnings, transfers and family composition. The elderly saw marked decreases in low income rates between the early 1980s and 1995. On the other hand, the relative stability of the other three generations masked an increased reliance on transfers as an income source in the 1980s. Also hidden were the dramatic changes in the Canadian family since

Upcoming publications

Two books are planned for publication. The first will address the use of generational accounting in the Canadian context. The effect of government programs on different generations, the burden this may place on future generations, and the implications for economic growth and inequality are all examined. The book also addresses the limitations of generational accounting as a tool for setting and implementing fiscal policy, and the need for better statistics to help envision the legacy that will be left to future generations.

It is increasingly suggested that the current generation of young Canadians will not be as well-off as their parents. The second book will examine this theme by focusing on how families and labour markets influence the well-being of children and their long-term prospects as adults. Among the issues addressed are the effect of low income during childhood on future earnings during adulthood, the relationship between the income and education of parents and the health and educational attainment of their children, and the effect of parental divorce on the marital and fertility choices that children eventually make. The declining economic status of the young (relative to older) generations is also documented.

Both books are slated for publication in autumn 1997. For more information on these books or the conference contact Miles Corak at (613) 951-9047; Internet: coramil@statcan.ca.

the early 1970s. Because of these demographic changes, the incidence of families with low incomes declined until the early 1990s, then grew, despite transfers.

The declining participation of young men in the workforce was the focus of René Morissette's discussion. The 1990s have seen high youth unemployment, increasing inequality in the distribution of earnings and a widening income gap between younger and older workers. Information from the Labour Force Survey and from income tax data was used to determine, among other conclusions, that since the early 1980s young male workers have been moving more slowly into better paying jobs than had previous cohorts. Noted also were relative decreases in rates of unionization and pension coverage for this group.

Ross Finnie concluded this session with a discussion of the shortfall between market income and low income cutoffs for families between 1982 and 1993. Based on Statistics Canada's Longitudinal Administrative Databank, the study showed that spells of low income, for example, have lengthened while the distribution of family incomes has been polarizing.

Meaning and measurement of intergenerational equity (Panel discussion)

Laurence Kotlikoff talked about the prevalence of generational accounting and its application in 16 countries, much of this with government participation. In his opinion, agencies that are at arm's length from their governments may be the best organizations to carry out generational accounting. The technique does have deficiencies. For example, it lacks general feedbacks and adjustments for unexpected future shifts. But it does provide a way to understand intergenerational income redistribution and a country's patterns of saving. He encouraged the Canadian government to adopt generational accounting.

Arguing against this technique, Lars Osberg said that income and income distribution mattered, both between and within generations. Generational accounting is fundamentally about the split in expenditure between public and private. Public policy will help to define the debate; unbiased statistics will inform it. Most important to the discussion is the transfer of resources within families, a component often ignored in generational accounting.

Focusing as well on generational accounting, John Helliwell contended that six elements would summarize the legacy to be passed from one generation to the next, and that many of these are now missing in the standard generational accounting framework: fiscal deficit and debt; constructed capital (for example, public buildings), infrastructure and knowledge (research and development); human capital (physical and mental health and education); natural resources and physical environment; the institutional environment (for example, legal and welfare systems); and social capital (shared values and activities). Important to these considerations is who accumulates and distributes these assets and liabilities. The list would include governments, families, and multinational agencies. He suggested that both good and bad effects between generations might also be experienced within generations.

Intergenerational income mobility

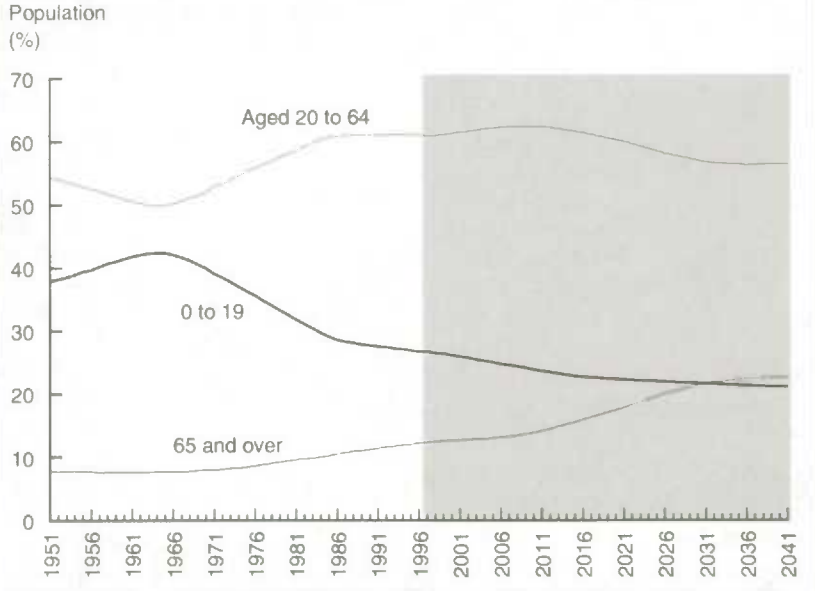
Nicole Fortin and Sophie Lefebvre opened the discussion on intergenerational mobility with an investigation into the private transmission of economic status from fathers to their sons and daughters. According to data from the General Social Surveys of 1986 and 1994, Canadians have experienced greater intergenerational mobility than the British or Americans, although private transfer of resources seems to have been decreasing over time.

Miles Corak analyzed tax data for 1982 to 1994, comparing the incomes of sons and daughters with those of fathers. The results were interpreted using selected social and neighbourhood variables. The findings confirmed that an individual tends to be

Demographic trends

Older people made up about 8% of the total population in 1951 and they maintained that level until 1975. By 1996, however, they had increased to 12%. Meanwhile, those aged 19 and under peaked at 42% in 1964 and 1965, then diminished to just 27% by 1996.

Seniors make up a growing proportion of the population.



Sources: Census of Canada (1951 to 1996); Population Projections for Canada, Provinces and Territories 1993-2016 *(1997 to 2041).*

Note: Statistics Canada produces several population projections. The one shown here is projection number 2, a medium growth scenario.

more successful if his or her father had market income, if the family did not move often, and if there were not many siblings. And while daughters do not make as much money as sons, their incomes are not as strongly influenced by most of the measures examined.

The discussion continued with Céline Le Bourdais' use of General Social Survey data to reconfirm the long-term effects of family instability, especially divorce, on children.

Health and education of children

Tamara Knighton began this segment with an inquiry into parental access to health care services during a child's first year. Using the database from the Linked Census – Manitoba Health Services Insurance Plan Project, the study showed that parents with higher education made greater use of preventive care services; those with lower education made greater use of treatment care services. A similar relationship was seen for parents with high and low incomes. And these differences in use of health care may have cumulative effects on the child.

Laval Lavallée discussed intergenerational transfer of education and literacy. This analysis confirmed that parents' intellectual capital tends to determine the educational achievement of their children. The study also indicated an increasing polarization in educational achievement among families.

Asset and Debt Survey

Mike Sheridan described the proposal for the Asset and Debt Survey (ADS) at Statistics Canada. The most recent survey on assets and debts was in 1984 (Survey of Consumer Finances). The ADS would refresh and expand upon that information as well as measure change due to phenomena such as the increase in lone-parent families and individuals living alone, the recession of the early 1990s, the increased popularity of mutual funds, and the aging population. It would permit more detailed and regional analysis of wealth accumulation in Canada. It should also further understanding of the future value of pensions, of the characteristics of debt and debt holders, and of "positive" (for example, mortgages) versus "negative" debt.

Intergenerational support through the family

With data from the 1990 General Social Survey, Leroy Stone and Ingrid Connidis looked at the patterns of exchanges and supports between parents and children and argued that generational accounting needed to find ways to include "private" transfers. While *perception* of need is crucial to this discussion, the data suggest that parental support often continues well after the children have left home, entered the labour market and begun their own families. Over the long term, parents probably give more to their children than they receive. And, while aging parents do receive increasing support of various kinds from their children, two-thirds of parents aged 75 years and over receive no support from children who do not live with them.

Paul Bernard discussed living arrangements of young people in the 1980s and 1990s, using the annual Survey of Consumer Finances. This

study indicates that young people are residing longer with their parents. When they do leave home they live increasingly in non-couple households.

David Cheal presented a study on poverty and dependence at different ages, using data from the 1993 Survey of Labour and Income Dynamics (SLID). The survey focuses on the family circumstances of the individual, rather than on the family or household as a whole, facilitating a closer look at young people who no longer live with their parents. His study suggests that childhood poverty extends into young adulthood, that people whose parents had low incomes have higher rates of financial dependence than other adults, including the elderly.

Directions for policy (Panel discussion)

Bob Baldwin proposed that younger generations should inherit capital stock that provides good employment opportunities; knowledge and skills for participation in society; a bountiful natural environment; and social peace. Important questions related to intergenerational equity thus arise: how will retired people continue to have adequate incomes without imposing too much burden on younger generations? How can Canadians ensure that substandard retirement incomes do not become more and more prevalent?

In discussing intergenerational equity, Susan McDaniel called for more co-operation among the academic disciplines involved in socio-economic studies, as well as more research on how resources are shared within families. Current data do not fully capture the dynamism of intergenerational relations, but longitudinal data, such as SLID, begin to address the problem. She stated that more information was needed on how private intergenerational transfer of resources was changing with shrinking public transfers.

Summing up, Arthur Kroeger talked about the substantial changes to Canadian society in recent decades. Those now retired appear to be continuing to benefit while younger generations may be faring less well than previously. He suggested that this was a time when careful assessment and creative applications of data were crucial in dealing with demanding social issues such as intergenerational equity.

The author wishes to thank Michel Côté for his contribution to this report.

□

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Appendix
Presentations and participants

The impact of government programs across generations

Chair:
Andrew Sharpe (Centre for the Study of Living Standards)

The Age Distribution of the Tax/Transfer System in Canada
Chantal Hicks (Statistics Canada)

Impacts of Changing Tax/Transfer Systems on the "Lifetime" Distribution of Net Taxes: 1984 to 1996
Brian Murphy (Statistics Canada)

Generational Accounting of Workers' Compensation Unfunded Liabilities
Morley Gunderson (University of Toronto)
Douglas Hyatt (University of Toronto)

Discussants:
James Pesando (University of Toronto)
Paul Lanoie (HEC, University of Montréal)

Generational accounting

Chair:
Ronald Hirshhorn (Consultant)

Applying Generational Accounting to Canada: Issues, Results, and Interpretations
Philip Oreopoulos (University of California at Berkeley)
François Vaillancourt (University of Montréal)

The Economic and Social Welfare Effects of Reducing Transfers from Future to Current Generations
Steven James (Finance Canada)
Chris Matier (Finance Canada)

The Effects of Deficit Financing on Intergenerational Equity and Growth: The Case of Canada
Marcel Mérette (Finance Canada)

Generational Accounting with Heterogeneous Populations
Michael Wolfson (Statistics Canada)
Steve Gribble (Statistics Canada)
Zhengxi Lin (Statistics Canada)
Geoff Rowe (Statistics Canada)

Discussants:
William Scarth (McMaster University)
Alice Nakamura (University of Alberta)
Huw Lloyd-Ellis (University of Toronto)

The structure of labour markets and their interaction with social programs

Chair:
Jean-Pierre Voyer (Human Resources Development Canada)

Changing Labour Market Conditions, Government Transfers, and Poverty among the Young and Old
Garnett Picot (Statistics Canada)
John Myles (University of Florida)
Wendy Pyper (Statistics Canada)

The Declining Labour Market Status of Young Men
René Morissette (Statistics Canada)

Incomes of the Young and Old: Evidence from the Longitudinal Administrative Databank
Ross Finnie (Carleton University)

Discussants:
Dean Lillard (Cornell University)
Ging Wong (Human Resources Development Canada)
David Gray (University of Ottawa)

Panel discussion: The meaning and measurement of intergenerational equity

Chair:
Mike McCracken (Informetrica)

Discussants:
John Helliwell (University of British Columbia)
Laurence Kotlikoff (Boston University)
Lars Osberg (Dalhousie University)

Intergenerational income mobility

Chair:
Allen Zeesman (Human Resources Development Canada)

Intergenerational Income Mobility Using a Parsimonious Occupation Classification System
Nicole Fortin (Stanford University and University of Montréal)
Sophie Lefebvre (*CIRANO*)

How to Get Ahead in Life: Some Correlates of Intergenerational Income Mobility in Canada
Miles Corak (Statistics Canada)
Andrew Heisz (Statistics Canada)

Appendix (concluded)
Presentations and participants

Intergenerational Equity: The Impact of Family Disruption in Childhood on Adult Outcomes in Canada
Céline Le Bourdais (INRS – Urbanisation, University of Quebec)
Nicole Marcil-Gratton (University of Montréal)

Discussants:
David Zimmerman (Williams College)
Guy Lacroix (Laval University)

The health and education of children

Chair:
Brian Ward (Human Resources Development Canada)

The Impact of Socioeconomic Inequity on the Health of Young Children
Jean-Marie Berthelot (Statistics Canada)
Christian Houle (Statistics Canada)
Tamara Knighton (Statistics Canada)
Cameron Mustard (University of Manitoba)

Parents and Children: Education and Labour Market Activities
Patrice de Broucker (Statistics Canada)
Laval Lavallée (Vestimetra International Inc.)

Discussants:
Geoff Dougherty (Montréal Children's Hospital)
Chris Ferrall (Queen's University)

Presentation and consultation on the Asset and Debt Survey

Mike Sheridan (Statistics Canada)

Intergenerational support through the family

Chair:
Suzanne Peters (Canadian Policy Research Networks)

Intergenerational Exchange in Canada: Pattern and Socioeconomic Correlates
Leroy O. Stone (Statistics Canada)
Carolyn Rosenthal (McMaster University)
Ingrid Connidis (University of Western Ontario)

Eternal Youth? Changes in the Living Arrangements of Young People in Canada during the 1980s and 1990s
Dominique Meunier (Institut d'études politiques de Paris)
Johanne Boisjoly (University of Quebec in Rimouski)
Paul Bernard (University of Montréal)
Roger T. Michaud (University of Montréal)

Hidden in the Household: Poverty and Dependence at Different Ages
David Cheal (University of Winnipeg)

Discussants:
Roderic Beaujot (University of Western Ontario)
Ted Wannell (Statistics Canada)
Robin Rowley (McGill University)

Panel discussion: Directions for policy

Chair:
Jim Lahey (Human Resources Development Canada)

Discussants:
Bob Baldwin (Canadian Labour Congress)
Arthur Kroeger (Former Deputy Minister, Government of Canada)
Susan A. McDaniel (University of Alberta)

An overview of permanent layoffs

Garnett Picot, Zhengxi Lin and Wendy Pyper *

Canadians are increasingly concerned about permanent layoffs. Many feel job instability and the possibility of job loss have increased in the 1990s. Governments, confronted with a large number of permanent layoffs each year, need to respond appropriately in order to improve labour adjustment so that displaced workers can quickly find a new job.

Permanent layoffs often lead to the use of Employment Insurance (EI) or even social assistance. These layoffs and the resulting worker displacements need to be better understood. No fewer than three dimensions are critical to the discussion: a) the cause of displacement – permanent layoffs are driven by numerous economic forces, on both the demand and supply side; b) the types of workers involved – some displaced workers have stable employment histories while others are repeatedly displaced; and c) the labour market outcomes – many displaced workers gain while others lose in the post-displacement process.

Using a new longitudinal data source on job separations, this article looks at the first of these issues, namely, the underlying causes of most permanent layoffs (see *Data sources*). It examines the role played by the business cycle, by changes in industrial demand – often associated with structural change – and by firm size. Other factors likely to play a role in layoffs are also considered. Finally, the study provides an overview of the work displacement process in the Canadian economy.

Data sources

This study is based on the Longitudinal Worker File (LWF) created by Statistics Canada. The LWF is a 10% random sample of all Canadian workers. It was constructed by integrating data from three sources: the Record of Employment (ROE) files of Human Resources Development Canada, the T4 files of Revenue Canada, and the Longitudinal Employment Analysis Program (LEAP) file of the Business and Labour Market Analysis Division (BLMA), Statistics Canada. The last one is an employer file.

Employers issue an ROE to every employee working in insurable employment who has had an interruption in earnings. These records indicate, among other things, the reason for the work interruption or separation. Because they provide information on all workers (covered by EI) with separations, they can be used to determine different types of job separations. In addition, employers issue each employee a T4 slip summarizing his or her annual earnings.

Thus, all workers at risk of job separations, as well as those who actually separate from their jobs, are known from these two data sources in each year. Statistics Canada combines these data sources with additional information from the LEAP file to create a longitudinal file of all Canadian workers: the LWF.

In the LWF, job separations are classified into three categories (quit, layoff and other) according to the reason for separation indicated in the ROE. A layoff is a separation due to shortage of work, and is considered temporary if the separated worker returns to the same employer in the same or following year; otherwise, it is permanent. If a worker is observed with a firm in one year but not in the previous one, this is considered a hire. This includes hiring to replace workers who have left, as well as expansion hiring.

Permanent separation rates (the quit rate, permanent layoff rate and the "other" permanent separation rate) are calculated as the number of permanent separations divided by the total number of persons employed at any time during the year (that is, the total number of person-jobs). The hiring rate is the number of hires divided by total employment in the year. On the other hand, the temporary separation rate is calculated by using the number of persons with at least one temporary separation, rather than the total number of temporary separations. The LWF, with its large sample size (1.8 million records in 1988), allows a detailed analysis of job separations by age group or industry.[1]

Comparisons with the Labour Market Activity Survey (LMAS) reveal that for the late 1980s the number of permanent separations and layoffs drawn from the survey was comparable to that in the LWF, in spite of the fact that one is drawn from a sample survey and the other is based on administrative data.

Cyclical variation

Permanent layoffs have certain basic features. For example, their number remains high over all phases of a business cycle. It moved from 1.2 million in 1982, at the worst of the recession of the early 1980s, to 1.1 million in 1989, at the peak of the business cycle. By 1991, the middle of the last recession, it had reached 1.3 million (Table 1). The labour market is thus characterized by an ongoing and more or less stable number of layoffs, irrespective of expansions or recessions.

* *Adapted from an article in* Canadian Economic Observer *(Statistics Canada, Catalogue no. 11-010-XPB) 10, no. 2 (February 1997): 3.1-3.14.* *Garnett Picot is Director of the Business and Labour Market Analysis Division (BLMA). He can be reached at (613) 951-8214. Zhengxi Lin and Wendy Pyper are also with the BLMA. They can be reached at (613) 951-0830 and (613) 951-0381, respectively.*

Table 1
Job separations and hirings

	Number of separations							
	Permanent				Temporary			
	Total	Layoffs	Quits	Other	Total	Layoffs	Other	Hirings
	'000							
1978	2,854.0	1,003.7	991.6	858.7	2,153.4	1,159.3	994.1	..
1979	3,038.2	902.7	1,183.5	952.0	2,174.8	1,139.2	1,035.6	3,293.7
1980	2,974.4	867.5	1,139.5	967.5	2,352.5	1,274.6	1,077.9	3,116.5
1981	3,476.4	1,042.9	1,361.4	1,072.2	2,659.8	1,518.7	1,141.1	4,192.1
1982	2,893.7	1,204.8	761.7	927.2	3,323.4	2,031.6	1,291.8	2,003.8
1983	2,640.2	1,098.7	696.8	844.7	2,598.8	1,600.5	998.3	2,992.9
1984	3,118.4	1,159.9	937.0	1,021.4	2,885.7	1,690.5	1,195.3	3,249.2
1985	3,395.5	1,152.8	1,145.4	1,097.3	2,862.8	1,626.6	1,236.2	3,966.0
1986	3,584.2	1,148.4	1,295.0	1,140.9	2,940.5	1,656.3	1,284.2	4,056.2
1987	3,893.6	1,149.4	1,539.6	1,204.5	2,860.6	1,569.6	1,291.0	4,466.5
1988	4,234.9	1,153.6	1,789.6	1,291.8	2,988.8	1,571.8	1,417.0	4,649.5
1989	4,252.6	1,137.4	1,813.0	1,302.2	3,073.5	1,624.0	1,449.4	4,761.4
1990	4,118.4	1,290.3	1,526.8	1,301.3	3,430.0	1,892.3	1,537.7	3,861.1
1991	3,537.2	1,283.8	1,070.5	1,182.9	3,479.1	2,006.3	1,472.8	3,078.6
1992	3,213.7	1,225.3	884.5	1,103.9	3,279.3	1,971.4	1,307.9	2,902.7
1993	3,074.0	1,165.2	837.3	1,071.5	3,085.5	1,840.6	1,245.0	2,952.0
1994	..	..	..	..	..	..	..	3,424.1
	Separation rates							
	Permanent				Temporary			
	Total	Layoffs	Quits	Other	Total	Layoffs	Other	Hiring rate
	%							
1978	20.9	7.4	7.3	6.3	12.9	7.0	6.5	..
1979	21.6	6.4	8.4	6.8	12.7	6.6	6.7	23.4
1980	21.0	6.1	8.0	6.8	13.2	7.0	6.8	22.0
1981	22.6	6.8	8.9	7.0	13.6	7.6	6.7	27.3
1982	20.8	8.7	5.5	6.7	17.8	10.8	8.1	14.4
1983	18.9	7.8	5.0	6.0	14.8	9.0	6.4	21.4
1984	21.3	7.9	6.4	7.0	15.8	9.1	7.3	22.2
1985	22.0	7.5	7.4	7.1	15.0	8.4	7.2	25.6
1986	22.2	7.1	8.0	7.1	14.7	8.1	7.2	25.2
1987	22.9	6.8	9.1	7.1	13.7	7.3	6.9	26.3
1988	23.8	6.5	10.1	7.3	13.8	7.0	7.3	26.2
1989	23.3	6.2	9.9	7.1	13.7	7.1	7.2	26.0
1990	23.0	7.2	8.5	7.3	15.3	8.3	7.7	21.6
1991	21.0	7.6	6.3	7.0	16.3	9.3	7.8	18.3
1992	19.8	7.5	5.4	6.8	16.0	9.4	7.2	17.9
1993	19.2	7.3	5.2	6.7	15.5	9.1	7.0	18.5
1994	..	..	..	..	..	..	..	21.0

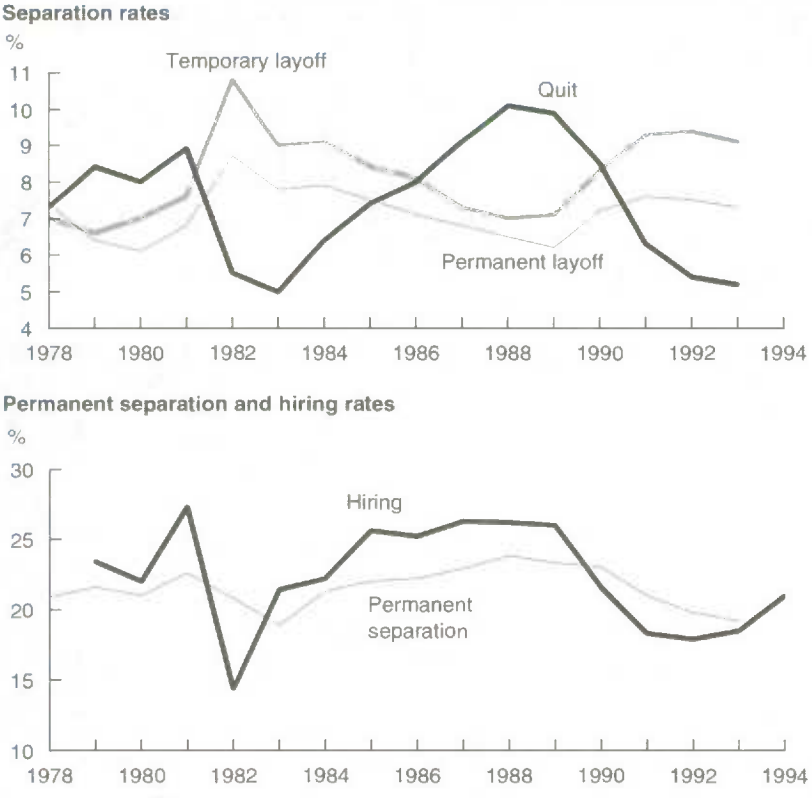
Source: Longitudinal Worker File

Note: Permanent separation rates are calculated by dividing the number of permanent separations by the total number of employed persons at any time during the year. Temporary separation rates, on the other hand, are calculated with the number of persons who have had at least one temporary separation, rather than with the total number of temporary separations.

The permanent layoff rate does decline during expansions, but not dramatically. It moved from 8.7% in 1982 to 6.2% in 1989, and reached 7.6% in 1991 (Chart A). While temporary layoffs increased sharply and quits and hirings fell dramatically during recessions, permanent layoffs were not as cyclically sensitive. Thus, during the recession of the early 1980s, temporary layoffs rose by 78% (from 1.1 to 2.0 million), quits fell by 35% (from 1.2 to 0.8 million) and hirings by 39% (from 3.3 to 2.0 million), while permanent layoffs increased by under 34% (from 0.9 to 1.2 million). The most recent recession tells a similar story. From 1989 to 1991, temporary layoffs increased by 23% (from 1.6 to 2.0 million), quits declined by 40% (from 1.8 to 1.1 million), and hirings by 35% (from 4.8 to 3.1 million); on the other hand, permanent layoffs rose by only 13% (from 1.1 to 1.3 million).

Regression analysis was used to assess the cyclical sensitivity of these rates. This technique correlates the change in the four rates (for hirings, quits, temporary and permanent layoffs) with changes in the unemployment rate, a useful indicator of cyclical variation in the labour market from 1978 to 1992. The results confirmed those observed above. A one percentage-point increase in the unemployment rate was associated with a 0.9 percentage-point fall in the quit rate, a 1.4 point fall in the hiring rate, and a 0.6 point increase in the temporary layoff rate, but only a 0.3 point increase in the permanent layoff rate. The last rate is the least cyclically sensitive.

Chart A
Permanent layoffs are not as sensitive to the business cycle as temporary layoffs.



Source: Longitudinal Worker File

In spite of suggestions that a greater share of the 1990s job loss was permanent, because of cost cutting and increased structural change, the data reveal that both the 1980s and 1990s recessions were similar in this regard. While permanent layoffs did increase marginally as a share of all layoffs during the 1990-92 recession, the change was not significant (Picot, Lemaître and Kuhn, 1994). Nor did the change support the view that there had been a dramatic economy-wide shift toward more permanent job loss, often associated with restructuring. The pattern of worker displacement in the 1990s recession does not appear to have differed significantly from the 1981-82 experience.

Why do permanent layoffs remain high, even during recovery and expansion, and why are they not as cyclically sensitive as temporary layoffs, quits and hires? During economic downturns, quits decline sharply as workers are in less demand. Also, employers may reduce their workforce by means other than permanent layoffs. They may resort to temporary layoffs, separations, or cutbacks in hirings. During economic upswings, on the other hand, quits increase as workers find it easier to find new jobs, and employers expand their workforce by recalling workers temporarily laid off and by increasing hirings. These factors seem to explain, to a large extent, the ups and downs of temporary layoffs and quits during recessions and expansions.

Other processes

In addition to cyclical variation, other processes seem to influence the permanent layoff rate. These include the worker-employer job-matching process, the continual reallocation of market share and labour demand

among firms within industries, structural declines in some industries, and decreased labour demand during recessions.

First, individuals seeking jobs and employers seeking workers create matches that may or may not be in the best interest of both parties. As workers learn more about the employer, and vice versa, the match is either continued or terminated. The worker terminates the match by quitting; the employer may turn to permanent layoffs. Triggered by this job-match process, permanent layoffs occur on a continual basis, both in recessions and expansionary periods. They may be more common during expansions as hiring increases, and would tend to involve workers who have been with the employer for a relatively short period of time.

Second, within any market or industry at any given time, some firms will be more successful than others; they will increase their market share while others lose theirs. This reallocation of market share and labour demand will lead to job gains and hirings in some firms, but job loss and permanent layoffs in others. This process is also continual, and the resulting permanent layoffs will occur even if overall labour demand and total employment in a market or industry is increasing.

Third, the Canadian economy experienced a series of structural changes in the 1980s related to increasing globalization, changing composition of the labour force, and accelerating technological advances. Consequently, some industries and sectors have undergone a long-term decline in labour demand. Because these structural changes continue, job loss and permanent layoffs have persisted in some industries and sectors, even during recovery and expansions; this is certainly the case in the goods sector.

Fourth, permanent layoffs can also result from decreases in demand during recessions. These decreases tend to be economy-wide in scope and are virtually non-existent in expansions. As already noted, however, this is not the only or even primary cause of layoffs, since permanent layoffs remain high even during expansions.

To assess the significance of each process is beyond the scope of this study. The causes are numerous, however, and together they result in a large number of permanent layoffs on a continual basis. The following sections explore further some of these causes.

Industrial patterns in layoffs and job losses

Just as the permanent layoff rate is not highly correlated with changes in the business cycle, so is it only weakly associated with the aggregate economic performance of an industry. Industries with rapid employment growth do not necessarily have low layoff rates, and those with declining employment do not necessarily experience high rates. Put another way, permanent layoffs are not necessarily concentrated in industries that are in long-term structural decline as indicated by declining aggregate employment. The highest permanent layoff rate in 1988 (21.5%) was registered in construction – the industry with one of the highest rates of employment growth that year at 7.8% (Table 2). In neither 1983 nor 1988 (near the turning points of the business cycle) was the correlation between the permanent layoff rate and net employment growth statistically significant. This observation was tested at two levels of industrial aggregation (280 and 52 industries).

According to regression analysis, only for 1988 did a small, statistically significant correlation exist, and only when the process was tested at the 52-industry level. The faster growing industries tended to have marginally higher layoff rates. Overall, during any given year industry growth and the layoff rate were only slightly related.

Other characteristics of industries determine the permanent layoff rate, such as the level of the quit rate in the industry and the volatility of employment at the firm level within the industry. In industries with very high quit rates, job loss may be handled through ongoing attrition rather than permanent layoffs. The job loss in an industry is the sum of employment change across all firms in that industry that either disappeared or had declining employment between 1983 and 1988.[2]

Job losses and gains have been associated largely with specific changes in particular firms, rather than with economic conditions at the level of the industry (such as restructuring of employment) or the aggregate economy (the business cycle) (Baldwin and Gorecki, 1990; Davis and Haltiwanger, 1992). These firm-specific job losses and gains in turn play a major role in determining permanent layoff rates. An estimated 42% of all permanent worker reallocations in the United States (including quits, permanent layoffs and hires) are associated with job losses and gains in firms (Anderson and Meyer, 1994).

Changing economic conditions associated with industry (as measured by net change in employment) are thus not a good predictor of the permanent layoff rate. Events occurring in firms within these industries are likely more important. Some industries have highly volatile employment at the firm level, even during expansions, leading to higher job loss and hence potentially higher permanent layoff rates.

Firm size and permanent layoffs

Cyclical variation in aggregate demand is only weakly correlated with permanent layoffs. Furthermore, cross-sectional differences in employment change at the industry level do not explain differences in layoff rates. Differences by firm size,

Table 2
Job loss and permanent layoff rates by industry, 1988

	Job loss * rate due to			Permanent layoffs			
					Distribution of		
	Total job loss	Disappearance of firms	Firms with declining employment	Permanent layoff rate	Permanent layoff rate	Total employment	Net employment change
				%			
Commercial sector	**11.0**	**2.9**	**8.1**	**7.9**	**84.7**	**74.7**	***3.5***
Forestry/mining	9.0	2.0	7.0	15.5	5.4	2.7	*3.8*
Manufacturing	8.6	1.8	6.8	6.0	15.1	21.2	*4.3*
Construction	17.5	4.1	13.2	21.5	18.2	5.4	*7.8*
Transportation	8.3	2.3	6.0	5.6	2.8	4.2	*-0.2*
Communication	1.3	0.7	0.6	2.2	0.7	2.8	*-1.3*
Utilities	1.6	0.6	1.0	1.4	0.2	1.5	*8.7*
Wholesale trade	10.9	2.3	8.6	5.9	3.7	4.9	*3.9*
Finance	6.7	1.7	5.0	1.4	0.5	3.2	*5.1*
Insurance	2.4	0.4	2.0	4.6	0.8	1.4	*2.5*
Real estate	15.3	3.3	12.0	3.8	0.8	1.6	*4.1*
Business management	12.8	3.3	9.5	6.2	4.3	4.7	*9.4*
Retail trade	9.6	2.9	6.7	7.4	14.6	11.6	*3.2*
Consumer services	15.6	4.7	10.9	8.9	17.4	9.4	*1.2*

Sources: Longitudinal Employment Analysis Program (job losses); Labour Market Activity Survey (permanent layoffs)
* *Job loss is simply the negative employment change in a firm between 1987 and 1988. A firm is a legal entity.*

however, are significant. The media often present layoffs as massive cutbacks in large firms. These layoffs are often associated with major worker displacement (such as when a large manufacturer closes a number of plants). Reality, however, does not conform to this image.

Small- and medium-sized firms account for most permanent layoffs. In 1988, small firms (fewer than 20 employees) represented 20% of employment but 41% of permanent layoffs. Firms with 500 or more employees had 40% of employment, but only 17% of permanent layoffs. About one in 8 persons in small firms was laid off permanently in 1988, compared with only one in 29 in large firms (Table 3).

A number of explanations are possible. The first relates to the industrial distribution of large and small firms. If small firms were concentrated in industries with volatile employment due to rapidly shifting demand, then high layoffs would be observed in small firms. This would probably be a characteristic of the industry rather than of firm size. But firm size differentials in layoff rates are observed in all major industries.

The second possible explanation involves differences in the characteristics of workers. Those in large firms have, on average, a higher level of education, are members of a union and are older and more experienced than their counterparts in small firms. These characteristics are associated with lower permanent layoff rates and might explain the difference between small and large firms. However, the chance of being laid off from a small firm, even after controlling for worker characteristics, is roughly two-and-a-half times greater than that in large firms.

Table 3
Permanent layoffs by firm size, 1988

Number of employees	Permanent layoff rate	Distribution of permanent layoffs	Dist'n of total employment *
		%	
Total	**7.1**	**100.0**	**100.0**
1 to 19	12.0	41.4	19.9
20 to 99	7.6	17.0	15.6
100 to 499	5.7	9.7	13.0
500 and over	3.4	16.6	40.0
Size unknown	8.4	15.2	11.6

Source: Labour Market Activity Survey
* *This is the number of hours of employment observed in a particular group (for example, small firms) as a percentage of all hours of employment in the economy for 1988. A part-time job has a lower weight in this calculation than a full-time job.*

Table 4
Rate of employment loss and gain by firm size, 1988

Number of employees	Rate of employment loss due to			Rate of employment gain due to		
	Total employment loss	Disappearance of firms	Firms with declining employment	Total employment gain	Appearance of firms	Firms with expanding employment
	%					
Commercial sector	**10.8**	**2.8**	**8.0**	**13.9**	**2.8**	**11.1**
1 to 19	16.9	5.3	11.6	26.5	6.5	20.0
20 to 99	12.5	3.0	9.5	16.6	3.6	13.1
100 to 499	11.8	3.1	8.8	12.6	2.3	10.3
500 and over	5.6	0.9	4.7	5.3	0.3	5.0

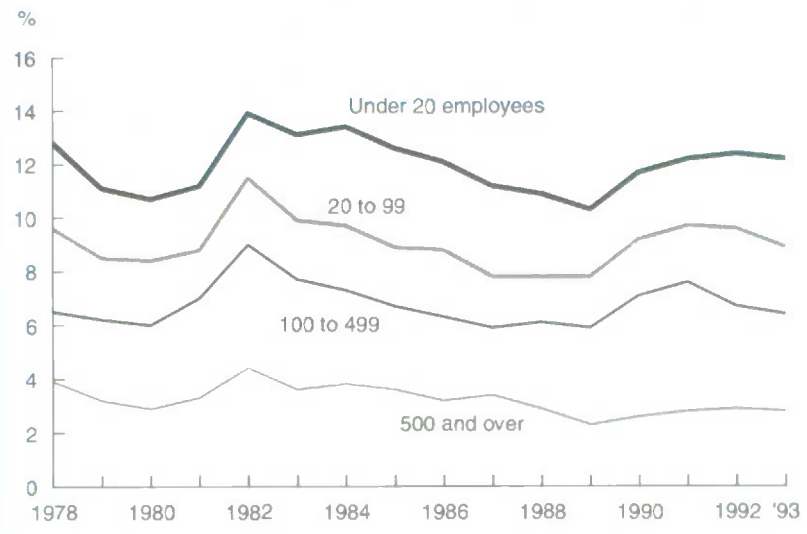
Source: Longitudinal Employment Analysis Program

The third possible explanation relates to the stability of small and large firms. The small firm sector is highly volatile: firms are much more likely to disappear and be replaced by others, obviously affecting layoffs. In 1988, employment among small firms fell 5% because some disappeared, and an additional 12% because declining (but continuing) firms downsized. Thus, 17% of total employment in small firms was lost in declining or disappearing firms (Table 4). Among large firms, only 6% of employment was lost (1% from disappearing firms and 5% from declining). With a rate of job loss three times higher than that of large firms, it is not surprising that small firms could have three to four times the permanent layoff rate. These observations are not unique to any particular year.

The difference between small and large firms' layoff rates persists over the course of the business cycle. During the 1980s and early 1990s, the likelihood of being displaced (permanently laid off) from a large firm, even during a severe recession like that of 1981 to 1982, does not approach that of being laid off from a small firm during the best of economic times (Chart B).

Of course, most hiring is concentrated in small firms as they expand or as new ones are created. For example, in 1993 the hiring rate (the number hired as a proportion of all employees in a firm) was around 25% for firms with fewer than 100 employees, and 9% among those with 500 and over. This means that very small firms (under 20 employees) accounted for 41% of all hiring, but only 29% of employment (person-jobs). Conversely, large firms (500 and over) registered only 15% of all hiring, but 31% of employment (person-jobs). Hiring is highly concentrated in small- and medium-sized firms, as are permanent layoffs.

Chart B
Small firms are much more likely to lay off employees.



Source: Longitudinal Worker File

Conclusion

Permanent layoff rates are not determined primarily by cyclical fluctuations in aggregate demand or by factors affecting economic performance of industries. Rather, the process is more complex, relating to the employer-worker match process and, in particular, to the reallocation of market share and labour demand among firms within industries. This process is continual and ongoing, and results in the relative stability of permanent layoffs in the economy. This reallocation process is also more evident among small than large firms, resulting in a concentration of permanent layoffs in the small firm sector.

Permanent layoffs are an ongoing feature of a market economy in which there is "creative destruction." Workers are being laid off and hired in large numbers, more than a million per year. Increases in permanent layoffs do not define a recession the way a rise in temporary layoffs or a decline in hirings and quits might. Permanent layoffs are much less cyclically sensitive than the other methods firms use to adjust their workforce.

And there is no evidence that permanent layoffs played a larger role (relative to temporary layoffs) in firms' adjustments to changing demand in the 1990s recession than they did during the 1980s recession.

Thus, a decline in aggregate demand in recessions is not the principal cause of permanent layoffs, although it is obviously a contributing factor. Another possibility is decreasing employment in some industries, and increasing employment in others. Here again, however, little evidence supports the notion that the level of permanent layoffs is related to such changes in employment. Changes in net employment in an industry are not correlated with the layoff rate. Some declining industries have low layoff rates, while some expanding sectors have high rates. Certain other aspects within an industry determine the layoff rate. These are probably related to the level of gross job gain and loss at the firm level in an industry, independent of the changes in aggregate demand occurring in the industry. □

Notes

1 For more details on the LWF and definitions, see Heath et al. (1992).

2 The job loss rate is the number of job losses divided by total employment in the industry during the base year. Job loss refers to the loss of a job in a firm (that is, a decline in employment levels), not to the exit of a worker from a firm.

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What's new?

UPCOMING RELEASES

Household Facilities and Equipment Survey takes stock; Survey of Consumer Finances looks at income

Household Facilities and Equipment, 1997

An upcoming publication answers questions about home conveniences and the nature and quality of the housing stock. *Household Facilities and Equipment, 1997* (Catalogue no. 64-202-XPB) provides estimates of heating equipment and fuel, and of appliances or features like dishwashers, microwave ovens, air conditioning, computers, colour television sets and automobiles. Information on other household items, recreational equipment, supplementary heating equipment and fuel, and dwelling condition is included on a rotational basis. The report includes data analysis, definitions, data quality measures and the survey questionnaire.

Income Distributions by Size in Canada, 1996

With the economy still experiencing an uneven recovery in 1996, how did family income fare? Was low income becoming more or less prevalent? These and other questions are answered by *Income Distributions by Size in Canada, 1996* (Catalogue no. 13-207-XPB). This publication provides estimates of family and individual incomes by source of income, province, sex and other characteristics. It also presents income shares by quintile, and estimated numbers and characteristics of individuals and families with low incomes. Income deficiency, or the extent to which certain family incomes fall short of the low income cut-offs, is included. Statistics are derived from the Survey of Consumer Finances. The report also includes data analysis, definitions, data quality measures, and a bibliography.

To order the publications, contact the Dissemination Unit, Household Surveys Division at (613) 951-7355 or 1 888 297-7355; fax (613) 951-3012; Internet: income@statcan.ca. □

JUST RELEASED

Latest on the labour force

The second issue of *Labour Force Update* (Catalogue no. 71-005-XPB) covers hours of work. Highlights are listed below:

- In early 1997, an average 1.9 million people worked overtime, accounting for 19% of all employees who were at work. Most overtimers were unpaid for their extra time; 11% of employees worked overtime without compensation while 8% worked paid overtime.
- In the first quarter of 1997, the underemployed made up 2% of all employed. Approximately 293,000 workers accepted part-time jobs because of business or economic conditions unfavourable to full-time opportunities.
- In 1995, 24% of workers put in fewer than 35 hours per week, an increase of 8 percentage points from 1976. The percentage working long hours (greater than 40), meanwhile, increased from 19% to 22% over the same period.
- Just over two-thirds of all part-timers (that is, with fewer than 30 hours per week) take on these hours willingly. This amounts to about 1.9 million people.

For additional information on this new quarterly, contact Geoff Bowlby at (613) 951-3325; Internet: bowlgeo@statcan.ca or Jean-Marc Lévesque at (613) 951-2301; fax (613) 951-2869; Internet: levejea@statcan.ca. □

Agricultural financial data, 1995

Agricultural Financial Statistics gives a picture of the financial performance of farms in Canada. It provides key statistics such as operating revenues and expenses by province, type of farm and revenue class, as well as income distribution. Data on off-farm income for operators and families involved in a single unincorporated farm add perspective to this financial picture. Highlights follow:

- Average net operating income (before depreciation) of farm businesses rose 14% in 1995, to

$23,600 per farm. Average operating revenues increased 8% and average operating expenses rose 7%.

- Higher grain and oilseed revenues were largely responsible for the overall rise in revenues. Program payments to farmers continued to trend down (-19%), reflecting improved growing conditions and higher market returns. The increase in expenses was due mainly to higher crop production expenses and feed costs.
- Tobacco farms' average net operating income of $60,400 topped the list in 1995. Their operating margin was up 52% from the year before.
- Cattle farms came last at $8,800 per farm. This reflects their relatively low average operating revenues and margins.
- These estimates cover unincorporated farms with gross operating revenues of $10,000 and over and corporations with total farm sales of $25,000 and over, and for which 51% or more of their sales come from agricultural activities. The estimates presented in this release also include communal farming organizations.

Agricultural Financial Statistics, 1995 (Catalogue no. 21-205-XPB, $47), a product of a joint venture between Statistics Canada and Agriculture and Agri-Food Canada, is now available. For further information, contact Lina Di Piétro, Agriculture Division at (613) 951-3171; Internet: dipilin@statcan.ca. □

■ Analytical Studies Branch looks at new firms

Successful Entrants: Creating the Capacity for Survival and Growth is the second study in a series on small- and medium-sized enterprises.

Although new firms have great potential to contribute to the economy, most do not succeed. This study profiles the characteristics of new firms that do survive. It also investigates the differences between those that survived but achieved little growth, and those that survived and grew rapidly.

- Four out of five new businesses in Canada went out of business before they were 10 years old. Those that did survive stressed high-quality products, customer focus and solid business fundamentals.
- Faster-growing survivors were almost twice as likely (30%) to innovate as slower-growing firms (16%). Similarly, they placed more strategic emphasis on enhancing, updating or expanding product line, and improving production.
- Successful new businesses enjoyed significant financial backing. Moreover, on average, over half of the capital in these firms was derived from internal sources. A further third of the capital came from banks and trust companies.

The title of the first study in the series is *Strategies for Success* (Catalogue no. 61-523-RPE). For further information on *Successful Entrants: Creating the Capacity for Survival and Growth* (Catalogue no. 61-524-XPE, $35), contact John Baldwin at (613) 951-8588; Internet: baldjoh@statcan.ca. □

■ Analytical Studies Branch research paper series

An Experimental Canadian Survey That Links Workplace Practices and Employee Outcomes: Why It Is Needed and How It Works
G. Picot and T. Wannell
Research Paper Series no. 100

Changes in the labour market are often related to changes in the way firms engage and pay for labour and adopt new technologies, and in the types of market in which firms compete, as well as to other changes on the demand side of the labour market. But data have never existed that allowed activities in firms to be linked to outcomes for the workers. This paper outlines why such data are necessary. The example of rising inequality is used to demonstrate the need for such a survey. Also presented is an outline of how a new approach to surveying can provide such data. The proposed Workplace and Employee Survey, an experimental survey sponsored by Human Resources Development Canada, first questions the establishment, then the workers within that establishment. A direct link is also made between the events in the firm and the characteristics of the workers, another area of research that has lacked data at the micro-level. This paper outlines the need for such a survey, its possible content, and research topics that could be addressed with the data.

Working More? Working Less? What Do Canadian Workers Prefer?
M. Drolet and R. Morissette
Research Paper Series no. 104

Faced with high unemployment rates, an unequal distribution of work time, and shifts to temporary, part-time and contract employment, Canadian workers may prefer to change their work hours. Using data from the 1995 Survey of Work Arrangements, this study observes that two-thirds of Canadian workers are satisfied with their work hours. The majority of workers who are not satisfied would prefer more hours

for more pay rather than fewer hours for less pay. This finding holds for each age group, education level, seniority level, industrial and occupational group. Workers most likely to want more hours are generally young, have low levels of education and little seniority, hold temporary jobs, work short hours and are employed in low-skill occupations. Workers most likely to prefer a shorter week are professionals, managers, and natural and social science workers, who tend to have high hourly wage rates, high levels of education and long job tenure. They also occupy permanent jobs and already work long hours.

Calculations based on the 1985 Survey on Work Reduction suggest that if Canadian workers were to reduce their work week voluntarily, the number of work hours available for redistribution would not likely be sufficient to eliminate underemployment *and* reduce unemployment. The potential for work time redistribution, as measured by the desire for fewer hours, appears to be greatest (lowest) in age and education groups with relatively low (high) unemployment rates. This implies that the resulting decrease in unemployment and underemployment could be more pronounced in groups where workers are already relatively successful.

To order studies in the Research Paper Series, contact your nearest Statistics Canada Regional Reference Centre, or write to Publications Review Committee, Analytical Studies Branch, Statistics Canada, 24th floor, R.H. Coats Building, Ottawa, Ontario K1A 0T6. Or phone (613) 951-1804; fax (613) 951-5403. □

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Key labour and income facts

The following is a guide to data sources for labour market, business, income and earnings, pension, education and other household topics. Each quarter, this section will present charts and analysis featuring one or more of these sources. For general inquiries, please contact Joanne Bourdeau at (613) 951-4722; Internet: bourjoa@statcan.ca or Jeannine Usalcas at (613) 951-4628; Internet: usaljea@statcan.ca.

Administrative data

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

Business surveys

Annual Survey of Manufactures
Frequency: Annual
Contact: Richard Vincent
(613)951-4070

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: Abdul Rashid
(613)951-6897

Employment and income surveys

Labour Force Survey
Frequency: Monthly
Contact: Nathalie Caron
(613)951-4168

Survey of Labour and Income Dynamics
Frequency: Annual
Contact: Philip Giles
(613)951-2891

Survey of Consumer Finances
Frequency: Annual
Contact: Réjean Lasnier
(613)951-5266

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

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

Household Facilities and Equipment Survey
Frequency: Annual
Contact: Réjean Lasnier
(613)951-5266

General Social Survey

Education, work and retirement
Frequency: Occasional
Contact: Ghislaine Villeneuve
(613)951-4995

Social and community support
Frequency: Occasional
Contact: Ed Praught
(613)951-9180

Time use
Frequency: Occasional
Contact: Ghislaine Villeneuve
(613)951-4995

Pension surveys

Pension Plans in Canada Survey
Frequency: Annual
Contact: Thomas Dufour
(613)951-2088

Quarterly Survey of Trusteed Pension Funds
Frequency: Quarterly
Contact: Thomas Dufour
(613)951-2088

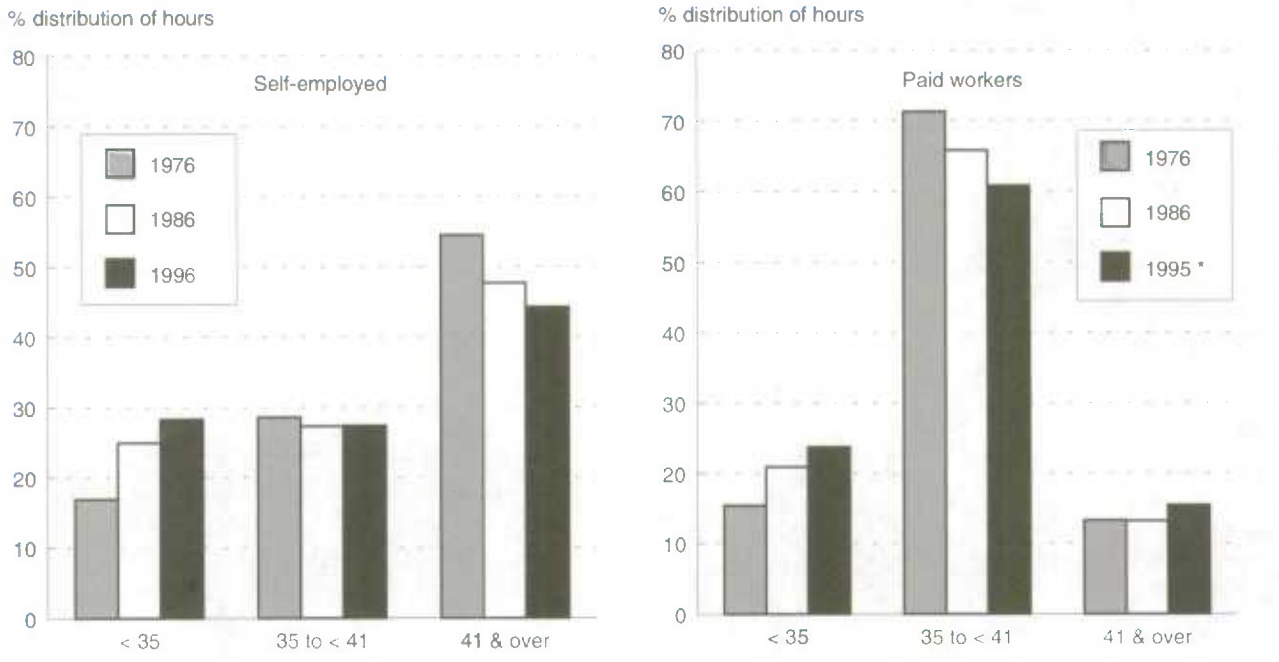
Special surveys

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

Adult Education and Training Survey
Frequency: Occasional
Contact: Steve Arrowsmith
(613)951-0566

Graduate Surveys
(Postsecondary)
Frequency: Occasional
Contact: Bill Magnus
(613)951-4577

Trends in usual weekly work hours



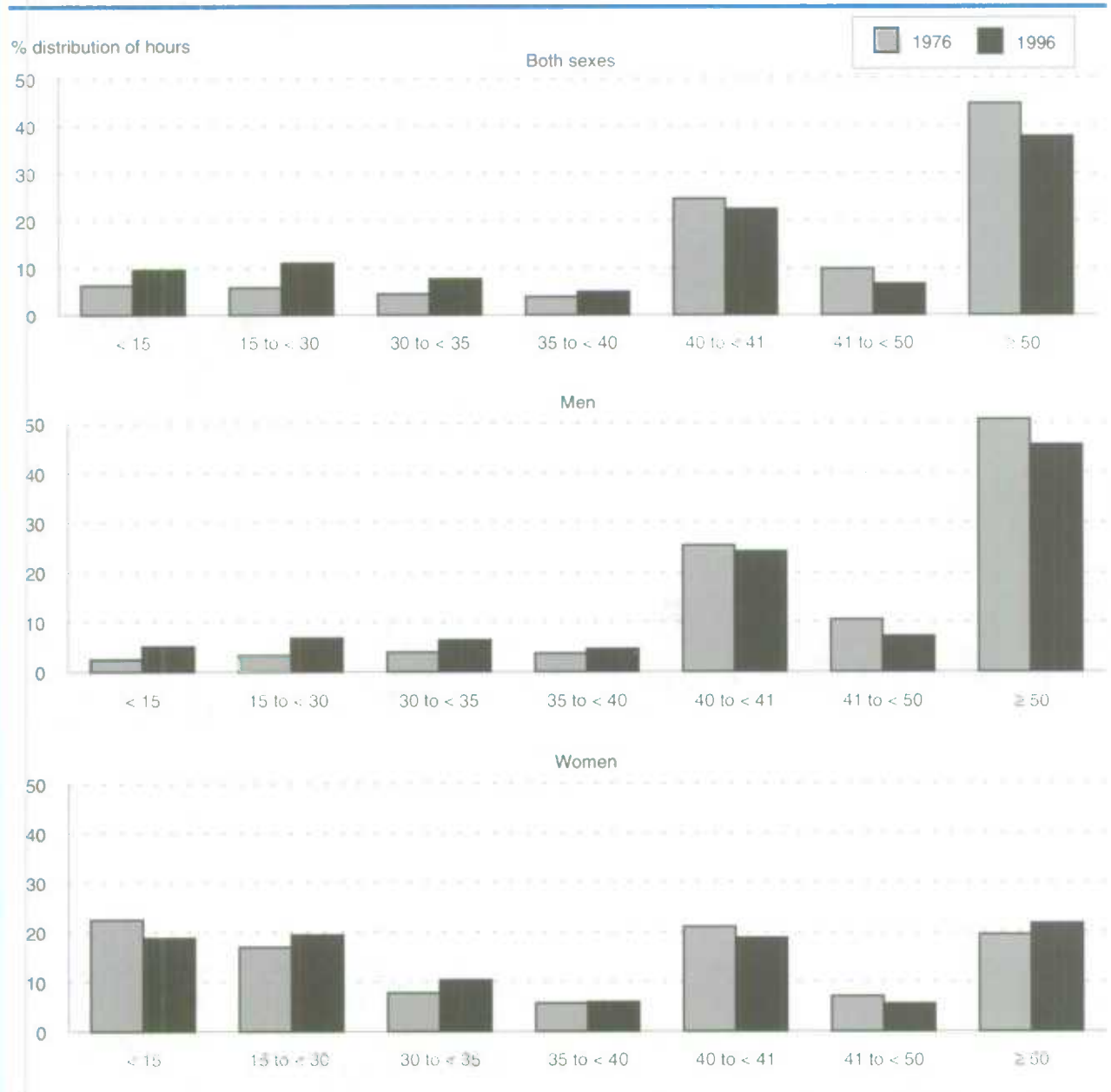
Source: Labour Force Survey

* *The 1996 hour distributions for employees are not included because the question about usual hours at the main job was changed in September 1996. For more information, see* Labour Force Update: Hours of work, *Catalogue no. 71-005-XPB (Summer 1997).*

More are working short hours

- The distribution in work hours of employees differs greatly from that of the self-employed. The majority of employees generally work a standard hour week (35 to fewer than 41 hours) while many business owners work long hours (41 and over a week).
- In the last 20 years, however, work hours have changed for both types of workers. The proportion of paid workers with standard hours is declining, and the proportions with short hours (fewer than 35) and long hours (41 and over) are climbing. Stated differently, work hours among employees are polarizing.
- For the self-employed, short work weeks are becoming more common. In 1976, 54% of the self-employed worked 41 hours and over each week; by 1996, the rate had declined to 44%. Only 17% of the self-employed worked fewer than 35 hours in 1976, compared with 28% in 1996.
- The proportion of the self-employed working standard hours has changed little since 1976, fluctuating around 28%.

Usual weekly work hours of the self-employed, by sex

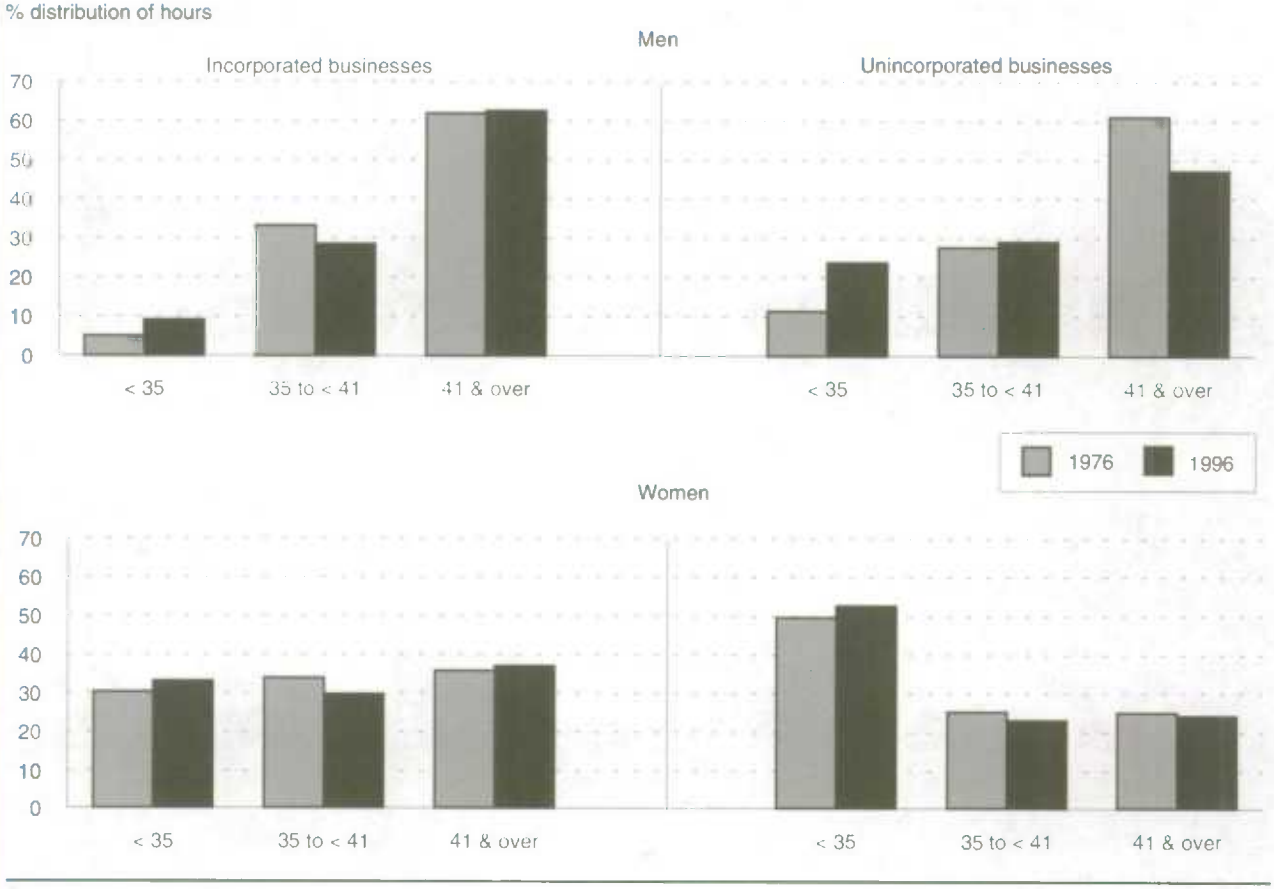


Source: Labour Force Survey

Men's and women's work hours differ greatly

- The overall distribution of work hours among the self-employed reflects primarily the schedules of male business owners, since they accounted for 67% of the self-employed in 1996. Just under half (46%) these men worked at least 50 hours in 1996, a decrease from 51% in 1976.
- Women represented 33% of the self-employed in 1996, compared with just 19% in 1976. The distribution of work hours for this group has not changed significantly over time. Some 48% worked short hours in 1996, while 27% worked 41 hours and over, and 25% worked a standard hour week.

Usual weekly work hours by type of business



Source: Labour Force Survey

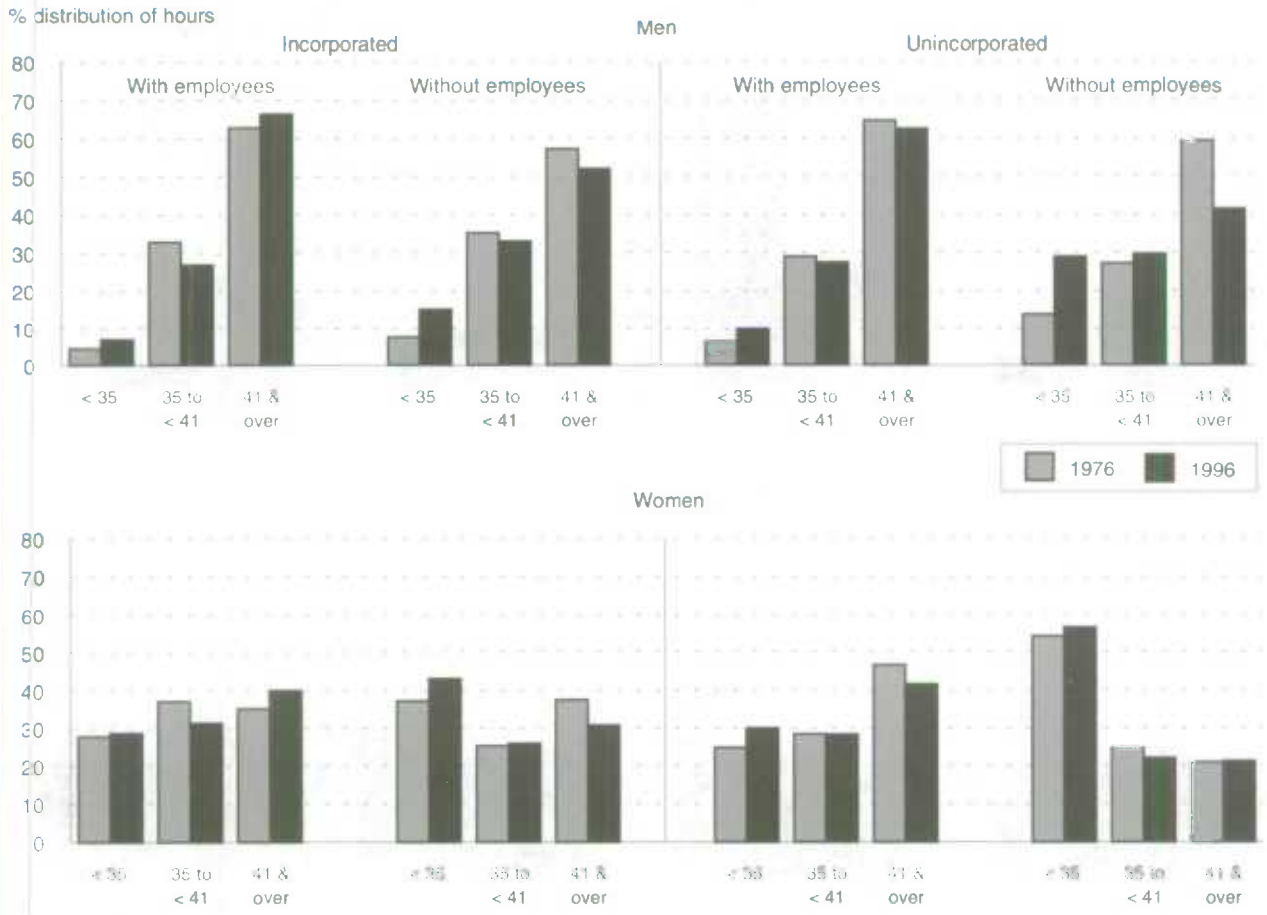
More men with unincorporated businesses worked short hours in 1996 ...

- Most business owners have unincorporated businesses, although the proportion has declined (68% in 1996 compared with 76% in 1976). The hours distribution for men has changed most for those with unincorporated businesses: 47% worked long hours in 1996, compared with 61% in 1976, and 24% worked fewer than 35 hours (versus 11% in 1976).

- Men with incorporated businesses are the most likely to work long hours. This hasn't changed much since 1976, although the slight decrease in those working standard hours has been offset by an increase in the proportion working fewer than 35 hours.

- A greater proportion of self-employed women (78%) than men (62%) had unincorporated businesses in 1996. Over half of these women (53%) worked short hours in 1996. The hours distribution for women with incorporated businesses, on the other hand, was almost equally spread among the three hour groupings, with little difference between 1976 and 1996.

Usual weekly work hours by type of business, with or without employees

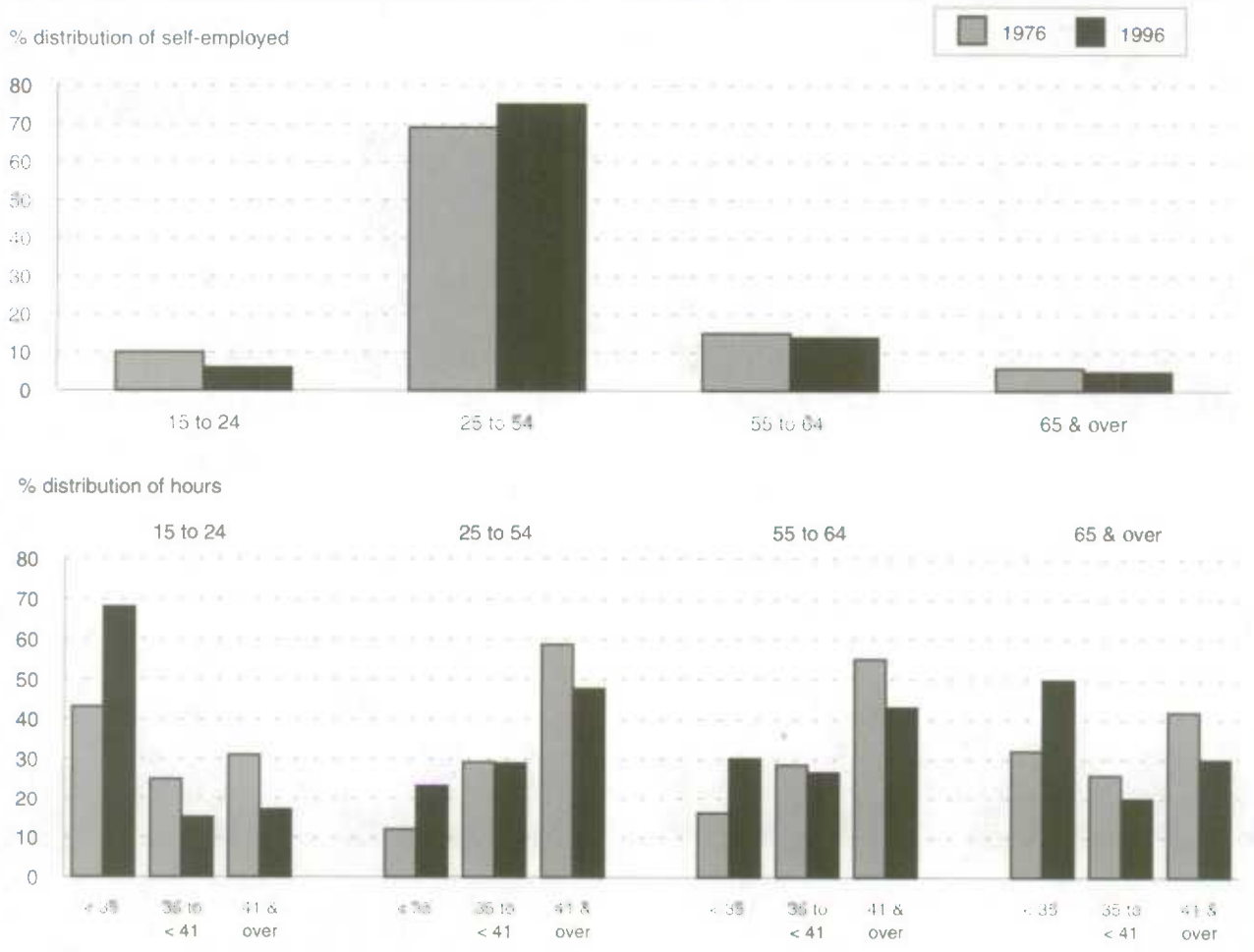


Source: Labour Force Survey

especially those without employees

- Most incorporated businesses had employees in 1996 (72%), while most unincorporated businesses had none (77%).
- Whether incorporated or unincorporated, a higher proportion of business owners with or without employees tended to work short hours in 1996. This was particularly true for men with unincorporated businesses and no employees.

Distribution of the self-employed, and of their usual weekly hours, by age

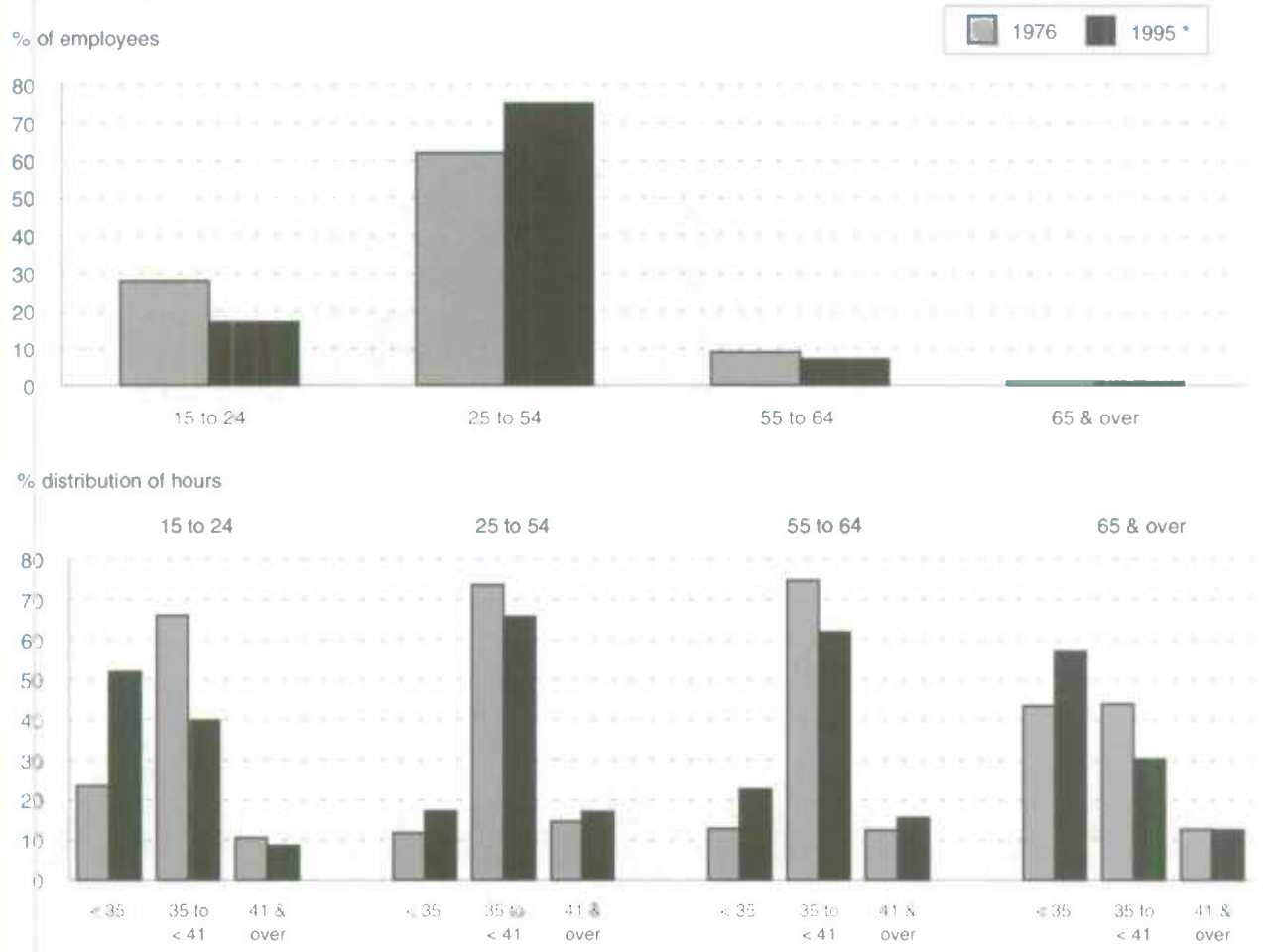


Source: Labour Force Survey

Youngest and eldest work short hours ...

- Three-quarters of the self-employed fall into the core age group of 25 to 54 years, a slight increase since 1976 (69%).
- The distribution of work hours varies by age. Business owners aged 15 to 24 and 65 and over tended to work short hours in 1996, while those 25 to 54 were least likely to have done so.
- The proportion working short hours has risen in all age groups, especially for the young. In 1976, 43% of 15 to 24 year-olds worked fewer than 35 hours; by 1996, that proportion had increased to 68%. This change reflects, among other things, increasing school attendance among the young and a growing tendency to combine school and work.
- In 1976, 42% of those aged 65 and over worked long hours; by 1996, 50% were working short hours.

Distribution of paid workers, and of their usual weekly hours, by age



Source: Labour Force Survey

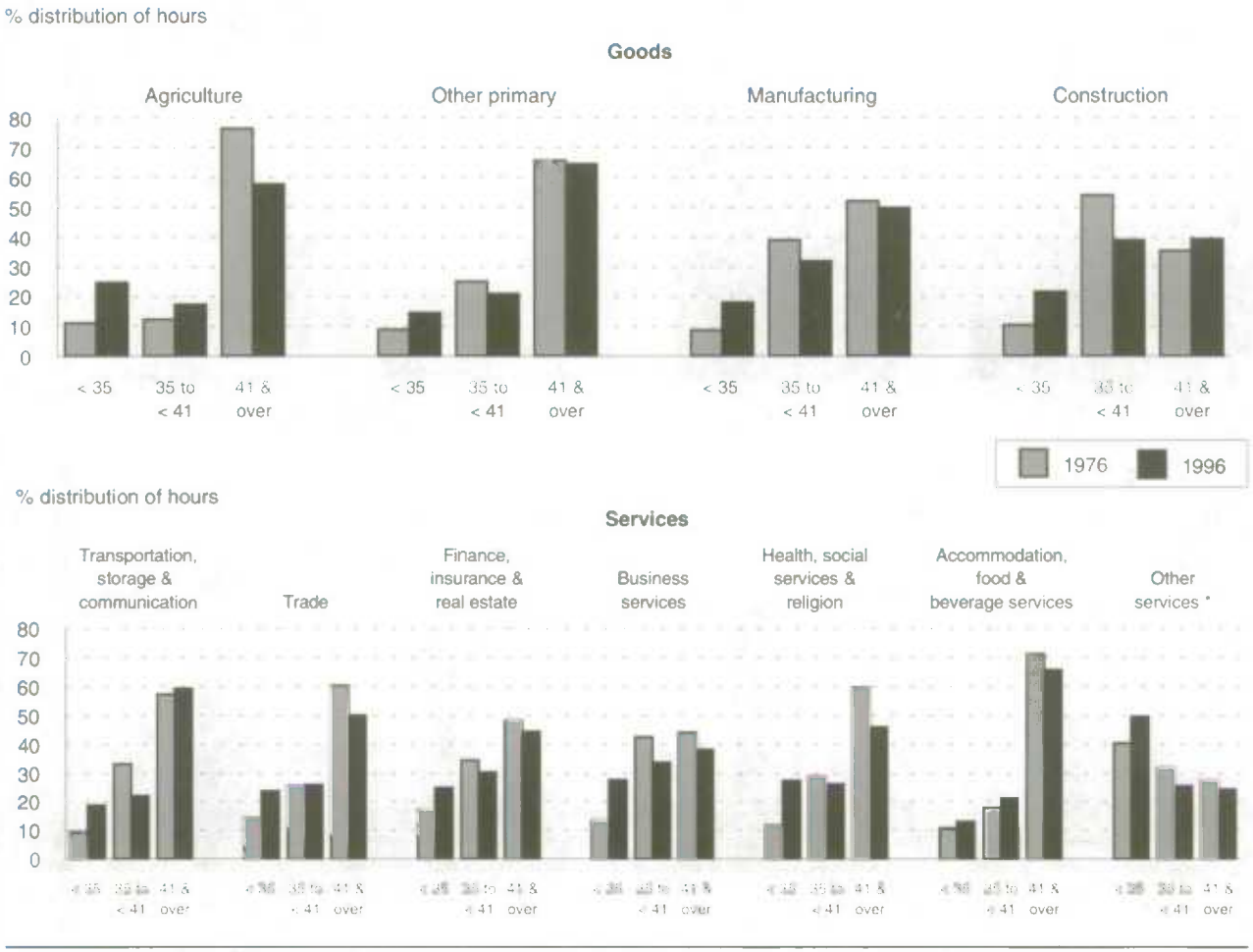
* *The 1996 hour distributions for employees are not included because the question about usual hours at the main job was changed in September 1996. For more information, see* Labour Force Update: Hours of work, *Catalogue no. 71-005-XPB (Summer 1997).*

as do employees

- As with the self-employed, all age groups of paid workers have seen an increase in the proportion working short hours, especially 15 to 24 year-olds. The older age groups have also experienced significant growth in short hours.

- In 1976, around 40% of employees aged 65 and over worked short hours, and a similar proportion worked standard hours. By 1995, close to 60% were working fewer than 35 hours.

Usual weekly work hours of the self-employed, by industry



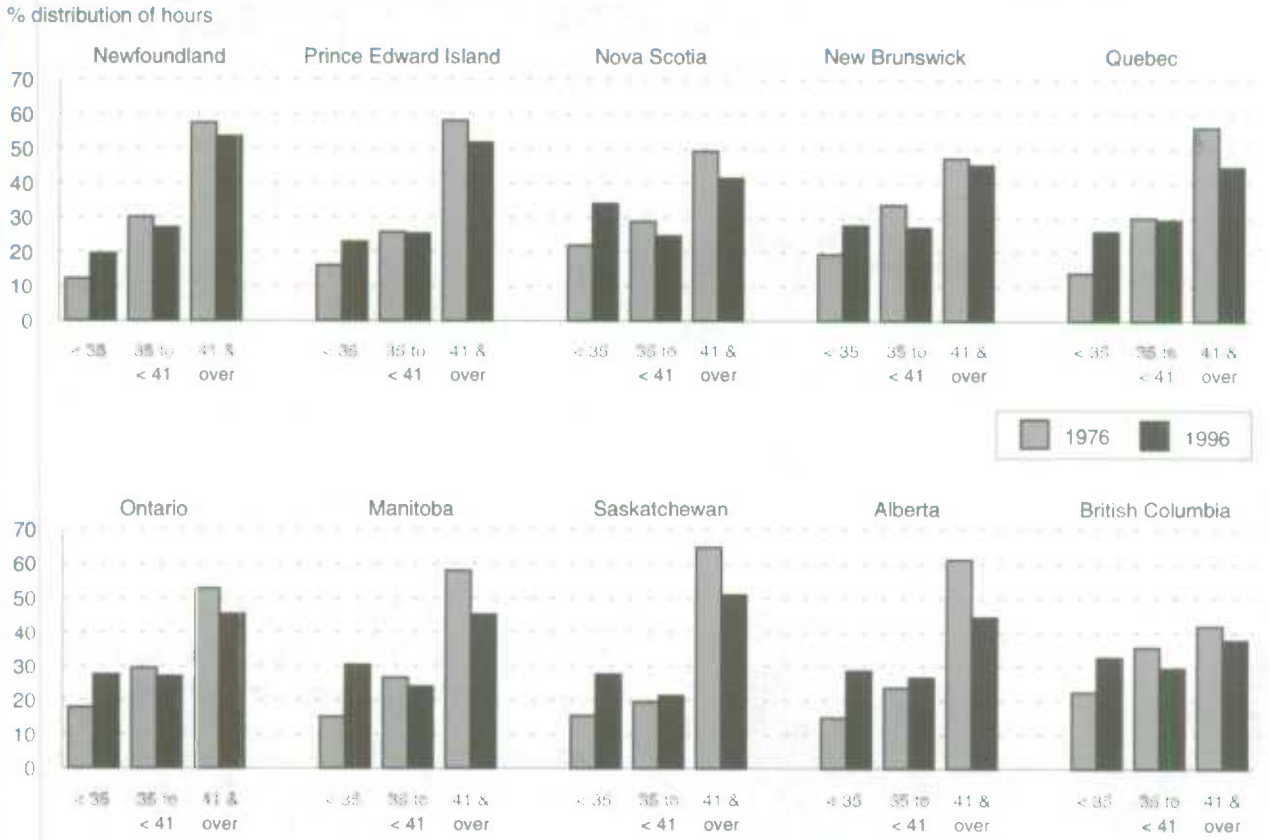
Source: Labour Force Survey

* *Includes amusement and recreational services, personal and household services, membership organizations and other service industries.*

The trend continues by industry

- In 1976, the industries with the largest share of self-employment were agriculture, trade, other services, and construction. By 1996, the business services industry had joined the group.
- The proportion of workers with short hours has increased in each major industry since 1976, especially in health, social services and religion; business services; and agriculture. In other services, made up mainly of amusement and recreational; personal and household services, almost half worked short hours in 1996.
- Short hours were especially prevalent for women with businesses in other services and agriculture. For men, industries with the highest proportion working short hours were other services; finance, insurance and real estate; construction; and business services.
- Long hours predominate in most industries, though the proportion of the self-employed with long hours declined in several industries between 1976 and 1996. Roughly two in three business owners still worked long hours in accommodation, food and beverage services; other primary industries; transportation, storage and communication; and agriculture. The same trend held for men. Women worked mainly long hours in only one industry: accommodation, food and beverage services.
- The only industries that have experienced an increase in long hours since 1976 are transportation, storage and communication; and construction.

Usual weekly work hours of the self-employed, by province



Source: Labour Force Survey

British Columbians are least likely to work long hours

- In each province, proportionately more of the self-employed were working short hours in 1996 and fewer were working long hours. These changes were most marked in the Prairie provinces and Quebec.
- Long hours were most common in Newfoundland, Prince Edward Island and Saskatchewan. Business owners in Nova Scotia, British Columbia and Manitoba had the highest proportions working short hours.
- British Columbia differed considerably from the other provinces. Short, standard and long hours were more evenly distributed in 1996.

Charts and text for this issue's "Key labour and income facts" were prepared by Jeannine Usalcas of the Labour and Household Surveys Analysis Division. She can be reached at (613) 951-4628; Internet: usaljea@statcan.ca. The *Labour Force Update*, Autumn issue (to be released in October 1997) will feature more topics on the self-employed.

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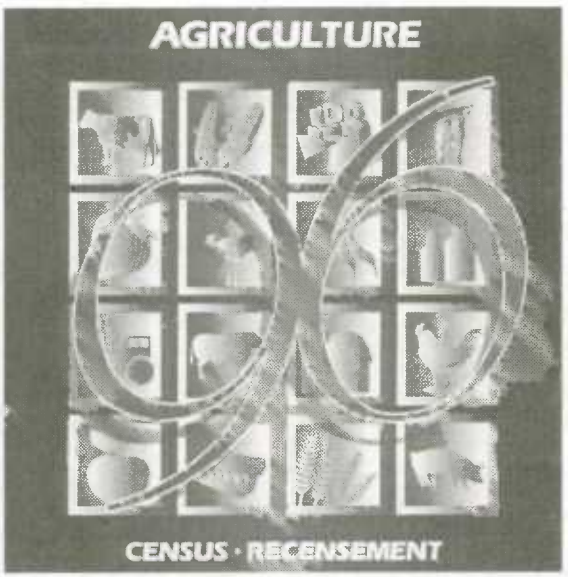

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In the works

Here are some of the topics to be featured in upcoming issues

Non-permanent jobs and regional disparities

The proportion of non-permanent jobs is greater in the East, a finding only partly explained by the prevalence of seasonal work. This article measures the extent of regional disparities by type of job (permanent, temporary, occasional) and quality (salary and benefits). Seasonal work is excluded. Where possible, the study examines subprovincial data.

Redistribution of hours of work

Using the 1995 Survey of Work Arrangements, this article considers how usual hours of paid overtime might be converted to full-time equivalent jobs. Analysis is by province, occupation and level of education. Finally, a trial matching of the hours created with the number of unemployed shows that this potential creation remains hypothetical if done on a voluntary basis.

International comparison of employee training

This study looks at employee training in the seven countries participating in the 1994 International Adult Literacy Survey. Training effort, sources of support, motivation, and characteristics of trainees are examined.

Overtime

Despite a relatively strong economy, unemployment rates remain high, and many people who have jobs would like to work more hours. Paradoxically, many others feel burdened by long hours of work. This article sheds light on the characteristics of the people who work either paid or unpaid overtime, and of the jobs that demand such hours. Analysis by sex, age, marital status, education, province, industry and occupation is included.

Work hour preferences

Faced with high unemployment rates, an unequal distribution of work time, and shifts to temporary, part-time and contract employment, Canadian workers might prefer to change their work hours. Data from the Survey of Work Arrangements show that two-thirds of workers are satisfied with their hours and that most of those who are not would prefer to work more hours for more pay. This article analyzes work hour preferences by sex, province, job characteristics and family situation.

Index 1989-1997

Cumulative index to all articles published in *Perspectives* since its inception, arranged by topic.

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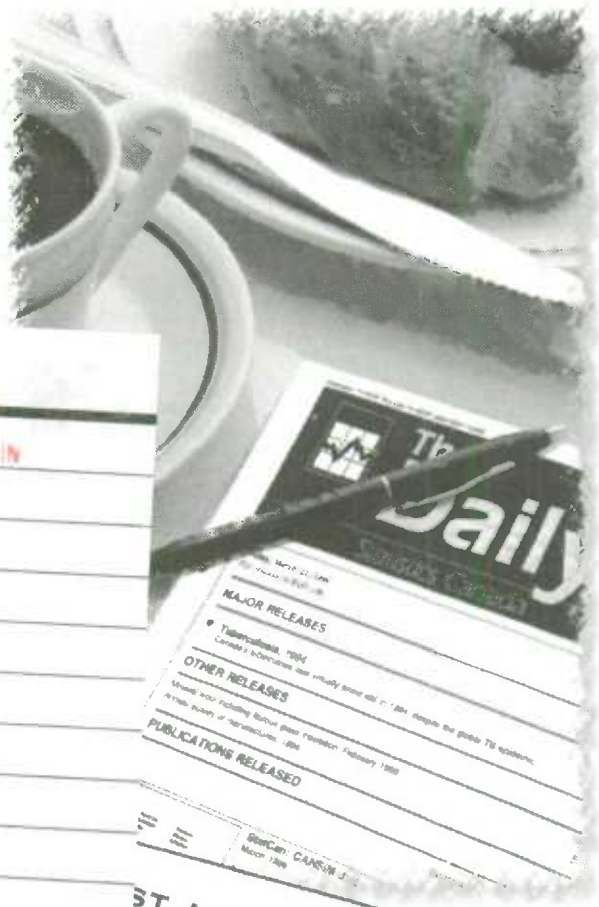

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