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PERSPECTIVES

ON LABOUR AND INCOME

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■ '96 IN REVIEW

■ NORTHERN TRENDS

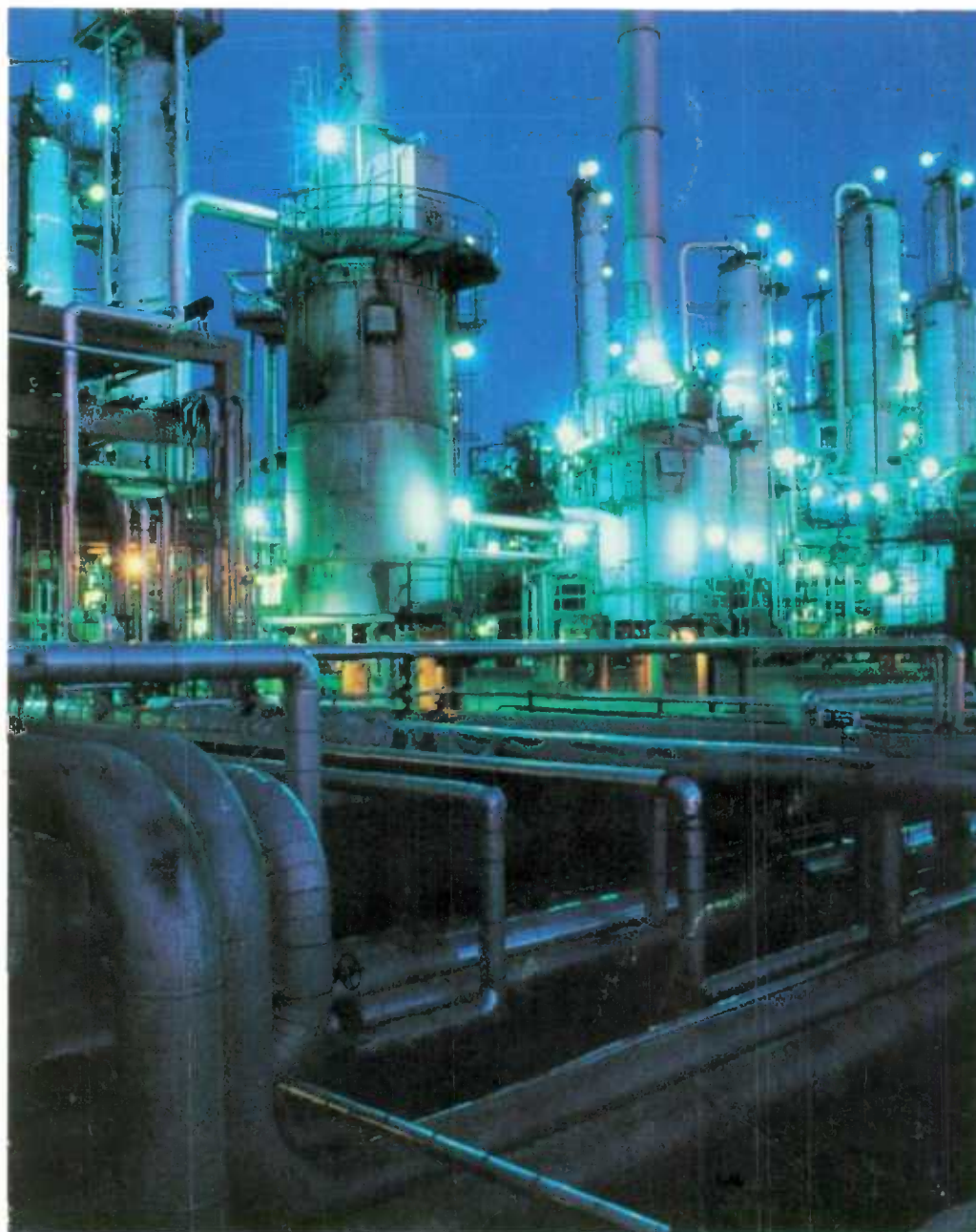
- EMPLOYMENT
- EARNINGS AND INCOME

■ CLOTHING MANUFACTURING

■ RRSP CONTRIBUTORS

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■ WORK ARRANGEMENTS



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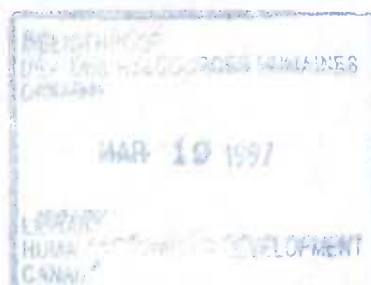
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The rate of RRSP participation of persons with low incomes has been increasing since the early 1980s. This note explores the reasons for this and examines participation among men and women by personal and family income.

48 Work arrangements: 1995 overview

Ernest B. Akyeampong

This article provides highlights of results from the 1995 Survey of Work Arrangements and compares them with those from the 1991 survey. Issues explored include business practices, juggling school and work, balancing work and family, job quality, reasons for self-employment, and work hour preferences. (This article appeared as an advance release in December 1996.)

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■ In the Spring 1996 issue of *Perspectives* I listed a number of the challenges faced by government statisticians. The particular dilemma I would like to revisit here, by means of a very current example, concerns the trade-off between consistency and relevance. I'll expand on that.

In virtually all repeated surveys, one of the main goals is to generate accurate measures of change. This is the consistency objective. To achieve that objective it is necessary to hold constant through time almost all aspects of the survey, particularly the questionnaire. Well and good, you say, but what if the phenomenon to be measured is changing? What if you detect that some of the survey's measures are not as accurate as you can make them? Therein lies the objective of relevance. A survey that doesn't reflect conditions that have emerged, or that doesn't reflect current conditions as accurately as it could, is failing, at least to some degree, the relevance test. But achieving relevance sometimes necessitates a loss of consistency, hence the dilemma.

And now for the current example. As many of you may already be aware, a revised Labour Force Survey (LFS) questionnaire was introduced in January of this year. This is the first significant change in the questionnaire since 1975 when the survey was last overhauled. The current changes were brought about after careful consultations with data users, and inspired by a need to address deficiencies of which we had been aware for some time. The introduction of this questionnaire will, therefore, greatly improve the relevance of the data. However, this will involve some reduction in the consistency of the data through time. In addressing the loss of consistency, it is useful to divide the output data into several groups.

First are the core estimates of the number of employed and unemployed persons. Great care has been taken to avoid disturbing these estimates, so for these important variables there should be little discernible loss of consistency.

Next are estimates of the characteristics of the employed and unemployed. For example, the definition of part-time employment, once based on total hours of

all jobs for multiple job holders, will now consider hours of the main job only. Fortunately, it was possible to make this change using the old LFS questionnaire, which meant no loss of consistency. Several other revisions were also achieved in this way.

Other changes could not be implemented using the old questionnaire, so they represent a loss of consistency, but a gain in relevance. For example, the so-called discouraged workers are now identified on the basis of their current desire for work, instead of their job search in the past six months. Similarly, the data on "involuntary" part-time workers were strengthened. (Involuntary part-time workers are those who, when asked why they were working part time, claimed they could not find full-time work.) This strengthening involved, among other changes, asking direct questions on the desire for full-time employment. While the changes to data on both discouraged workers and involuntary part-time work represent a loss of consistency, this loss is more than offset by new measures that will have far greater acceptance in the data user community.

The most important gains in relevance have been achieved by adding variables not previously collected on the LFS. Here, consistency is not an issue. These include measures of average weekly and hourly earnings, union membership, job permanence and size of the employing establishment.

It is said that these are times of unprecedented rates of change in Canadian labour markets. To the extent that this is true, it makes dealing with the consistency-relevance trade-off that much more difficult. In times of rapid shifts, it is important to know not only the rate of change, but also the rate of change in the rate of change; that is, whether the change is accelerating or decelerating. However, it is never just a matter of growth or decline in the same things. Labour market shifts are not simply a matter of more or fewer jobs. Rather, it is a matter of the changing nature of jobs. To capture emerging trends we need to alter the labour market variables on enquiries like the Labour Force Survey. We need measures that break with the past.

While the users of LFS data will be the ultimate judges, those who manage the survey have tried to strike just the right balance between maintaining consistency and achieving relevance.

Ian Macredie
Editor-in-Chief



For further information on the revised LFS questionnaire, see "The Labour Force Survey: Development of a new questionnaire for 1997." This document is available on the Internet at <http://www.statcan.ca> under the "Research papers" section of the "Virtual library."

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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Please take a few moments to let us know how we are doing by completing the form on page 64 and returning it (or a copy) by mail or fax. If you have further comments or questions, feel free to use additional sheets.

Highlights

■ The labour market: Year-end review

... p. 9

- Employment increased by 189,000 in 1996. This was half the strong showing of 1994 (381,000), but almost double that of 1995 (99,000). In spite of this, the unemployment rate increased from 9.4% in December 1995 to 9.7% in December 1996, owing to an even larger increase in the labour force (263,000).
- Even though growth in merchandise exports has tapered off over the past three years, both GDP and employment gains continue to be fuelled mainly by this sector.
- Last year saw a return to the 1994 distribution pattern of employment growth, with gains among adult women (110,000 or 2.1%) exceeding those of adult men (99,000 or 1.6%). All employment gains among adult men were full-time, while two-thirds of adult women's were part-time. Youths continued to lose jobs, with the 1996 decline totalling 20,000.
- Employment growth was concentrated in the goods sector, accounting for slightly over half (103,000) of total gains – much higher than its one-quarter share of the workforce. Manufacturing (70,000) and agriculture (32,000) were responsible for most of the increase in this sector.
- Self-employment gains in 1996 totalled 125,000 (5.6%), with most of the increase occurring in the second half of the year. Employment in the private sector increased by 98,000 (1.1%) while that of the public sector decreased by 33,000 (-1.6%).
- Quebec and the Atlantic provinces lost employment in 1996, while Ontario and the western provinces recorded gains. Employment growth was exceptionally strong in Alberta (4.1%) and British Columbia (4.2%), about three times the national rate.
- Both adult women's labour force participation rate (which had fluctuated in recent years) and the proportion of workers with more than one job (which had remained virtually unchanged) resumed their upward trends in 1996.

- Among the G-7 countries, Canada's rate of job gains in 1996 was surpassed only by that of the United States.

■ Employment and industrial development in the North

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- The North's overall rate of paid employment growth was double that of the rest of Canada from 1983 to 1995. Annual average paid employment grew from 25,800 in 1983 to 35,700 in 1995.
- In the North, 84% of paid employment was in the service sector in 1995, compared with 77% in the rest of Canada. From 1983 to 1995, northern employment grew most in education; trade; accommodation, food and beverage services, and health and social services.
- In 1995, public sector jobs made up a higher proportion of employment in the North than in the rest of Canada, accounting for 44% of all employees in the Northwest Territories and 39% in the Yukon. Only 24% of employees held these jobs in the rest of Canada.
- Two occupational groups in particular have experienced rapid growth in the North: managerial and administrative fields and the social sciences. Women, especially, occupy a greater share of managerial and administrative occupations and jobs in natural sciences, engineering and mathematics.
- The unemployment rate of northern youths increased from 8.0% in 1971 to 25.4% in 1991; the corresponding rates for the rest of Canada were 15.3% and 21.9%.
- Non-Aboriginal adults and recent migrants tend to have higher rates of employment and lower rates of unemployment than Aboriginal people or longer-term residents. Aboriginal people are more likely to live in rural areas, which offer fewer employment and educational opportunities.

■ Northern earnings and income

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- The Northwest Territories experienced the highest rate of growth in average yearly earnings in Canada between 1970 and 1990. Average employment income increased by 35%, compared with 19% in Canada.
- From 1990 to 1994, median earnings continued to be higher in the North, despite greater declines there than in Canada overall. In 1994, median earnings were 20% higher in the Northwest Territories and 13% higher in the Yukon.
- A lower percentage of employed northerners than workers in Canada worked full year full time, yet annual earnings were higher in the North. For those who worked full year full time in the Northwest Territories average employment income in 1990 was \$42,300, for those in the Yukon, \$37,300, and for those in Canada, \$33,700.
- In 1990, women in the Northwest Territories earned 35% more than women in Canada overall; in the Yukon they earned 22% more. Men's earnings were 22% greater in the Northwest Territories and 7% greater in the Yukon.
- The male-female wage gap is less pronounced in the North than in Canada overall. In 1994, for every dollar earned by men, women earned 67 cents in the Northwest Territories, 78 cents in the Yukon and 62 cents across Canada.
- Youths working full year full time earn considerably more than youths in the rest of Canada; their 1990 average earnings were 33% higher in the Northwest Territories, and 24% higher in the Yukon.

■ Sizing up employment in clothing manufacturing

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- Employment in the clothing manufacturing industry remained relatively steady from 1981 to 1989, with a net loss of 1,100 jobs. From 1989 to 1994, however, employment dropped by 28%, representing 31,800 jobs.
- Three out of four workers in clothing manufacturing are women, compared with just one in four in all other manufacturing industries. Also, one in two are

immigrant workers, compared with one in four elsewhere. In fact, 37% of clothing manufacturing employees are female immigrants, compared with just 7% in all other manufacturing.

- Production of Canadian-made clothing increased throughout most of the 1980s, peaking in 1989 at \$6.9 billion. It declined for three years to \$5.9 billion in 1992, then increased to \$6.2 billion by 1995.
- Exports accounted for much of the clothing production gains of the 1990s, increasing steadily to \$1.3 billion in 1995.
- Imports continue to account for a growing share of the Canadian market, reaching 42% or \$3.6 billion in 1995. This increase will likely continue as global competition becomes tougher with the phasing-out of the Multi-Fibre Arrangement.
- Although advanced manufacturing technology (AMT) has helped increase labour productivity, it has also heightened the need for skilled workers. In 1993, 47% of clothing firms using AMT reported a shortage of skills, compared with 24% for non-clothing firms.

■ RRSP participation – the sooner the better

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- A growing number of younger Canadians are participating in RRSPs. In 1983, just 11% of eligible taxfilers who were 25 to 29 years of age contributed. When four years older, 22% of them did so. Furthermore, while 19% of this age group participated in 1988, 32% took part four years later.
- Of the 2.2 million eligible taxfilers aged 25 to 29 in 1983, 30% (679,000) contributed at least once from 1983 to 1987 and 11% did so in all five years. In comparison, 40% (987,000) of the 2.5 million in that age group in 1988 contributed at least once from 1988 to 1992 and 17% did so in all five years.
- From 1983 to 1987, the 679,000 contributors deposited \$4.2 billion for an average annual amount of \$2,600. From 1988 to 1992, the total contribution was higher (\$5.8 billion) but the average annual amount deposited was only \$2,200. This decrease can be attributed to the dramatic growth in the number of contributors with low earnings, especially women.

- The higher the income, the more likely the younger taxfiler made RRSP contributions. Of those with less than \$10,000 in employment income (1990 dollars), just 21% contributed at least once between 1988 and 1992. This proportion increased for each income group, to 88% for those earning \$50,000 or more.
- Some RRSP contributions are withdrawn, sometimes within the same tax year. However, for every young person withdrawing from 1988 to 1992, almost four contributed, and for every one dollar withdrawn, six were contributed.

■ Low incomes and RRSPs ... p. 46

- Although the bulk of the growth in RRSP participation during the 1980s and early 1990s was among taxfilers with personal incomes of \$30,000 or over (1990 dollars), the growth among those with income under \$20,000 was also significant. From 1982 to 1992, the proportion of eligible filers with this income who contributed grew from 4% to 16%.
- Women account for most of the increase in RRSP participation in the last 15 years, but they still represent the majority of contributors with low incomes. While their proportion among contributors with \$30,000 or more increased from 23% in 1982 to 31% in 1992, their percentage among those with under \$20,000 went up from 60% to 65%.
- Even though the number of eligible married taxfilers with family incomes under \$30,000 decreased by nearly 300,000 over the 10-year period, the number of married RRSP contributors with this income increased by almost 100,000. This growth can also be attributed to the increasing participation of women. Their share of married contributors with family incomes under \$30,000 grew from 22% to 39%.

■ Work arrangements: 1995 overview ... p. 48

- According to the Survey of Work Arrangements, the proportion of workers aged 15 to 69 with a flexitime work arrangement (that is, an arrangement that permitted, within limits, some variation of work start and end times) rose from 16% to 24% (to 2.6 million) between 1991 and 1995. Similarly, work at home saw an increase. The proportion of employees who regularly did some or all of their paid work at home rose from 6% to 9% (to one million).

- In 1995, over one-half of workers (51%) were covered by an employer-sponsored retirement plan or group RRSP; 59%, by a health plan, and 55%, by a dental plan. Furthermore, 57% of employees were entitled to paid sick leave.
- Only one-quarter of all employed young students had a regular daytime ("9 to 5") work schedule. The rest had a shift, irregular, on-call or casual schedule; a large majority of these did so to accommodate their school demands.
- Employed mothers aged 25 to 44 with pre-school aged children were slightly more likely to have work arrangements that helped to balance work and care of children. Approximately 28% had flexitime arrangements, compared with 25% of their counterparts without pre-schoolers. Some 13% worked from home, compared with 11%.
- Employees with permanent, with full-time, or with public sector jobs had greater access to non-wage benefits. The likelihood of being covered by non-wage benefit plans and of having paid sick leave entitlement also increased with firm size.
- Approximately 2.1 million people were self-employed in their main job in November 1995. The main reasons given for engaging in self-employment were enjoyment of independence (42%), carrying on a family business (17%), no other work available (12%), and a desire to make more money (10%).
- About 6% of paid workers (the majority being women) indicated a preference for fewer hours for less pay, while almost 28% preferred to work more hours for more pay. However, almost 50% of youths, of part-timers and of persons in non-permanent jobs preferred to work more hours.

■ What's new? ... p. 53

- The Survey of Consumer Finances and the Household Facilities and Equipment Survey have just released three income studies. *Earnings of Men and Women, 1995* looks at how earnings of men and women compare and how education, age, full- and part-time status and job tenure affect earnings differences; *Household Facilities by Income and Other Characteristics, 1996* examines such issues as how the level of household income affects Canadian households, the relationship between household income and family home ownership, and the

presence of various household facilities and equipment. *Family Incomes, Census Families, 1995* looks at trends and patterns of income for census and non-census families (that is, nuclear families as opposed to extended families).

- *Territorial Indicators of Employment: Focusing on Rural Development* is a new report released by the Organisation for Economic Co-operation and Development (OECD). It was compiled with the assistance of Statistics Canada and looks at the characteristics and dynamics of rural labour markets in Canada and other member nations of the OECD.
- *Services Indicators* has released its second-quarter 1996 issue, whose feature article is titled "The temporary help service industry: Its role, structure and growth." It studies the industry that supplies temporary help to business and industry.
- *Growing Up in Canada, 1994-95* contains analyses of data from the National Longitudinal Survey of Children and Youth. The report presents early findings and conclusions of studies undertaken by experts on child development.
- *Annual Estimates of Employment, Earnings and Hours, 1983-1995*, from the Survey of Employment, Payrolls and Hours, is now available in electronic format. Users of this easy-to-load, user-friendly software can browse, print or export data into the spreadsheet of their choice.
- *Family Income after Separation*, released by the Labour and Household Surveys Analysis Division, looks at family composition as well as after-tax income before and after separation.
- The Analytical Studies Branch has released four more research papers. *Were Small Producers the Engines of Growth in the Canadian Manufacturing Sector in the 1980s?* evaluates the performance of small firms by studying employment, wage rates and labour productivity. *Longitudinal Aspects of Earnings Inequality in Canada* asks whether new spells of low earnings now last longer than they used to, and whether long-term inequality in earnings rose in the eighties. *Changes in Job Tenure and Job Stability in Canada* studies changes in job stability from 1981 to 1994. Finally, *Unemployment in the Stock and Flow* presents a framework for analyzing unemployment and applies it to Canadian and U.S. data.
- The final version of the SLID 1993 public-use microdata file has now been distributed. Those who had purchased the preliminary version should have received this final version automatically. □

The labour market: Year-end review

Ernest B. Akyeampong

The past three years – all of them economic expansion years – have painted very different labour market pictures. In terms of employment, both the strength and the pattern of growth differed from one year to the next. In 1996, that is, from December 1995 to December 1996, the increase (189,000) was half the strong showing of 1994 (381,000), but almost double that of 1995 (99,000). Furthermore, while growth was steady throughout 1994, it stalled until the latter half of 1995 and performed erratically in 1996. More than half the increase of the first four months was lost over the following couple of months, a pattern that was more or less repeated in the second half of the year (Chart A).

In terms of unemployment, the magnitude and direction of change also varied significantly from year to year. The unemployment rate saw a large decline in 1994 (from 11.2% at the close of 1993 to 9.6% a year later), a small and gradual decline in 1995 (to 9.4%), and an erratic but upward trend in 1996 (to roughly 10.0% during the last three months).

The economic environment

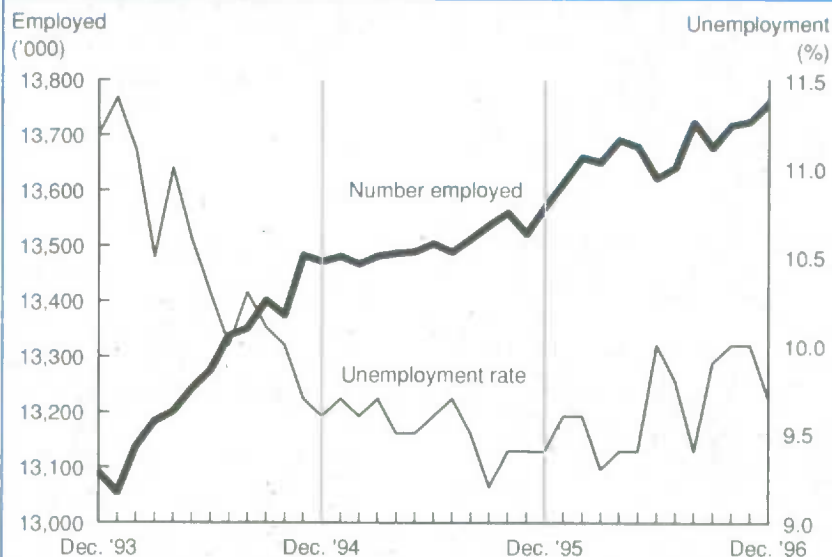
Lags and leads notwithstanding, these labour market developments were influenced by concurrent macroeconomic and other circumstances of the last three years. Some of these developments are worth noting (Chart B).

Except for a few deviations (third-quarter 1996 being one example), the employment picture

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Chart A

The unemployment rate rose in 1996 because labour force* growth outpaced employment gains.



Source: Labour Force Survey

* Includes both the employed and unemployed.

appeared to be closely associated with movements in real gross domestic product (GDP), the broadest measure of economic performance. The strong quarterly GDP growth rates throughout 1994 fell off dramatically in 1995, especially during the first half of the year. From the third quarter of 1995 to the second quarter of 1996, the GDP grew slowly (at around 0.3%), then increased by 0.8% in the third quarter. The slower employment growth during the second and third quarters of 1996 also appears to be related to the fact that businesses resorted more to non-farm inventory liquidation than to accumulation.

Personal spending on goods and services also plays a significant role in both GDP and employment growth. Although interest rates began to drop in the spring of 1995, overall growth in personal spending that year was only one-half the

This article is based on information available as of January 10, 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 fluctuations.

increase in 1994 (1.4% versus 2.9%). The surge during the first three months of 1996 (1.3%) was short-lived. Despite the continued decline in borrowing costs and low inflation, growth in personal spending in the second and third quarters was very sluggish: 0.2% and 0.3%. This reluctance to spend can be attributed to several factors: the small increase in real personal incomes; continued high levels of personal debt; and job insecurity due in part to persistently high unemployment rates, high personal and business bankruptcy rates and low confidence in the economy's prospects. In addition, fiscal restraint practices of governments tended to dampen growth in total domestic demand.

Exports, especially merchandise, play an important role in Canada's employment growth, though these two indicators do not necessarily move in step. Year-over-year growth in merchandise exports has tapered off over the past three years: from 15% in 1994, to 12% in 1995 and 6% for the first three quarters of 1996 compared with the same period in 1995. In spite of this, GDP growth continues to be fuelled mainly by the export sector.

How has employment changed?

Not only did the strength and pattern of employment growth differ from year to year; so too did its split between full- and part-time work; its demographic, industrial and geographic distributions; and its breakdown between paid workers and the self-employed.

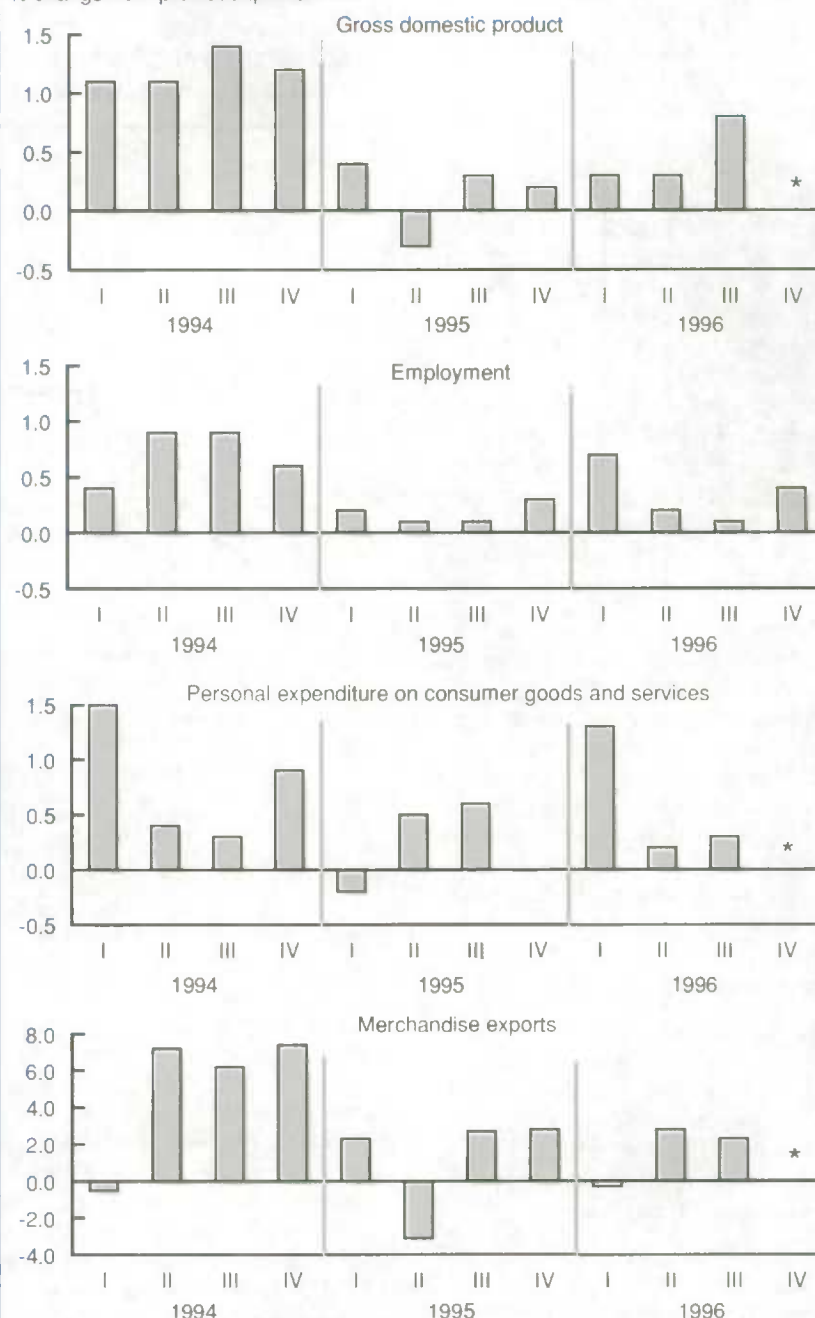
Full-time/part-time work

All employment growth from December 1993 to December 1994 was full-time (436,000). Indeed, part-time employment in 1994 declined by 55,000. This picture was reversed in 1995, when part-time

Chart B

Employment growth is closely associated with movements in the GDP.

% change from previous quarter



Sources: Labour Force Survey, and National Accounts and Environment Division

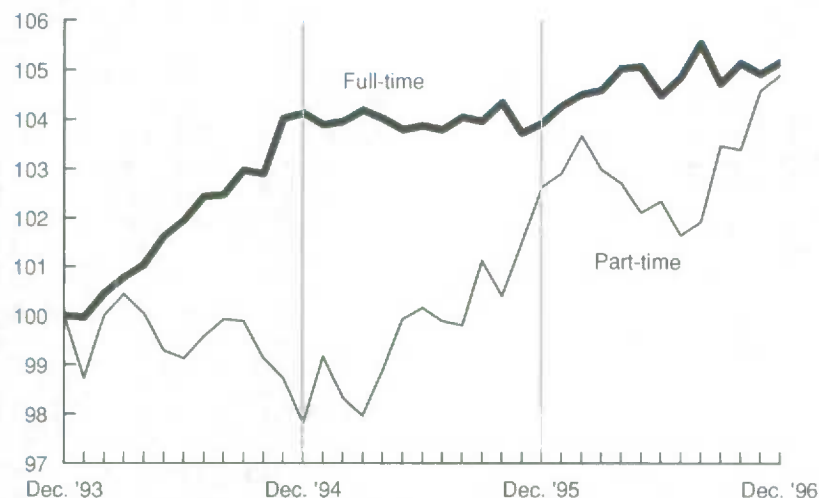
Note: Scale for merchandise exports differs from the others.

* Data not available.

Chart C

Unlike the situation in 1994 and 1995, both full- and part-time employment contributed to job growth in 1996.

December 1993=100



Source: Labour Force Survey

adult women (110,000 or 2.1%) exceeding that of adult men (99,000 or 1.6%). Youths continued to see their employment numbers dwindle (-20,000 or -1%). All employment gains among adult men in 1996 were full-time, while two-thirds of adult women's were part-time.

Industry shares

Both goods- and service-producing industries enjoyed strong employment gains in 1994. In absolute and relative terms, however, growth in the goods sector (209,000 or 6.1%) exceeded that of the service sector (171,000 or 1.8%). Over the course of the following year, the service sector saw its employment levels rise by 131,000, while the goods sector registered a loss of 35,000. In 1996, as in 1994, employment growth was concentrated in the goods sector, accounting for slightly over one-half (103,000) of total gains throughout the year –

jobs (121,000) accounted for all employment growth, and full-time employment declined by 22,000. In 1996, job growth was both full-time (132,000) and part-time (57,000) (Chart C).

Demographic distributions

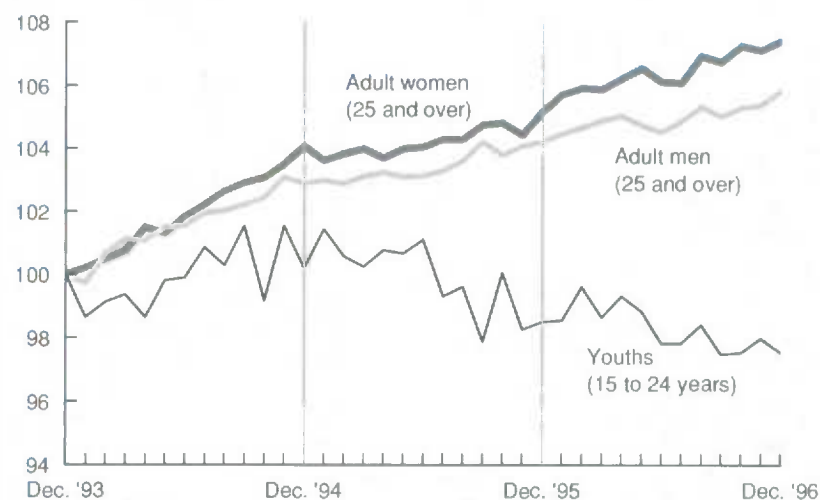
Except for 1994, when youths (15 to 24 year-olds) saw a marginal rise (4,000), job gains in the past three years have gone to adult men and women (aged 25 or over). However, their respective shares of the gains have varied over the period (Chart D).

In 1994, employment gains by adult women (199,000) slightly exceeded those of adult men (178,000). The following year, the picture was reversed: men's gains (80,000) surpassed women's (54,000). That year, youth employment fell by 35,000. This past year saw a return to the 1994 distribution pattern, with growth among

Chart D

Adult employment has seen sustained growth, while youths continue to lose ground.

December 1993=100

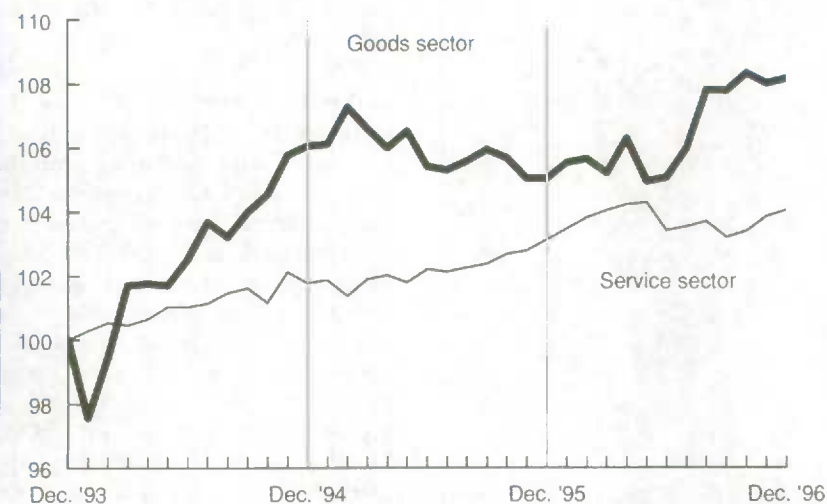


Source: Labour Force Survey

Chart E

The goods sector showed strong employment growth in the second half of 1996.

December 1993=100



Source: Labour Force Survey

much higher than its one-quarter share of the workforce (Chart E).

The goods sector owed its strong performance in 1996 to the large employment increase in manufacturing (70,000 or 3%) – mostly in metal fabricating, electronic and wood products – and in agriculture (32,000 or 7%) (Chart F). A year earlier, these two industries had each lost employment. Last year's industrial strife in the auto sector does not appear to have had a major effect on employment growth in manufacturing, while the large increase in agricultural employment can be linked to the bumper grain harvest. By mid-1996, employment in the construction industry, in decline since late 1994, had begun to show some strength, though volatile, thanks to increased activity in both residential and non-residential construction. The rally was not strong enough, however, to prevent the loss of 3,000 jobs in 1996. New housing appears not to have been

as popular with home buyers as homes in the resale market, hence the moderate residential construction activity. Employment remained unchanged in the other primary industries.

The rather weak employment growth in the service sector in 1996 can be traced largely to poor performance in services. Employment gains there had totalled 170,000 in 1994 and 120,000 in 1995, but reached only 52,000 or 1.0% in 1996. Large employment losses in some public services (namely, health, education and social services) offset gains elsewhere, notably in services to business. Finance, insurance and real estate began the year with some impressive employment gains (in finance), but then gave way to even greater losses. Strong gains in autumn, again in finance, resulted in an overall industry employment growth of 8,000 (1.0%) in 1996.

Employment gains were recorded in both trade (42,000) – mostly wholesale trade – and public administration (27,000) in 1996, but losses were registered in transportation, communication and other utilities (-31,000), mainly in communication.

Provincial distributions

While all provinces shared proportionately in the strong employment growth of 1994, the moderate job gains of 1995 were concentrated in Quebec, British Columbia, Alberta and Nova Scotia. In 1996, all provinces east of Ontario recorded employment losses, while Ontario and the western provinces registered gains (Chart G).

Between December 1995 and December 1996, Newfoundland saw employment gains in only three months, with losses or no gain in the others. It ended the year with a loss of 8,000 (-4.1%).

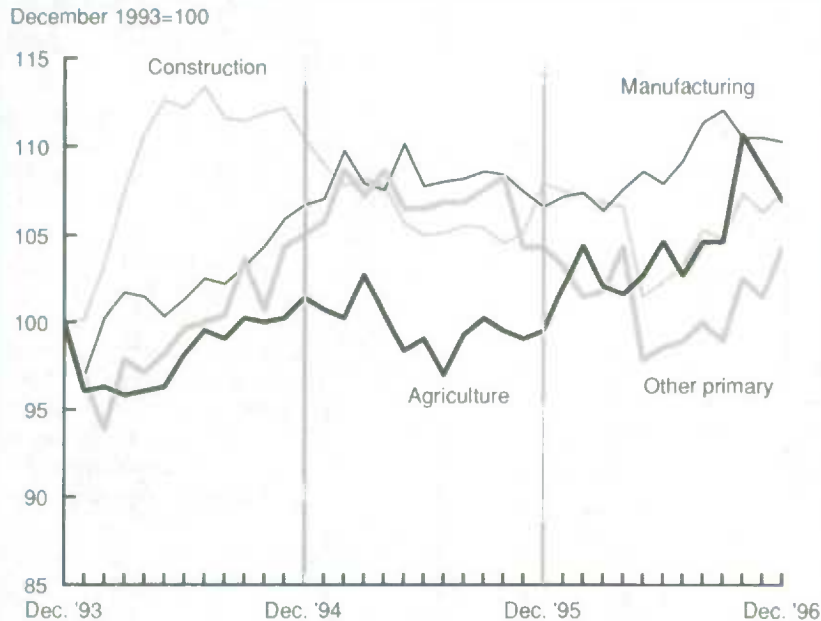
In Prince Edward Island, employment levels moved very little during the first eight months of 1996. Then, slight and consecutive declines brought the year-end level to just 1,000 (-1.6%) less than that of December 1995.

In Nova Scotia, half the employment losses in the first three months were regained in the second quarter. This was quickly followed by another large loss in July. Since then, employment has edged up only slightly, and the level at the close of the year was 9,000 (-2.3%) lower than a year earlier – a reversal of the 14,000 gain in 1995.

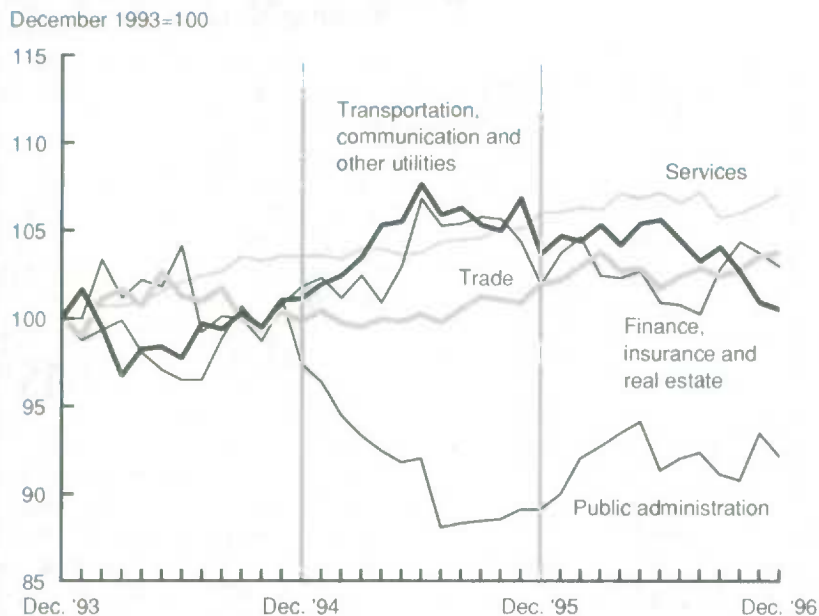
Employment levels fluctuated in New Brunswick in 1996, but the monthly losses exceeded the gains, and the province ended the year with a loss of 8,000 – larger than the 5,000 drop in 1995.

In 1995, Quebec had recorded the largest employment gain (40,000) among the provinces; in 1996, it posted a loss (-18,000 or -0.6%). Following some very early

Chart F
Manufacturing and agriculture fuelled employment growth in the goods sector in 1996 ...



while job losses in public services * and communication contributed to a lacklustre service sector performance.



Source: Labour Force Survey

* Public services, namely, health, education and social services, is part of the services industry.

gains, the province lost 90,000 jobs during March through July, mostly in trade and public services. About half of these losses were regained in August. The next five months saw minor losses offset by a slight gain at the end of the year.

Ontario painted a fluctuating employment picture during the first half of 1996, but increased activity in manufacturing fuelled an upward trend during the second half of the year. In absolute terms, Ontario's employment gain (77,000) amounted to 40% of the overall national increase; its employment growth rate (1.5%) just barely exceeded the national figure of 1.4%. In spite of the employment declines during the last two months, mostly in communication and public services, the province's overall job increase in 1996 was almost six times the gain in 1995 (13,000).

Manitoba showed no change in employment in 1995. The trend in 1996, however, was upward, fuelled mainly by trade, providing a gain for the year of 19,000 (3.7%).

Saskatchewan lost jobs in 1995 (-4000). Monthly employment gains and losses in 1996 almost cancelled each other out, and the province ended the year with just 1,000 more jobs.

Alberta and British Columbia are the only provinces to have registered sustained upward trends in their employment levels from 1994 to 1996. Indeed, last year their rates of employment growth (4.1% [56,000] and 4.2% [74,000]) were about three times larger than that of the nation as a whole. Furthermore, the job gains in these two provinces were more widespread across industries.

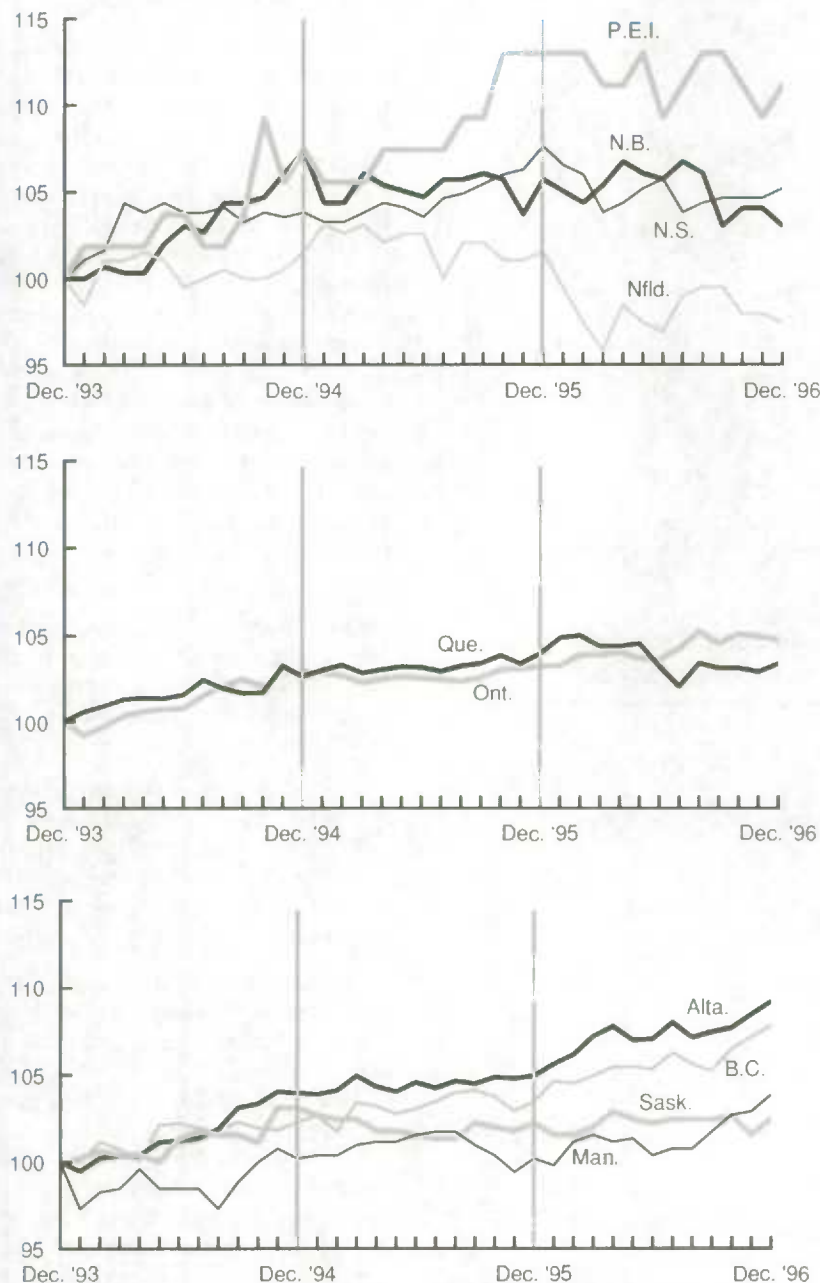
Self-employment growth fastest

With all levels of government practising fiscal restraint, the decline in public sector¹ employment that

Chart G

In 1996, Quebec and the East saw employment drop while Ontario and the West posted gains.

December 1993=100



Source: Labour Force Survey

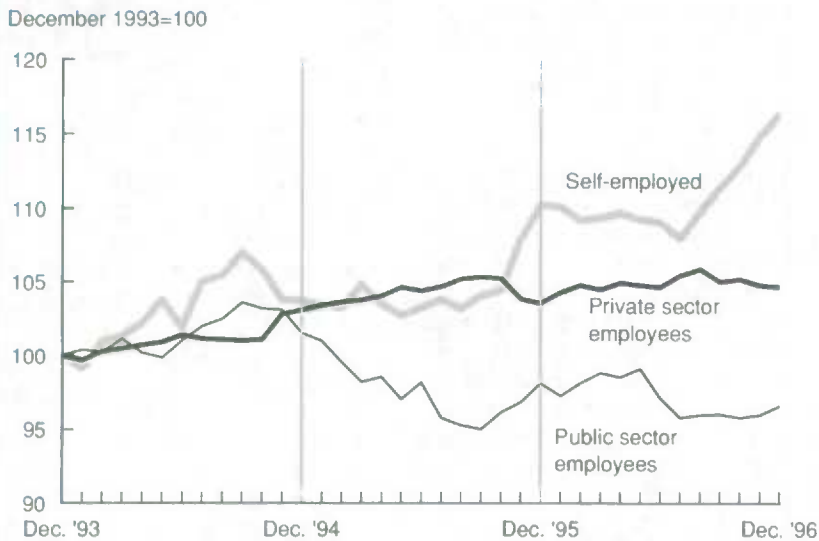
began during the latter part of 1994 accelerated in 1995. The decreases continued into 1996, though at a slower pace. Employment losses in this sector totalled 33,000 (-1.6%) last year, almost all of them in health, education and social services.

In the private sector, the number of employees grew throughout 1994 and most of 1995. Since the last quarter of 1995, the level has fluctuated. The increase in 1996 amounted to 98,000 (1.1%). Self-employment also grew steadily during the first three quarters of 1994. Following a brief decline, the level remained fairly flat for about a year, but climbed again in autumn 1995. The slight drop during the first half of 1996 was followed by a rapid and sustained growth in the second half. Self-employment gains over the course of the year totalled 125,000 (5.6%); self-employment now accounts for 17% (2.4 million) of total employment, up from 14% (1.7 million) a decade ago (Chart H).²

Moonlighting on the rise

Moonlighting, registering an annual average of some 650,000 workers from 1993 to 1995, saw a big jump in 1996, rising to about 700,000. Expressed differently, the moonlighting rate, that is, the proportion of employed persons holding more than one job, rose from around 4.9% in 1995 to roughly 5.1% in 1996. Youths as well as adult men and women contributed to this increase. Two factors may have played some role in the sudden increase. First, low increases in real earnings in recent years may have forced many workers to take on additional jobs to help make ends meet. Indeed, results from the 1991 and 1995 Surveys of Work Arrangements show that more than half of moonlighters take additional jobs for financial reasons

Chart H
Self-employment experienced rapid growth in the second half of 1996.



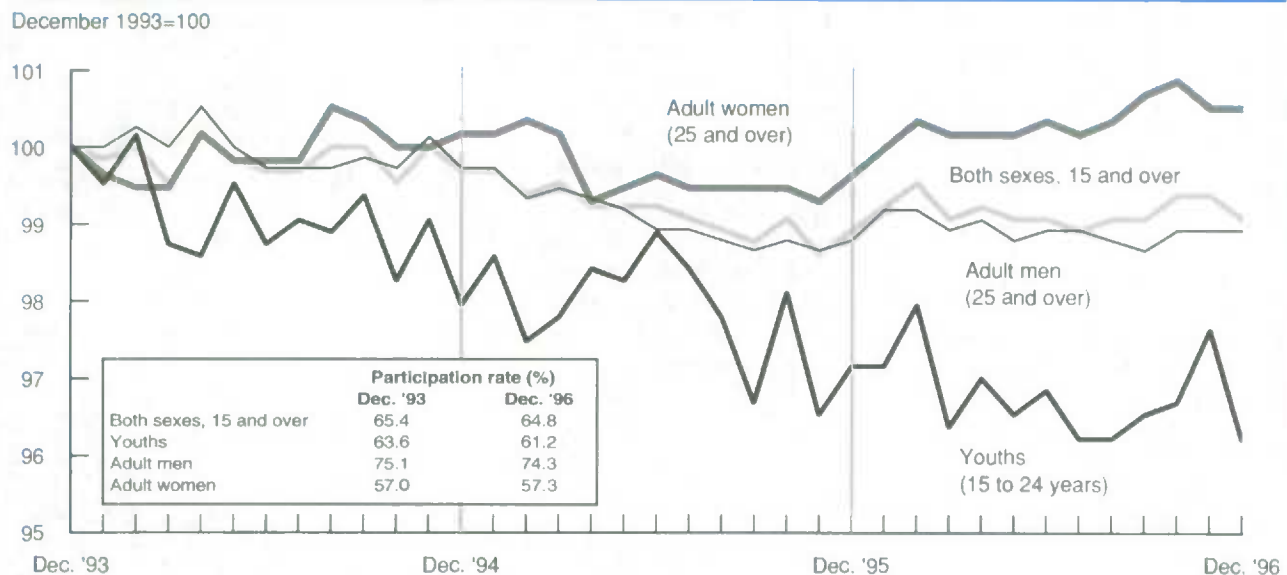
Source: Labour Force Survey
 Note: See note 1 for definitions.

(Siroonian, 1993). Second, the perceived erosion of job security in recent years may have pushed some people to take a second job as a buffer against sudden unemployment.

Unemployment

Movements in the overall unemployment rate are the result of the interactions between employment and labour force³ changes. In 1994, growth in employment tended to outpace that of the labour force, causing the unemployment rate to decline. In 1995, however, the two measures tended to move in tandem, making little difference to the unemployment rate. Employment growth in 1996 (189,000), though erratic, was nevertheless better than the year before, but it was accompanied by an even greater increase in the labour force (263,000). The result was a rise in the unemployment rate. On an annual average basis, the overall

Chart I
The overall participation rate inched up in 1996, thanks to the resumption of the upward trend for adult women.



Source: Labour Force Survey

unemployment rate fell from 10.4% in 1994 to 9.5% in 1995, then rose to 9.7% in 1996.

This interplay of movements in overall employment, the labour force, and the unemployment rate held true all three years for both adult men and women and, to a large extent, for youths. Men's annual rate fell from 9.4% to 8.4%, then rose marginally to 8.5% in 1996. The corresponding rates for adult women were 8.9%, 8.2% and 8.4%, and for youths, 16.5%, 15.6% and 16.1%.

Quebec and the Atlantic provinces each registered a double-digit annual average unemployment rate in 1996, ranging from 11.7% in New Brunswick and 11.8% in Quebec to 19.4% in Newfoundland. Ontario and the western provinces each recorded a single-digit rate, ranging from 6.6% in Saskatchewan (one-third the rate of Newfoundland) to 9.1% in Ontario.

The annual average number of unemployed Canadians, as well as the average unemployment duration (the average number of weeks unemployed persons have continuously sought work without success), moved in line with the unemployment rate. The number of unemployed fell from 1,541,000 in 1994 to 1,422,000 in 1995, and rose to 1,469,000 in 1996. Similarly, average unemployment duration moved from 25.7 weeks to 24.3, to 28.0. (In 1990, the average duration had been 16.8 weeks.) In 1996, about one in 8 unemployed persons sought work without success for between six months and one year; a similar proportion had done so for more than a year.

Participation rate inches up

As noted earlier, last year's growth in the labour force (263,000) exceeded that of employment (189,000). Adult women accounted for about half the year's labour force growth, their participation rate having risen from 56.8% at the end of 1995 to 57.3% by December 1996 (Chart I).

The participation rate has fluctuated for the last six years, following a sustained annual growth that lasted more than two decades (Akyeampong, 1995; Butlin, 1995; Dumas, 1996; Macredie, 1996). Still, the 1996 annual average of 57.2% is the highest ever recorded for adult women. In fact, their strong showing alone managed to nudge the overall rate from 64.8% in 1995 to 64.9%.

In contrast, adult men's participation rate has seen annual declines for the past two decades, with the exception of 1996 (74.3%), which differed little from 1995. The rate increased early in the year, falling back in the second quarter to 74.3%, and remaining fairly flat. The youth rate has also trended downwards this decade, with 1996 no exception, although the last quarter produced a slight increase. Youths' annual average participation rate for 1996 (61.6%) was down from 62.2% in 1995.

International comparisons

Among the G-7 countries,⁴ Canada's annual average employment growth (1.3%) in 1996 was bettered only by that of the United States (1.4%). Preliminary estimates⁵ show comparable growth rates of around 0.5% in Japan and Italy,

just 0.2% in the United Kingdom and 0.1% in France. Germany⁶ experienced a 0.9% decline.

In terms of unemployment, the data suggest a slight widening of the gap between Canadian and U.S. annual average rates. In 1996, the rates were 9.7% versus 5.4%; a year earlier, they had been 9.5% and 5.6%. Preliminary estimates also indicate that among the G-7 countries, only France (12.5%) and Italy (12.2%) had rates higher than Canada's. Japan's rate of 3.4% was about one-third that of Canada; Germany's and the United Kingdom's stood at 7.2% and 8.2%.

Summary

Despite continuing sluggish domestic spending, employment growth in 1996, though erratic, was better than that of 1995, thanks mainly to exports. In spite of this, the unemployment rate increased in 1996 because labour force growth was even greater.

Employment growth in 1996 was not universal, however. Higher-than-average growth rates were recorded especially in Alberta and British Columbia, as well as in the goods sector, among adult women, and in self-employment. However, in Quebec and the Atlantic provinces, among young people, and in the public sector, there were actually some job losses.

In 1996, both adult women's labour force participation rate (which had fluctuated in recent years) and the multiple job-holding rate (which had remained virtually unchanged) resumed their upward trends. □

■ Notes

1 The public sector includes employees working for the federal government, provincial or local governments, agencies or other government bodies, Crown corporations, or government-owned institutions such as schools or hospitals. The private sector includes all other employees and the self-employed. The self-employed are working owners of businesses (incorporated or unincorporated), professional practices or farms. On Chart H, the line labelled "self-employed" also includes 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).

2 Results from the 1995 Survey of Work Arrangements (SWA) show that the main reasons for engaging in self-employment were enjoyment of independence (42%), carrying on a family business (17%), no other work available (12%), and a desire to make more money (10%) (Akyeampong, 1997).

For another look at SWA data on the self-employed, see "Key labour and income facts" in this issue.

3 The labour force includes both the employed and unemployed.

4 The G-7 countries are Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.

5 These estimates were produced by the U.S. Bureau of Labor Statistics, based on data available at the end of 1996. All data approximate U.S. labour market definitions so as to make the comparisons meaningful.

6 Figures for Germany refer to the Federal Republic of Germany before unification.

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Employment and industrial development in the North

Lee Grenon

Over the past century natural resource industries have transformed the North. Its economy has expanded beyond fishing, hunting, trapping and independent prospecting to include resource-based industries and a broad service sector. Today, most independent operators have given way to large corporations and to unionized miners and engineers. Many other workers are also migrating to the area as its economy diversifies.

This study compares economic and employment trends in the Yukon and Northwest Territories with those in the rest of the country. The accompanying study in this issue, "Northern earnings and income," compares northern earnings and income trends with those elsewhere in the country (see *Data sources* and *Definitions*).

The northern economy

Boom-to-bust cycles have produced considerable variation in northern economic performance during the past decade, particularly in the Yukon. Mining makes up a large share of the Yukon's gross domestic product (GDP). As a consequence, movements of this indicator have been relatively volatile because of changing conditions in the industry. For example, from 1985 through 1987, GDP increased by 57% with the re-opening of the Faro lead-zinc mine, and by 12% between 1991 and 1992 following a labour dispute in 1991 (Chart A). Because mining suffered a major decline in 1993, GDP dropped by 19% between 1992 and 1994. When the industry recovered in 1995, economic output rebounded

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Data sources

Aboriginal Peoples Survey (APS)

For information on this survey see *Data on the Aboriginal population*.

Census of Canada

The census is held every five years, and provides labour force and demographic information such as industry, occupation, age, sex, ethnic origin and length of residency. Data from the 1996 Census will begin to be released this year. For further information see Statistics Canada (1996a).

The 1991 Census introduced a change in the definition of the Census population. Comparisons of 1991 data and those from earlier censuses should be made with caution.

Labour Force Survey (LFS)

The Labour Force Survey, conducted by Statistics Canada each month, produces official employment and unemployment statistics for Canada (excluding the Yukon and Northwest Territories). Winter figures cited in Table 1 of this article are three-month averages (January to March).

Labour Force Survey in the Yukon

Since 1992, Statistics Canada has conducted a special labour force survey for the Yukon. The Yukon Bureau of Statistics releases data from this survey on a three-month average basis.

Neighbourhood Income and Demographic file (taxfilers database)

This file is produced by Statistics Canada's Small Area and Administra-

tive Data Division based on the T1 income tax form. Statistics on taxfilers' income and demographic characteristics are available for detailed geographic areas.

Northwest Territories Labour Force Survey

During February and March 1994, the N.W.T. Bureau of Statistics conducted a labour force survey of over 12,000 persons aged 15 years and over. Surveys were also conducted in December 1984 and in 1989 (January to March).

The Public Institutions Division

Statistics Canada produces estimates of public sector employment and wages and salaries. Coverage does not include universities, lay and religious residential care facilities, Newfoundland school boards, or First Nations and Inuit administrations.

Survey of Employment, Payrolls and Hours (SEPH)

SEPH is the largest survey of businesses in Canada, and the only source of current weekly earnings at a detailed industry level.² Comparable historical estimates are available from 1983 on.

System of National Accounts

Estimates of provincial and territorial gross domestic product (GDP) by industry are produced by the Industry Measures and Analysis Division of Statistics Canada. Estimates of provincial and territorial GDP at factor cost by industry are available from 1984 on.

by 11%. (At the end of 1996, the Faro mine suspended operations.)

Between 1984 and 1989, economic growth was weaker in the Northwest Territories than in the

rest of Canada. Its GDP grew by just 10%. Gold mining, petroleum production, and oil and gas exploration generated moderate economic growth in the late 1980s. Then, in the early 1990s, oil and

Definitions

Average income is the aggregate income for a population divided by the population count. **Median income** is the amount that splits the income distribution into halves. Median and average income calculations include individuals with either positive or negative income.

Total income is annual income received from all sources for the reference year: **employment income (earnings)** includes wages, salaries, commissions, net income from unincorporated non-farm business and/or professional practice, and net farm self-employment income; **government transfer payments** include Old Age Security and Guaranteed Income Supplement, Canada and Quebec Pension Plan benefits, Employment Insurance benefits, Family Allowance, Federal Child Tax Credit, and other income from government; **other income** includes investment income, retirement income, and other money income such as alimony, child support, severance pay and strike pay.

The census and the APS collect information on income from persons aged 15 years and over. Estimates of total income for taxfilers include all income reported by individuals on income tax returns.

Income is presented in constant dollars, adjusted for inflation using the Consumer Price Index (CPI). Income data from the census (1990 dollars) and taxfiler income data (1994 dollars) are adjusted with the Canada annual average of the CPI.

The definition of **employed** used in the Census of Canada, the Aboriginal Peoples Survey, Labour Force Surveys and the Neighbourhood Income and Demographic file is broader than that of paid employee used in the Survey of Employment, Payrolls and Hours. Employed persons in the census, APS and LFS include persons

aged 15 years and over who reported receiving wages, salaries, commissions, or self-employment income. The taxfilers database includes all persons who reported income from employment or self-employment.

Paid employee refers to a person receiving pay for services rendered (including paid absences), and for whom the employer is required to complete a Revenue Canada T-4 Supplementary Form. Included are full- and part-time employees, as well as working owners, directors, partners and other officers of incorporated businesses. Estimates for paid employees are from the SEPH. Statistics are not collected for self-employed persons with unincorporated businesses.

Those who **worked full year full time** were employed in 1990 for 49 to 52 weeks, and worked 30 hours or more a week for most of the year.

The official definition of **unemployed** refers to persons available for work during the reference week: who were without work and had actively looked for work in the previous four weeks; or who had been on temporary layoff and expected to return to work; or who had definite arrangements to start working within the next four weeks.

An alternative definition of unemployment used in the N.W.T. Labour Force Survey includes "persons who wanted a job... *but had not looked for work because they perceived no jobs to be available*." This alternative definition is similar to the concept of "discouraged worker" used by Canada's Labour Force Survey.

The **experienced labour force** consists of people who were in the labour force the week preceding the census (that is, they were employed or unemployed) and, if unemployed (that is, on temporary layoff or looking for work),

had worked at some time since January 1 of the year preceding the census.

Occupation refers to the kind of work performed. If a person was employed the week before the census, that occupation was assigned; otherwise, the job of longest duration since January 1 of the preceding year was used in the analysis.

Industry estimates are based on the 1980 Standard Industrial Classification.

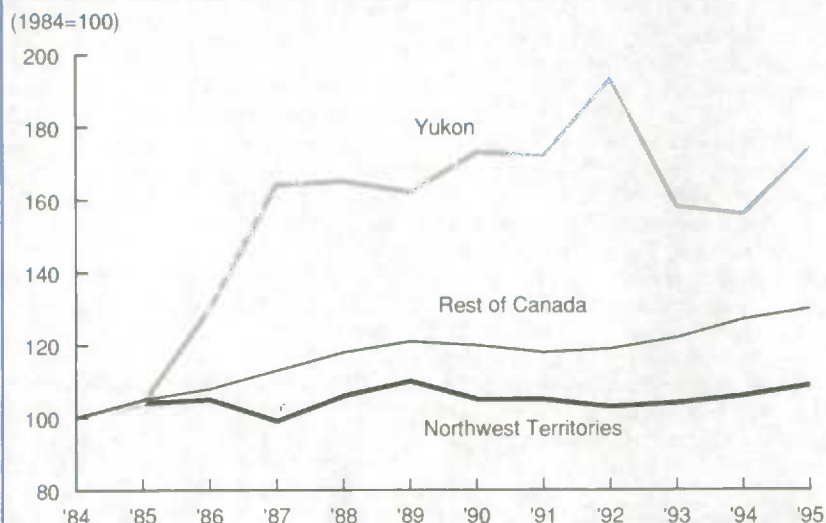
Estimates of **gross domestic product (GDP)** at factor cost by industry for provinces and territories have been revised for 1984 to 1991, and are preliminary for 1992 to 1995. All are in 1986 dollars. Estimates for years prior to 1984 may not be directly comparable owing to a change in methods used to estimate provincial and territorial GDP by industry.

The **North** and **northern Canada** refer to the Yukon and Northwest Territories. Most comparisons are between the Yukon or Northwest Territories and the rest of Canada; however, because of data limitations, some comparisons are with all of Canada. (For general facts about the North, see Appendix).

Recent migrants are adults 15 years and over who lived in the Yukon or Northwest Territories at the time of the 1991 Census, and lived in a different province, territory or country at the time of the 1986 Census. **Longer-term residents** are persons 15 years and over who resided in the same territory (either the Yukon or the Northwest Territories) during both censuses.

An **urban area** has a population of at least 1,000 people and a population density of at least 400 people per square kilometre, as of the previous census.

Chart A
The Yukon's GDP is relatively volatile.



Source: Industry Measures and Analysis Division

Note: The Faro lead-zinc mine in the Yukon re-opened in 1985. In the summer of 1991, a strike took place. In the summer of 1993, mining operations were suspended. At the end of 1994, activity resumed. In December 1996, mining operations were again suspended.

1983 to 1995 (Chart B). Despite greater fluctuations in its GDP, the North's annual average paid employment increased from 25,800 to 35,700, exceeding its pre-recession peak. In contrast, paid employment in the rest of Canada remained below its 1990 high point.³

Both employment and unemployment rates are higher in the North (Table 1)⁴ – the result of a relatively mobile workforce and young population. For example, persons who moved to the North from elsewhere or from one territory to another between 1986 and 1991 made up 28% of northern workers in 1991. Among the working-age population (that is, 15 years and over), the percentage aged 15 to 64 years in 1995 was 95.8% in the Northwest Territories and 93.9% in the Yukon. It was just 84.9% in the rest of Canada.

Since Statistics Canada's definition of unemployment may not be a satisfactory measure of joblessness

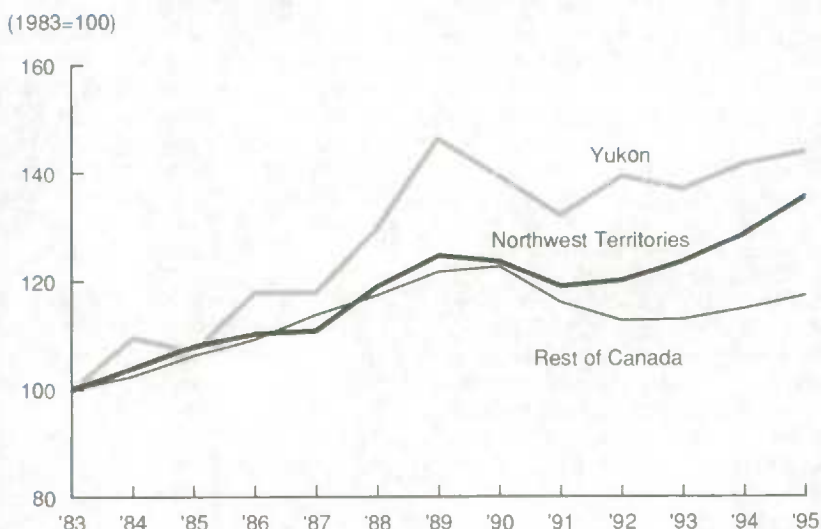
gas exploration and resource industry construction declined, while gold mining suffered from mine closures and labour disputes. Consequently, GDP fell by 6% from 1989 to 1992. Thanks to renewed activity in mining, by 1995 economic output had nearly returned to its pre-recession peak.

In contrast, from 1984 to 1989 Canada's GDP grew by 21%. Despite declines and weak growth in the early 1990s, the Canadian economy was 7% larger in 1995 than it had been in 1989. The Northwest Territories' GDP was still 1% below its 1989 peak, and the Yukon's was 10% below its 1992 level.

Employment in the North

Northern Canada's overall rate of paid employment growth was double that of the rest of Canada from

Chart B
Employment growth has been stronger in the North.



Source: Survey of Employment, Payrolls and Hours

Table 1
Labour force activity of persons aged 15 years and over

	1986 Census	Winter 1989	1991 Census	Winter 1994
	%			
Northwest Territories				
Participation rate	70	70	73	73
Employment rate	60	59	63	61
Unemployment rate	14	16	13	17
Yukon				
Participation rate	79	..	82	60
Employment rate	69	..	72	52
Unemployment rate	13	..	12	14
Rest of Canada				
Participation rate	66	66	68	64
Employment rate	60	61	61	56
Unemployment rate	10	8	10	12

Sources: Northwest Territories Labour Force Survey, 1989 and 1994; Yukon Bureau of Statistics, 1994; Labour Force Survey, 1989 and 1994; Census of Canada, 1986 and 1991. For details, see Data sources.

The growing service sector's requirement for public and commercial facilities has promoted employment in the construction industry. Natural resources have also made a major contribution to employment. On the other hand, manufacturing remains relatively small and narrowly based, which has limited the growth of the goods-producing workforce. The latter peaked at the height of mining, oil and gas activity in the late 1980s (Table 2), then lost ground early this decade.

The public sector⁶ continues to make a major contribution to the northern economy. In 1995, it employed 44% of all employees in the Northwest Territories and 39% in the Yukon. In the rest of Canada,

in small remote communities, an alternative measure of unemployment is also used by the Northwest Territories.⁵ It includes people who want to work but have not looked for work because they believe no jobs are available. This rate is considerably higher than the official rate, attesting to the difficulty of finding employment in northern rural areas.

Diversification of the paid workforce

In 1995, 84% of paid employment in the North was in the service sector, compared with 77% in the rest of Canada. The North's higher concentration in service jobs has persisted over the past decade. While the service sector's output has not yet fully recovered from the early 1990s recession, its paid workforce has exceeded the pre-recessionary peak. From 1983 to 1995, service sector employment expanded most in education (106%), retail and wholesale trade (69%), accommodation, food and beverage services (50%), and health and social services (48%).

Table 2
Annual average paid employment

		1983	1989	1995
Industrial aggregate *	N.W.T.	17,400	21,700	23,600
	Yukon	8,400	12,300	12,100
Goods sector	N.W.T.	3,400	3,600	3,700
	Yukon	1,200	2,000	1,700
Construction	N.W.T.	400	700	1,400
	Yukon	400	800	700
Service sector	N.W.T.	14,000	18,100	19,800
	Yukon	7,300	10,300	10,300
Public administration	N.W.T.	4,900	6,200	5,800
	Yukon	1,900	2,900	2,700
Retail and wholesale trade	N.W.T.	1,500	2,100	2,900
	Yukon	1,100	1,800	1,500
Education	N.W.T.	1,400	2,100	2,600
	Yukon	400	500	1,100
Health and social services	N.W.T.	1,100	1,500	2,200
	Yukon	1,000	1,400	900
Accommodation, food and beverage services	N.W.T.	1,100	1,600	1,300
	Yukon	700	1,100	1,400
Transportation and storage	N.W.T.	1,400	1,500	1,500
	Yukon	1,100	1,400	700

Source: Survey of Employment, Payrolls and Hours

* The industrial aggregate includes employment in businesses that do not have an industry classification. Military personnel are not included in paid employment estimates.

Table 3
Distribution of employees by sector

	Northwest Territories	Yukon	Rest of Canada
		%	
All employees	100	100	100
Private sector	56	61	76
Public sector *	44	39	24
Government business enterprises	1	1	3
Government	43	38	21
Federal (including military)	6	8	3
Provincial and territorial	30	27	9
Local	7	3	8

Sources: Survey of Employment, Payrolls and Hours; Public Institutions Division, 1995

* See note 6.

24% of all employees worked in the public sector (Table 3).

Two occupational groups in particular have experienced rapid growth: managerial and adminis-

trative positions, and the social sciences (Table 4). These occupations accounted for one-quarter of the increase in northern employment from 1971 to 1991.

Aboriginal labour force

Three broad populations of Aboriginal people live in the North: Inuit, Métis and North American Indian (see *Data on the Aboriginal population* and Appendix). Regional differences in population density, economic activity and access to education and training are reflected in their respective employment and unemployment rates (Table 5).

In contrast to non-Aboriginal people, who tend to live in urban areas (63% in 1991), most Aboriginal people in the North live in rural areas (75% in 1991) with limited opportunities for employment or postsecondary education. Consequently, just 59% of adults with Aboriginal origins participated in the labour force in 1991, compared with 87% of non-Aboriginal adults.

Table 4
Distribution of experienced labour force * by occupation **

	Northwest Territories			Yukon			Rest of Canada		
	1971	1981	1991	1971	1981	1991	1971	1981	1991
	%								
Experienced labour force	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Managerial and administrative	4.0	9.7	13.6	3.6	8.4	12.1	4.3	6.8	9.0
Natural sciences, engineering and mathematics	3.2	3.4	3.4	3.5	4.1	4.0	2.7	3.4	4.0
Social sciences	1.1	2.3	3.6	0.8	2.3	3.3	0.9	1.6	2.1
Religion	0.6	0.5	0.4	0.2	0.4	0.3	0.3	0.3	0.2
Teaching	5.0	5.7	6.2	3.2	3.7	4.3	4.0	4.1	4.2
Medicine and health	2.9	2.9	3.0	2.3	2.6	3.0	3.8	4.3	4.9
Artistic, literary and recreational	1.0	2.0	2.6	0.9	1.3	1.6	0.9	1.4	1.6
Clerical	11.3	16.7	16.7	13.5	17.6	16.6	15.9	18.2	17.4
Sales	4.2	4.7	4.6	6.4	6.7	6.7	9.5	9.6	10.0
Services	14.4	14.6	14.7	14.3	13.4	13.1	11.2	11.9	12.7
Farming, horticultural and animal husbandry	0.2	0.3	0.3	0.4	0.8	1.1	5.9	4.2	3.7
Fishing, hunting and trapping	3.3	1.1	1.2	0.3	0.2	0.2	0.3	0.3	0.3
Forestry and logging	0.8	0.5	0.6	1.0	0.6	1.0	0.8	0.7	0.6
Mining and quarrying, including oil and gas	3.8	3.4	2.1	4.4	3.8	1.7	0.7	0.6	0.4
Processing	1.5	1.2	0.9	1.8	1.2	1.1	3.9	3.9	2.8
Machining	1.5	0.8	0.6	1.0	1.0	1.0	2.8	2.6	1.8
Product fabricating, assembling and repairing	4.6	5.1	3.2	7.2	5.5	4.1	7.4	7.8	6.0
Construction	7.4	9.0	8.8	9.6	9.4	9.9	6.6	6.4	5.7
Transport equipment operating	4.8	5.6	5.0	6.8	5.4	3.8	3.9	3.8	3.4
Material handling	2.4	2.1	1.3	2.1	1.7	0.9	2.4	2.0	1.5
Other crafts and equipment operating	2.3	1.5	1.0	1.7	1.1	0.9	1.3	1.2	1.0
Other occupations	2.4	2.6	2.8	0.9	1.7	2.5	1.9	1.5	2.3
Not stated	17.0	4.5	3.3	14.2	7.1	6.9	8.5	3.5	4.1

Source: Census of Canada

* See Definitions.

** Based on the 1971 Occupational Classification Manual.

Data on the Aboriginal population

Characteristics of Aboriginal and non-Aboriginal persons are estimates based on the 1991 Census. Its question on ethnic or cultural origins provided information about North American Indian, Métis, or Inuit origins, elicited either as a single response or mentioned in combination with other origins. Another census question collected information on persons who were registered Indians as defined by the *Indian Act of Canada*.

The Aboriginal Peoples Survey (APS), conducted between October 1991 and January 1992, was a follow-up survey to the 1991 Census. A large-scale survey of a sample of those who had reported having Aboriginal origins and/or being registered under the act, the APS provided a portrait of those who identified with those origins, that is, considered themselves to be North American Indian, Métis, or Inuit.

In the North, most persons with Aboriginal origins also identify with their Aboriginal ancestry. Among the 25,725 persons who reported those origins and/or were registered under the act, 92% or 23,795 persons identified themselves as North American Indian, Métis or Inuit.¹

Comparison of 1986 and 1991 Census data on ethnic origin

The ethnic origin question asked in the 1991 Census differed slightly from that of the 1986 Census. In 1991, respondents were asked: "To which ethnic or cultural group(s) did this person's ancestors belong?" The 1986 Census question had asked: "To which ethnic or cultural group(s) do you or did your ancestors belong?" The phrase "do you" was removed to clarify the intent of the question, which was to measure the origins of respondents. In addition,

a note explained the purpose and intent of asking a question on ethnic origin.

These changes do not affect the comparability of 1986 and 1991 data. The reporting of ethnicity is affected, however, by the social environment and by personal factors, including awareness of family background, length of time since immigration, and confusion with other concepts such as citizenship, nationality, language or identity. Between 1986 and 1991, increases in acknowledgement of Aboriginal origins and Canadian origins, and a decrease in that of English ancestry, are likely the result of social and personal considerations. The percentage of the population reporting Aboriginal origins increased in the Northwest Territories from 59% in 1986 to 62% in 1991, and in the Yukon from 21% in 1986 to 23% in 1991.

Their official unemployment rate was considerably higher than that of the latter: 24.5% versus 6.2% (Table 6). Even in urban areas and among postsecondary graduates, Aboriginal people were less likely to be employed and more likely to be unemployed (Table 7).

Recent migrants

As with differences between non-Aboriginal and Aboriginal populations, recent migrants to the North or between territories tend to have higher rates of employment and lower rates of unemployment than do longer-term residents (Table 8). Many transient workers tend to come to the area only if they have jobs lined up and stay only as long as they have employment. The relatively high unemployment rate in 1991 among the Yukon's recent migrants was likely due to a mining labour dispute.

Greater participation of women

Women's participation in the northern labour force increased from 41% in 1971 to 71% in 1991. The

rate among men grew more slowly, from 77% to 81%. Similarly, in the rest of Canada, women's participation in the labour force increased from 40% to 60%, while men's remained steady at 76%.²

Table 5
Labour force activity of persons in the Yukon and Northwest Territories, by Aboriginal origin

	Participation rate	Employment rate	Unemployment rate	Worked in 1990 or 1991
	%			
Aboriginal population	61.9	46.7	24.5	73.4
Single origin	59.3	43.6	26.3	70.9
Multiple origins	73.8	60.9	17.9	84.5
Inuit *	57.3	42.8	25.3	70.2
Single origin	56.1	41.7	25.6	69.2
Multiple origins	67.0	51.9	23.2	78.9
Métis	74.1	62.5	16.0	83.9
Single origin	71.9	59.3	17.9	80.5
Multiple origins	76.8	66.4	14.0	87.9
North American Indian	64.2	47.5	26.0	74.7
Single origin	60.9	43.1	29.1	71.3
Multiple origins	74.4	60.8	18.3	85.1

Source: Census of Canada, 1991

* Most Inuit live in the sparsely populated eastern Arctic.

Table 6
Labour force activity in the North, by area and ethnic origin

	Northern adults	
	Aboriginal	Non-Aboriginal
	%	
All areas		
Participation rate *	59.0	86.6
Worked in 1990 or 1991 **	73.4	92.6
Employment rate	46.8	81.6
Unemployment rate	24.5	6.2
Urban areas		
Participation rate *	68.6	86.5
Worked in 1990 or 1991 **	81.7	92.5
Employment rate	57.0	81.9
Unemployment rate	18.6	5.8
Rural areas		
Participation rate *	55.8	86.6
Worked in 1990 or 1991 **	70.7	92.7
Employment rate	43.4	81.0
Unemployment rate	26.8	7.0

Source: Census of Canada, 1991

* Experienced labour force (see Definitions).

** Adults who worked any time from January 1, 1990 to the 1991 Census reference week regardless of their labour force status in the reference week.

The employment rate among northern women also increased significantly – from 39% in 1971 to 62% in 1991. In contrast, northern men's dropped from 73% to 69%. Among women in the rest of Canada the rate rose from 36% to 52%, while among men it decreased from 71% to 67%.

Northern women increased their share of employment in managerial and administrative occupations from 14% in 1971 to 43% in 1991. Their share of jobs in natural sciences, engineering and mathematics grew from 3% to 20%.

The majority of women, however, continue to be concentrated in several occupational groups. In 1991, among women in the experienced labour force, 30% were in clerical occupations, 18% in service jobs, and 13% in managerial and administrative positions. Men were more evenly distributed across occupations: 16% in construction, 13% in managerial and administrative work and 11% in service jobs.

Fewer opportunities for youths

Labour market conditions have worsened for young people across Canada, but especially in the North, where their unemployment rate increased from 8.0% in 1971 to 25.4% in 1991. In fact, since 1981 the rate has been higher in the North than in the rest of Canada (Table 9). This may be related to lower school attendance. During the 1990-91 school year, the percentage of youths attending school was 43% in the Northwest Territories, 56% in the Yukon, and 62% in the rest of Canada. Many non-students were probably looking for work.

Older workers

The labour force participation rates of older men and women are higher in the North than in the rest of the country. In 1991, the rate for

Table 7
Labour force activity of persons with postsecondary qualifications * in the Yukon and N.W.T., by area and ethnic origin

	Northern adults	
	Aboriginal	Non-Aboriginal
	%	
All areas		
Participation rate **	81.8	91.5
Worked in 1990 or 1991 †	92.4	95.4
Employment rate	67.5	86.8
Unemployment rate	19.3	5.4
Urban areas		
Participation rate **	83.9	91.8
Worked in 1990 or 1991 †	93.5	95.4
Employment rate	72.5	87.7
Unemployment rate	14.4	4.8
Rural areas		
Participation rate **	80.9	91.0
Worked in 1990 or 1991 †	91.8	95.3
Employment rate	65.2	85.5
Unemployment rate	21.5	6.4

Source: Census of Canada, 1991

* Includes trade certificates, college/CEGEP diplomas, and university certificates and degrees.

** Experienced labour force (see Definitions).

† Adults who worked any time from January 1, 1990 to the 1991 Census reference week regardless of their labour force status in the reference week.

northerners aged 55 to 64 was 62%, compared with 52%. Among persons 65 and over, the rates were also higher (16% versus 9%), probably because of the smaller proportion of retired persons in the North.

The lower employment rate among older northern men reflects the trend in the rest of Canada. The rate for northern men aged 55 to 64 declined from 70% in 1971 to 61% in 1991. Similarly, employment for other Canadian men in this age group dropped from 76% to 59%.

Wildlife harvesting

For many people, working in the North involves more than paid employment. Wildlife harvesting (that is, fishing, hunting and trapping) is important for many residents. The 1994 Northwest Territories Labour Force Survey reported that in 1993, 27% of persons aged 15 and over hunted or fished, 14% produced crafts, and 6% trapped animals.

Wildlife harvesting is especially important to Aboriginal people. According to the 1991 Aboriginal Peoples Survey, over 30% of respondents participated in unpaid land-use activities to support themselves or their families. As well, 26% received money for participating in land-use activities.

Fishing, hunting and trapping activities are largely outside the northern market economy. Fishing and trapping (excluding tourism) contribute less than 1% to the total market economy of the North, and have dropped in value from \$6.6 million in 1989 to \$2.7 million in 1995 (1986 dollars).

Land of opportunity

The Yukon and Northwest Territories have offered solid employment opportunities over the past decade in several industries and occupations. Paid employment in construction and education has more

Table 8
Labour force activity by migration status

	Northwest Territories		Yukon	
	Recent migrants	Long-term residents	Recent migrants	Long-term residents
	%			
Participation rate	90.0	68.0	86.9	79.3
Employment rate	84.7	56.8	77.2	69.9
Unemployment rate	5.8	16.5	11.2	11.9

Source: Census of Canada, 1991

Table 9
Labour force activity of persons aged 15 to 24 years

	1971	1976	1981	1986	1991
	%				
Yukon and N.W.T.					
Participation rate	53.6	61.4	64.1	62.3	63.5
Employment rate	49.3	54.5	51.0	45.8	47.4
Unemployment rate	8.0	11.5	20.6	26.3	25.4
Rest of Canada					
Participation rate	57.4	61.4	69.0	69.6	70.7
Employment rate	48.6	52.8	55.6	55.1	55.3
Unemployment rate	15.3	13.9	19.4	20.9	21.9

Source: Census of Canada

than doubled since the early 1980s. Employment in the goods sector increased substantially in the 1980s, but declined early in the 1990s. Renewed job growth in this sector owes much to new development and to the re-opening of several mines, as well as to continuing growth in the construction industry. Canada's first diamond mine, at Lac de Gras in the Northwest Territories, is expected to be operating by 1998. With revenue of \$500 million a year expected over the 25-year life of the mine (Haliechuk, 1995), the North seems poised for another mineral "rush."

While much of the North's fortune still remains with mines and oil wells, the growing service sector will likely provide greater stability to the area. As in the rest of Canada, this sector has had more

sustained employment growth and less cyclical variation than the goods sector. The continued development of the public sector, as well as the creation of Nunavut (Stout, 1997) and the reorganization of the western portion of the Northwest Territories (as yet unnamed) may lead to increased employment in services.

The growth in employment has taken place largely in urban areas, where opportunities have sometimes exceeded those in many southern cities. Meanwhile, northern rural areas have among the lowest employment rates in the country. These disparities are clearly reflected in the distribution of earnings. The accompanying article in this issue, "Northern earnings and income," elaborates on these issues. □

■ Notes

1 In the Northwest Territories, 97% of persons who reported Aboriginal origins also identified with their ancestry. The proportion in the Yukon was 70%.

2 Two other sources of earnings data are the Census of Canada and the Survey of Consumer Finances. The SCF does not provide estimates for the Yukon or Northwest Territories.

3 The Survey of Employment, Payrolls and Hours shows a 1990 peak in the annual average estimate of paid employment. According to the Labour Force Survey, the figure for all workers (including employees, self-employed and unpaid family workers) has surpassed that peak.

4 Labour force estimates include paid workers, self-employed workers, unpaid family workers, and unemployed persons.

5 The alternative measure of unemployment for the Yukon was not available for this analysis.

6 The public sector includes employees working for federal, territorial or local government, agencies or other government bodies, government business enterprises, or publicly owned institutions such as hospitals or schools.

7 Historical comparisons are based on definitions of labour force activity used in the 1971 Census, which have remained fairly consistent. For further information on concepts used in the 1971 Census, 1991 Census and monthly Labour Force Survey, see Statistics Canada, 1992.

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Perspectives on Labour and Income

The quarterly for labour market and income information

In the Appendix to "Employment and industrial development in the North," the symbol for data not appropriate or not applicable (...) was inadvertently used for part of the Canada column. Please substitute the following version:

Appendix

General facts about the North

	Northwest Territories	Yukon	Canada
Geography			
Area in square kilometres	3,426,320	483,450	9,970,610
% of Canada	34.4	4.8	100
Persons per 100 square kilometres (July 1, 1996p)	2	7	301
People			
% of Canada (July 1, 1996p)	0.2	0.1	100
% in urban areas (1991)	36.7	58.8	76.6
Women as a % (July 1, 1996p)	48.0	48.7	50.5
Population distribution (%) by age (July 1, 1996p)			
Under 15 years	32.3	23.6	20.0
15 to 64 years	64.6	71.9	67.8
65 years and over	3.1	4.5	12.2
% with mother tongue other than English or French			
1951	72.6	23.9	11.8
1991	42.3	8.1	14.2
% with Aboriginal origins and/or Indian registration in 1991			
	61.8	23.4	3.8
Aboriginal population in 1991			
Single origin	35,390	6,385	1,002,670
Multiple origins	29,415	3,780	470,615
	5,975	2,610	532,060
Inuit			
Single origin	21,355	170	49,260
Multiple origins	18,430	60	30,090
	2,925	110	19,170
Métis			
Single origin	4,315	565	212,650
Multiple origins	2,315	165	75,150
	2,000	400	137,500
North American Indian			
Single origin	11,100	5,870	783,980
Multiple origins	8,670	3,550	365,375
	2,430	2,320	418,605
Fertility rate (1994) (live births per woman)	2.74	1.73	1.66
Infant mortality rate (1994) (per 1,000 live births)	15.6	2.3	6.3
Median age on July 1, 1996p	25.7	32.5	35.2
Life expectancy in years (1994)	73.6	74.9	78.2
Population			
Circa 1898 (Dawson)	...	30,000	...
1921	8,100	4,100	8,787,400
July 1, 1996p	66,570	31,450	29,963,630
Capital cities:			
Whitehorse, Y.T. (June 1996)	...	23,540	...
Yellowknife, N.W.T. (June 1991)	15,180
Iqaluit, * Nunavut (June 1991)	3,550

Sources: Census of Canada, Demography Division, Health Statistics Division, Yukon Bureau of Statistics, Northwest Territories Bureau of Statistics, Natural Resources Canada, The Canadian Encyclopedia.

* This community has been named capital of the new territory, which attains its official status in 1999.

Appendix General facts about the North

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Sources: Census of Canada, Demography Division, Health Statistics Division, Yukon Bureau of Statistics, Northwest Territories Bureau of Statistics, Natural Resources Canada, The Canadian Encyclopedia.

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Northern earnings and income

Lee Grenon

The North has long been viewed as a land of opportunity for job seekers with the right skills and knowledge. Although the northern labour force is small, the rate of job growth over the past two decades in some industries has been strong.

This article compares earnings and incomes of northern Canadians with those of other Canadians, and shows who earns what in the North. It also examines income sources of Northerners and Canadians in general.

Average earnings in the 1970s and 1980s

From 1970 to 1990, the Northwest Territories experienced the highest rate of growth in employment income (earnings) in Canada. Its average earnings increased by 35% after adjustment for inflation (Chart A). Early in the period, average earnings had been highest in the Yukon. By the mid-1980s, however, earnings in this territory had begun to decline. In 1990, they were only 5% higher than in 1970, while in Canada overall¹ they grew 19%. (Data sources and definitions used in this analysis are outlined in the preceding article, "Employment and industrial development in the North.")

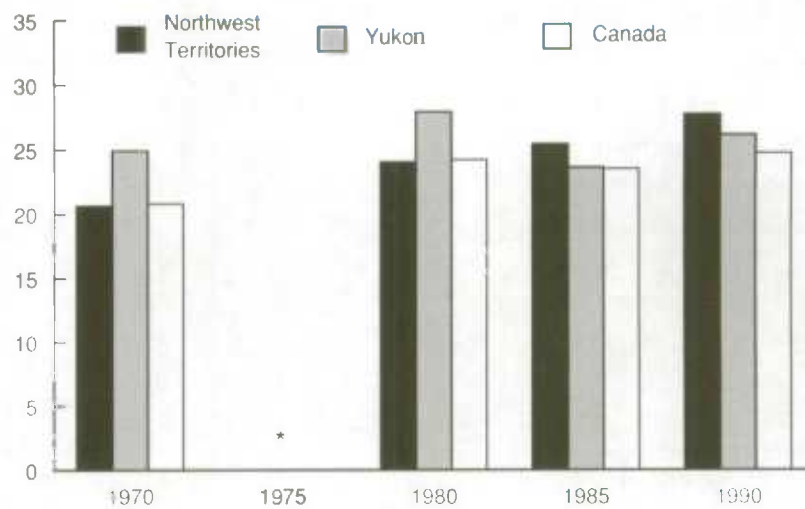
During the first decade of the period, Canadians' average employment income grew by 17%. The same was true for the Northwest Territories. This growth was slower in the Yukon (12%), although average earnings continued to be the highest of any province or territory.

Lee Grenon is with the Labour and Household Surveys Analysis Division. He can be reached at (613) 951-5254.

Chart A

From 1970 to 1990, N.W.T. average earnings increased by 35%.

1990\$ ('000)



Source: Census of Canada, 1971, 1981, 1986, 1991.

* Data not available.

The recession of the early 1980s contributed to a reduction of earnings for many Canadians, especially in the Yukon, where average earnings dropped 15% from 1980 to 1985. On the other hand, average employment income in the Northwest Territories was 6% higher than it had been five years earlier.²

The North led the growth in earnings during the late 1980s. Both the re-opening of the Faro lead-zinc mine and related economic growth in the Yukon were reflected in the 10% increase in average earnings from 1985 to 1990. The Northwest Territories reported the highest average earnings of any province or territory in 1990, enjoying a 9% increase.

Median earnings in the 1990s

Earnings declined in Canada in the early 1990s. Median employment income³ among taxfilers was lower in 1994 than it had been in 1990: 6% lower in the Yukon, 5% in the Northwest Territories, and 4% in all of Canada (Chart B). Despite the larger decline in the North, median employment income continued to be higher there than in Canada overall. In 1994, median earnings were 20% higher in the Northwest Territories and 13% higher in the Yukon. The cost of living, however, is substantially higher in the North (see *Some measures of the cost of living in the North*).

L'annexe de l'article «**Emploi et développement industriel dans le Nord**» comportait à tort le symbole désignant des données n'ayant pas lieu de figurer (...) dans une partie de la colonne touchant le Canada. Voici donc l'annexe corrigé :

Annexe Renseignements généraux sur le Nord			
	Territoires du Nord-Ouest	Yukon	Canada
Géographie			
Superficie en km ²	3 426 320	483 450	9 970 610
% du Canada	34,4	4,8	100
Nombre de personnes par 100 km ² (1 ^{er} juillet 1996p)	2	7	301
Démographie			
% du Canada (1 ^{er} juillet 1996p)	0,2	0,1	100
% en région urbaine (1991)	36,7	58,8	76,6
% de femmes (1 ^{er} juillet 1996p)	48,0	48,7	50,5
Répartition de la population en % selon l'âge (1 ^{er} juillet 1996p)			
Moins de 15 ans	32,3	23,6	20,0
15 à 64 ans	64,6	71,9	67,8
65 ans et plus	3,1	4,5	12,2
% dont la langue maternelle est autre que l'anglais ou le français			
1951	72,6	23,9	11,8
1991	42,3	8,1	14,2
% ayant une origine autochtone ou un statut d'Indien inscrit en 1991	61,8	23,4	3,8
Population autochtone en 1991	35 390	6 385	1 002 670
Origine unique	29 415	3 780	470 615
Origines multiples	5 975	2 610	532 060
Inuit	21 355	170	49 260
Origine unique	18 430	60	30 090
Origines multiples	2 925	110	19 170
Métis	4 315	565	212 650
Origine unique	2 315	165	75 150
Origines multiples	2 000	400	137 500
Indiens de l'Amérique du Nord	11 100	5 870	783 980
Origine unique	8 670	3 550	365 375
Origines multiples	2 430	2 320	418 605
Taux de fécondité (1994) (naissances vivantes par femme)	2,74	1,73	1,66
Taux de mortalité infantile (1994) (pour 1 000 naissances vivantes)	15,6	2,3	6,3
Âge médian au 1 ^{er} juillet 1996p	25,7	32,5	35,2
Espérance de vie en années (1994)	73,6	74,9	78,2
Population			
Circa 1898 (Dawson)	...	30 000	...
1921	8 100	4 100	8 787 400
1 ^{er} juillet 1996p	66 570	31 450	29 963 630
Capitales :			
Whitehorse, Yn. (juin 1996)	...	23 540	...
Yellowknife, T.N.-O. (juin 1991)	15 180
Iqaluit *, Nunavut (juin 1991)	3 550
Sources : Recensement du Canada, Division de la démographie, Division des statistiques de la santé, Bureau de la statistique du Yukon, Bureau de la statistique des Territoires du Nord-Ouest, Ressources naturelles Canada et L'encyclopédie du Canada			
* Cette collectivité a été nommée capitale de ce nouveau territoire, lequel sera officiellement reconnu en 1999.			

Some measures of the cost of living in the North

Earning levels should not necessarily be equated with consumer purchasing power. Prices for consumer goods and services (that is, the cost of living) differ considerably between the North and the rest of Canada. Described below are several measures that give a general indication of price differences between selected cities in the North and elsewhere in the country.

Despite differences in the cost of living, inflation rates for Whitehorse (Y.T.) and Yellowknife (N.W.T.) are comparable with those for Canada as a whole. Between 1983 and 1995, the **Consumer Price Index** annual average for all items increased by 45.0% in Whitehorse, 51.9% in Yellowknife, and 50.8% in Canada as a whole.

To measure price differences between Yellowknife and Edmonton, the Northwest Territories Bureau of Statistics produces the **Spatial Price**

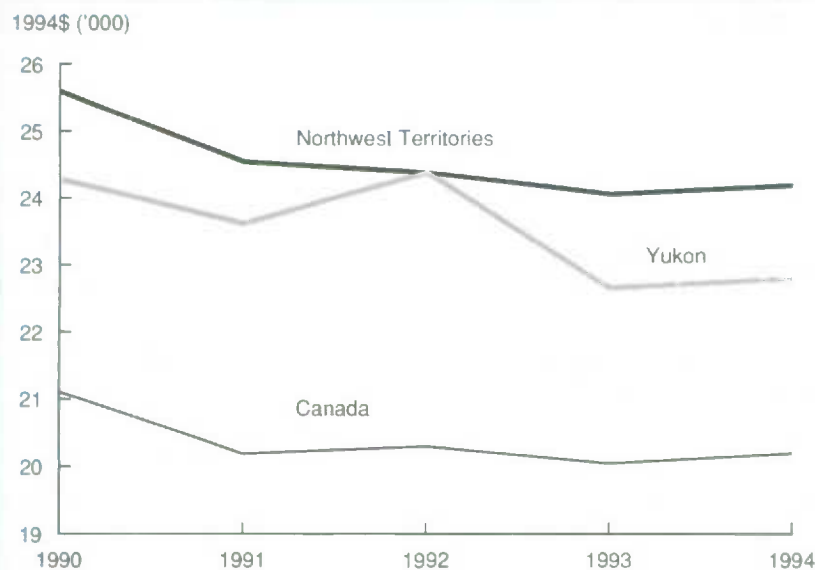
Index (SPI Edmonton = 100). Calculated each June, the SPI covers 90% of Edmonton's household expenditures as measured by the Consumer Price Index. Its major exclusion is mortgage interest payments. The SPI for Yellowknife was 136.3 in 1985, 131.2 in 1990 and 134.8 in 1993.

Differences between northern and southern costs of living vary across the North. One indicator of this variation is the **Living Cost Differential Allowance Index**. Several LCDs are produced by Statistics Canada to provide a range of price differentials between "isolated posts" and their respective "base" cities. For example, in 1994 the LCD index range for Yellowknife was 135.0 to 139.9. This means that prices for the selected "basket" of goods and services were roughly 35% to 40% higher in Yellowknife than in its base city of Ed-

monton. Across the Northwest Territories, index ranges for isolated posts varied from 120.0 to 124.9 for Fort Liard (Vancouver = 100) to 205.0 to 209.9 for Sachs Harbour (Edmonton = 100). In the Yukon, LCD index ranges varied from 115.0 to 119.9 in Whitehorse to 175.0 to 179.9 in Old Crow (Vancouver = 100).

It is important to note that LCD indexes apply only to federal government employees and do not necessarily reflect buying patterns for other households in the region. The LCD basket of goods and services includes groceries and other items ordered from outside the community. Several important components of household expenditure are excluded from the LCD basket, namely, shelter, clothing, furniture, vehicle purchase, and restaurant meals.

Chart B
Median earnings declined in the 1990s.



Source: Small Area and Administrative Data Division

Northern variations

The differences in annual earnings between the North and the rest of Canada are related partly to differences in the workforce distribution by sex, age and occupation (Grenon, 1997). Another important determinant is volume of work (that is, weekly hours of work and weeks of work in the year). A lower percentage of employed Northerners than workers in Canada worked full year full time. Annual earnings for those who did so were higher, however. In 1990, 48% of persons aged 15 and over in the Northwest Territories worked full year full time, 47% did so in the Yukon, and 52%, in Canada as a whole. Average employment income for those persons was \$42,300, \$37,300 and \$33,700, respectively.

Earnings also vary by occupation. In 1990, average employment income for most occupations was higher in the North than across Canada, with only a few exceptions, including sales and social sciences (Table 1).

Women and youths

In 1990, women on average earned 35% more in the Northwest Territories and 22% more in the Yukon than they did in Canada overall (Table 2). Men earned 22% more in the Northwest Territories and 7% more in the Yukon.

Furthermore, the male-female wage gap is less pronounced in the North than in Canada overall. At the beginning of the 1990s, women in the North earned 63 cents to every dollar earned by men. Across Canada, they made only 58 cents. By 1994, they were earning 67 cents in the Northwest Territories, 78 cents in the Yukon, and 62 cents across Canada (Table 3).

The gap has narrowed mainly because men's earnings declined in the early 1990s, particularly in the Yukon, where their median earnings dropped by 16% from 1990 to 1994 (Table 4). In contrast, Yukon women's earnings increased 4%. In 1992, men in the Yukon lost a major employer, the lead-zinc mine in Faro. This accounts for their drop in median employment income between 1992 and 1993.

Despite the higher unemployment rate among northern youths (aged 15 to 24), young people who work full year full time earn considerably more than youths in the rest of Canada; their average 1990 earnings were 33% higher in the Northwest Territories, and 24% higher in the Yukon (Table 5). These regional differences diminish with age. Among workers aged 55 to 64, average 1990 earnings were 18% higher in the Northwest Territories and 4% higher in the Yukon.

Table 1
Average employment income of persons aged 15 years and over working full year full time, by major occupational group, 1990

	Northwest Territories	Yukon	Canada
	1990 \$		
All occupations	42,300	37,300	33,700
Managerial and administrative	51,300	43,800	44,900
Natural sciences, engineering and mathematics	52,500	50,300	43,200
Social sciences	43,300	41,600	45,000
Teaching	44,600	41,800	42,400
Medicine and health	49,800	41,500	39,500
Artistic, literary and recreational	34,200	27,900	32,700
Clerical	31,100	30,100	25,100
Sales	31,000	31,200	31,800
Service	34,400	27,800	24,500
Mining, quarrying, oil and gas	68,400	43,000	45,400
Processing	43,400	x	31,400
Product fabricating, assembling and repairing	43,000	38,400	30,000
Construction	42,400	37,400	35,100
Transport equipment operating	35,700	37,800	33,100
Material handling	36,700	x	28,700
Other crafts and equipment operating	47,700	x	35,200

Source: Census of Canada, 1991

Table 2
Average earnings for men and women aged 15 years and over working full year full time, 1990

	Northwest Territories	Yukon	Canada
	1990 \$		
Both sexes	42,300	37,300	33,700
Men	47,100	41,400	38,600
Women	35,100	31,800	26,000

Source: Census of Canada, 1991

Ethnic origin and length of stay make a difference

An important feature of the North's income profile is its distribution by ethnic origin (Grenon, 1997). For example, in 1990, although 37% of adult earners were of Aboriginal origin, they received only 23% of total employment income. Their average earnings were around \$17,000. Non-Aboriginal workers earned \$37,400 in the Northwest

Territories and \$28,000 in the Yukon (Table 6).

Some of the gap is related to differences in work activity. In 1990, 58% of earners of non-Aboriginal origin worked full year full time, compared with 33% of Aboriginal earners. However, even among those who worked full year full time, the average 1990 employment income was \$31,900 among the latter, compared with \$43,300. These differences are to some extent explained by the greater rural

Table 3
Women's median earnings as a percentage of men's

	N.W.T.	Yukon	Canada
	%		
1990	63	63	58
1991	64	67	60
1992	66	67	62
1993	67	80	62
1994	67	78	62

Source: Small Area and Administrative Data Division

representation and lower education levels of the Aboriginal population. Variations in income and labour force activity exist within Aboriginal groups as well, and are related largely to regional economic activity (Table 7).

Earnings also vary with length of residency. In the Yukon, longer-term residents⁴ tend to have higher annual earnings than do recent migrants (Table 8). In contrast, recent migrants to the Northwest Territories generally have higher annual earnings than those who have lived in the area for some time. This likely reflects the migration of skilled workers and professionals into an area with a relatively small urban population.

Income from all sources

Earnings are but one source of income. Retirement and investment income, government transfer payments and other sources⁵ also contribute to the total income for individuals, and have become more important over the past two decades (Table 9). From 1970 to 1990, income from wages, salaries and commissions, and net income from self-employment and family farms declined from 94% to 90% of total income in the Northwest Territories, and from 94% to 87% in the Yukon. Across Canada, it dropped from 86% to 78%. This trend appears to be continuing. Among taxfilers in 1994, total income from employment was 86% in the Northwest Territories, 82% in the Yukon, and 72% across Canada. Northerners still rely less on non-employment income than do other Canadians, partly because fewer of them are retired and receiving pension and retirement income.

Yukon taxfilers' median total income has declined substantially since 1992. Even so, it continues to lead the country. In 1994, it was \$22,900, compared with \$22,700 in the Northwest Territories and

Table 4
Median taxfiler employment income by sex

	Northwest Territories		Yukon		Canada	
	Men	Women	Men	Women	Men	Women
1994 \$						
1990	31,600	19,800	31,300	19,100	27,300	15,900
1991	30,300	19,400	28,800	19,400	25,900	15,400
1992	29,600	19,400	29,600	19,800	25,600	15,800
1993	28,900	19,400	30,000	20,100	25,300	15,600
1994	29,100	19,600	25,600	19,900	25,400	15,800
% change from 1990 to 1994	-7.9	-1.0	-15.5	4.0	-7.1	-0.4

Source: Small Area and Administrative Data Division

Table 5
Average employment income for persons aged 15 years and over working full year full time, by age group, 1990

				As a % of the rest of Canada	
	Northwest Territories	Yukon	Rest of Canada	Northwest Territories	Yukon
1990 \$					
All ages	42,300	37,300	33,700	125	111
15-24	25,500	23,700	19,100	133	124
25-34	40,000	35,300	30,200	133	117
35-44	47,600	40,100	37,000	128	108
45-54	47,000	40,900	38,700	122	106
55-64	42,700	37,600	36,100	118	104
65 & over	36,500	30,500	29,300	125	104

Source: Census of Canada, 1991

\$18,500 across Canada. In urban areas, especially, Northerners reported high median incomes: \$36,700 in Yellowknife and \$25,300 in Whitehorse. Figures in selected southern census metropolitan areas were \$24,500 in Ottawa,⁶ \$20,600 in Toronto, \$19,900 in Vancouver, and \$17,800 in Montréal.

Conclusion

Earnings in the Yukon are among the highest in the country, and those in the Northwest Territories have increased substantially since the 1970s. High wages and salaries

Table 6
Average employment income by ethnic origin and work activity, 1990

	Northwest Territories	Yukon
1990 \$		
Aboriginal origins		
Worked in 1990	16,900	17,500
Full year full time	32,400	29,400
Part year or part time	9,300	12,200
Non-aboriginal origins		
Worked in 1990	37,400	28,000
Full year full time	46,900	38,300
Part year or part time	20,800	17,000

Source: Census of Canada, 1991

Table 7

Average employment income of workers by Aboriginal origin and work activity, 1990

	Worked full year full time		Worked part year or part time		% of workers who worked full year full time	
	Northwest Territories	Yukon	Northwest Territories	Yukon	Northwest Territories	Yukon
	1990 \$				%	
Inuit						
Single origin	29,400	-	8,000	15,100	32	-
Multiple origin	36,600	20,200	10,300	15,900	29	60
Métis						
Single origin	37,000	32,900	12,800	12,400	43	39
Multiple origin	39,300	32,500	14,100	13,600	45	38
North American Indian						
Single origin	30,400	28,700	8,900	11,300	28	31
Multiple origin	40,600	30,100	13,500	13,000	42	30

Source: Census of Canada, 1991

3 Earnings and other income from taxfilers are generally presented as median values. Historical census data for earnings are generally presented as averages. Although median and average earning levels differ, the trends are similar.

4 Longer-term residents are persons aged 15 and over who resided in the same territory during the 1986 and 1991 Censuses. In contrast, recent migrants moved to one territory or province from another territory, province or country between the censuses.

5 Government transfer payments include Old Age Security and Guaranteed Income Supplement, Canada and Quebec Pension Plan benefits, Employment Insurance benefits, Family Allowance, Federal Child Tax Credit, and other income from government.

Other sources include investment income, retirement income, and other money income such as alimony, child support, severance pay and strike pay.

6 This refers only to the Ottawa portion of the Ottawa-Hull census metropolitan area.

Table 8

Median employment income by migration status, 1990

	Northwest Territories	Yukon	Canada
	1990 \$		
Recent migrants	30,000	21,900	16,900
Longer-term residents	18,000	23,900	20,100

Source: Census of Canada, 1991

accrue to certain skilled workers in the natural resources and service industries. Not all northern workers have these opportunities, however.

Major gaps in earnings persist between Aboriginal and non-Aboriginal workers, and between recent migrants and longer-term residents. Much of the difference is related to volume of work, occupation, education, age and sex, as well as to labour markets. □

Table 9

Distribution of total income by source

	Northwest Territories			Yukon			Canada		
	1970	1980	1990	1970	1980	1990	1970	1980	1990
	%								
Employment income	93.8	91.6	90.1	94.1	91.4	86.9	86.3	82.1	77.8
Transfer payments *	4.3	5.6	7.5	3.8	4.5	7.8	6.6	8.4	11.4
Other income *	1.8	2.8	2.4	2.1	4.2	5.3	7.1	9.5	10.8

Source: Census of Canada, 1971, 1981, 1991

Note: Because of rounding, totals may not add to 100.

* See note 5.

■ Notes

1 Some comparisons are between the Yukon or Northwest Territories and the rest of Canada; others, because of data limitations, are with all of Canada.

2 In fact, this growth was the highest of all the provinces or territories, up from sixth place in 1980.

■ References

Garley, J. *Earnings of Canadians*. Focus on Canada. Catalogue no. 96-317-XPE. Ottawa: Statistics Canada, 1994.

Grenon, L. "Employment and industrial development in the North." *Perspectives on Labour and Income* (Statistics Canada, Catalogue no. 75-001-XPE): 9, no.1 (Spring 1997): 18-27.

Sizing up employment in clothing manufacturing

Katherine Marshall, Denise Guèvremont and Stéphane Pronovost

From 1989 to 1994 employment in clothing manufacturing dropped by 28% (-31,800 jobs), compared with a 14% decline for all manufacturing. As with many manufacturing industries, this decline has been linked to a number of factors, such as the strength of the economy, market demand for the product, technological advances, trade liberalization and the industry's ability to compete against imports. Clothing has been particularly affected by trade liberalization, having once been one of the most trade-protected industries. Both the 1989 Canada-U.S. Free Trade Agreement (FTA) and the 1994 North American Free Trade Agreement (NAFTA) have gradually reduced tariffs on clothing imports from the United States and Mexico.¹ And in 1995, the Multi-Fibre Arrangement (MFA) began a 10-year phase-out of quotas on imports from low-wage countries.

This article examines employment trends in the clothing manufacturing industry, and reasons for the steady decline in jobs since the late 1980s. Those employed in the industry are profiled, and factors most likely to affect future employment trends are discussed (see *Data sources* and *Definitions*).

Employment is declining

Employment in clothing manufacturing is tied to the industry's ability to compete in the emerging global market, both in the develop-

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Data sources

The Annual Survey of Manufactures surveys all establishments primarily engaged in manufacturing in Canada. Although some establishments may engage in wholesale trade, the bulk of their activity must be in the manufacturing process. Depending on establishment size, short and long questionnaires and tax records are used to collect information on shipments, employment, salaries and wages, cost of materials and supplies used, cost of fuel and electricity used, inventories and commodity data.

The Business Conditions Survey is a voluntary survey mailed to more than 9,000 manufacturing establishments every January, April, July and October. Among other things, the survey asks manufacturers if shortages of skilled and unskilled labour have impeded their production. Responses are weighted by the shipment value of each establishment.

ment of new export markets and in the expansion of existing ones. Quebec has a marked interest in the success of the industry, as it is home to more than half of all clothing manufacturing jobs in the country (see *Regional concentration*).

From 1981 until 1989, employment in clothing manufacturing remained relatively steady, with a net loss of 1,100 jobs; since that time there have been annual decreases (Chart A).³ By 1994, employment stood at 80,400, down from 112,200 in 1989. During those five years employment in production work dropped 31%, compared with a 10% reduction in management positions.

Similarly, the number of clothing manufacturing establishments, which numbered 2,686 in 1989, fell

The census collects labour market data from a 20% sample of the population aged 15 and over, excluding residents of institutions.

International trade data from administrative information from Revenue Canada, Customs and Excise and from customs brokers and importers help to calculate the movement of merchandise into or out of Canada (imports and exports).

The 1993 Survey of Innovation and Advanced Technology used a sample survey to cover all sizes of manufacturing establishments in Canada. The information collected dealt with firm characteristics, research and development, innovative behaviour, the intensity of technology use, and the benefits and problems of adopting technologies.

to 1,760 by 1994, a 34% decrease. This steady decline is not unique to Canada (see *International comparisons*).

The steep drop in employment from 1989 to 1992 coincided with the downturn of the economy. However, the clothing industry fared much worse than other manufacturing industries, dropping 25% compared with 14%. The relatively severe employment loss may be due, in part, to the introduction of the FTA, as apparel imports from the United States increased consistently following its introduction on January 1, 1989 (Industry Canada, 1994).⁴ However, from 1991 onwards Canada has countered this import increase with a steady growth in clothing exports. This may be part of the reason for the slower rate of employment loss since 1992.

Definitions

Advanced manufacturing technology (AMT): 22 new manufacturing technologies belonging to six functional groups. The functional groups and their accompanying individual technologies (in parenthesis) include ■ design and engineering (computer-aided design (CAD) and engineering; CAD output to control manufacturing machines; digital representation of CAD output); ■ fabrication and assembly (flexible manufacturing cells/systems; numerically controlled and computer-numerically controlled machines; materials working lasers; pick and place robots; other robots); ■ automated material handling systems (automated storage/retrieval systems; automated guided vehicle systems); ■ inspection and communications (automatic inspection equipment for incoming materials; automatic inspection equipment for final products; local area network for technical data; local area network for factory use; inter-company computer network; programmable controllers; computers used for control in factories);

■ manufacturing information systems (materials requirement planning; manufacturing resource planning); ■ integration and control (computer integrated manufacturing; supervisory control and data acquisition; artificial intelligence/expert systems).

Clothing manufacturing: establishments primarily engaged in manufacturing clothing. This category, which is major group 24 of the Standard Industrial Classification (1980 SIC), includes men's and boy's clothing (SIC 243), women's clothing (SIC 244), children's clothing (SIC 245) and other clothing and apparel, such as sweaters, occupational clothing, gloves, hosiery, fur goods and foundation garments (SIC 249). Clothing manufacturing is also referred to as the apparel or garment industry.

Employment in clothing manufacturing: includes salaried employees in executive, administrative and sales positions, and production workers paid by the hour. Production positions include markers, cutters, sewers, fusers,

pressers and cleaners, stylists and designers, stock keepers, shippers, packers, sample makers, maintenance workers and other related production workers.

Establishment: the smallest unit capable of reporting certain specified input and output data. For example, workers who have started a home business of selling home-made clothing will not be included.

Registered contractors and sub-contractors hired by an establishment to produce clothing are included in the count. However, any contractors or sub-contractors who, for example, have been paid in cash to avoid taxation, cannot be counted.²

Immigrants: persons who are, or have been, landed immigrants in Canada. A landed immigrant is not a Canadian citizen by birth.

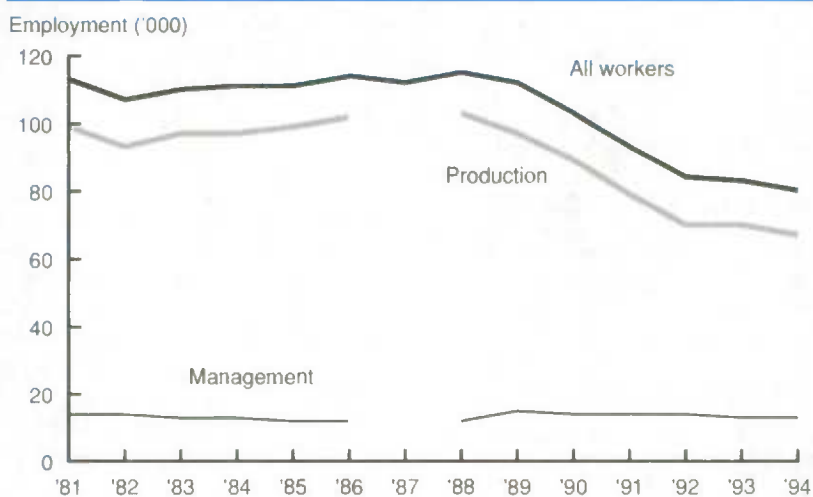
Home workers: refers to paid employees who do most of their work at home.

Employment is female-dominated and low-paying

A striking feature of clothing manufacturing is its high proportion of female employees: three out of four workers, compared with just one in four in all other manufacturing industries (Table 1). Also, 50% are immigrant workers, compared with 24% in other manufacturing. In fact, 37% of clothing manufacturing employees are female immigrants compared with just 7% in all other manufacturing. Proportionately more clothing workers than other manufacturing employees speak neither English nor French (8% compared with 1%), have less than high school graduation (54% compared with 33%), and work at home⁵ (5% versus 2%). Clothing manufacturing also offers the lowest hourly wage for production workers and the lowest average annual salary for management

Chart A

Employment in clothing manufacturing has dropped since the late 1980s.



Source: Annual Survey of Manufactures

Note: A change in commodity classification systems introduced a break in the time series for 1987. Only total employment estimates were derived for 1987.

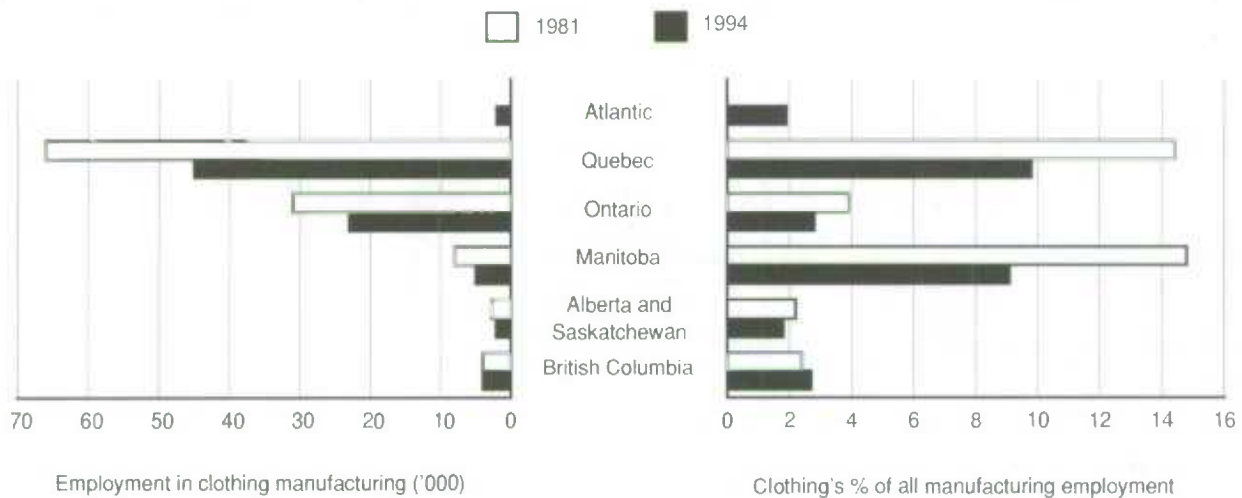
Regional concentration

Clothing manufacturing has a very high geographical concentration, with 95% of jobs located in just four provinces: Quebec (45,200 jobs or 56%), Ontario (23,000 jobs or 29%), Manitoba (4,600 jobs or 6%) and British

Columbia (4,000 jobs or 5%). Although their shares are relatively small, British Columbia and the Atlantic region are the only areas to show an increase in clothing manufacturing employment from 1981 to 1994. These

jobs are more important to Quebec and Manitoba (where they account for 10% and 9%, respectively, of all manufacturing jobs) than to other provinces (less than 3%).

The bulk of clothing manufacturing jobs are in Quebec.



Source: Annual Survey of Manufactures

workers of any manufacturing industry – \$8.92 and \$36,500, respectively. For all other manufacturing the average hourly pay is \$16.11 and the average annual managerial salary is \$47,800. (Notably, the highest hourly wage and annual salary are found in tobacco manufacturing – \$27.98 per hour and \$67,000.)

The high proportion of workers who have low levels of education and/or difficulties with English or French indicates that clothing manufacturing generally offers lower-skill entry-level employment. One-third of clothing workers are sewing machine operators, a lower-skilled job with few language requirements.

Exports and imports both on the rise

Employment levels in the apparel industry are tied to both domestic and foreign demand for Canadian-made clothing. Similar to the trend in employment, the production of Canadian-made clothing increased throughout most of the 1980s. Production peaked in 1989 at \$6.9 billion, followed by three years of decline to \$5.9 billion in 1992. Unlike the trend in employment, however, clothing output recovered in 1993, 1994 and 1995, pushing production to over \$6.2 billion. Exports have increased steadily since 1990 and reached \$1.3 billion in 1995, accounting for the production gains (Chart B). (Over 90% of

the 1995 exports went to the United States, with Japan [2%] and the United Kingdom [1%] a distant second and third.)

Domestic manufacturers' share of the Canadian market has declined steadily since 1989 while foreign producers' continued to rise. In 1989, imports accounted for only 28% of the Canadian clothing market; by 1995, that share had increased to 42% (Chart C). In 1989, when the FTA was brought into force, imported clothing from the United States accounted for 7% of all imports; by 1995 it accounted for 18%. The only other country to export more clothing to Canada was the People's Republic of China. However, Canada's exports

Chart B
Exports spurred the recent rise in clothing production.



Sources: Annual Survey of Manufactures and International Trade Division
* Measured by the value of total shipments.

Table 1
Selected characteristics * of paid workers

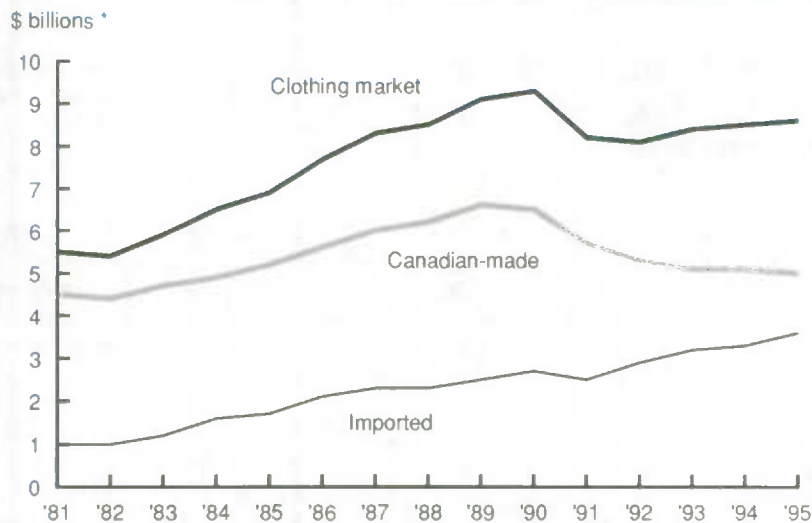
	Clothing	Non-clothing
	%	
Women	75	26
Immigrants	50	24
Female immigrants	37	7
Know neither official language	8	1
Less than high school graduation	54	33
Home workers **	5	2
	Hourly wage	
Production workers	\$8.92	\$16.11
	Annual salary	
Management	\$36,500	\$47,800

Sources: Census of Canada, 1991 and Annual Survey of Manufactures, 1994

* All non-wage characteristics are derived from census data and include both production and management workers.

** Primary place of work is at home.

Chart C
Imports accounted for 42% of the Canadian clothing market in 1995.



Sources: Annual Survey of Manufactures and International Trade Division
* Measured by the value of total shipments.

to the United States have helped increase its positive trade balance with that country – from \$100 million in 1989 to \$550 million in 1995. This has helped reduce Canada's negative trade balance with all countries from \$2.5 billion in 1992 to \$2.3 billion in 1995 (Industry Canada, 1996).

The annual wholesale value of both imported and Canadian-made clothing increased until 1989. Since then, only the former has continued to climb. The decline in the Canadian market in the early 1990s coincided with the recession. Only slight gains in the past few years suggest that Canadians are still buying fewer or less expensive garments than they once did.

Technology affects employment

All manufacturing industries have been affected to varying degrees by

International comparisons

Clothing manufacturing employment has diminished in many industrialized countries, including Canada. This decline reflects a shift in world apparel production in favour of countries with lower costs. Many of the latter, through increased exports to developed countries, have boosted their employment levels. Their share of world exports has risen from 10% in 1955 to 58% in 1992 (Dickerson, 1995).

Although Canadian wages in clothing manufacturing are relatively low compared with other domestic manufacturing, they are similar to those in other industrialized countries. Canada ranks high when monthly wages are adjusted for purchasing power parity.

Monthly wages in clothing manufacturing ranked according to purchasing power parity (PPP), selected countries

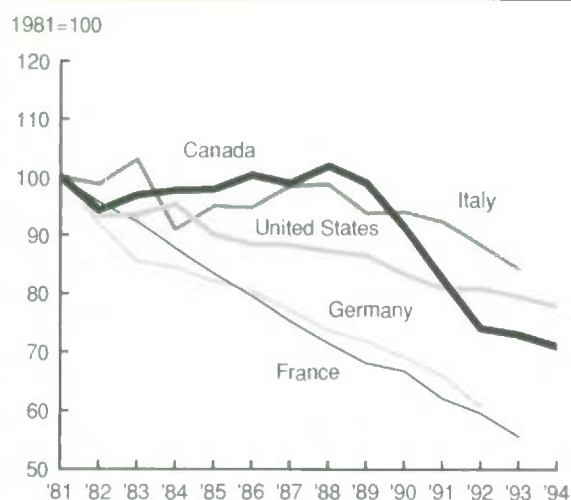
	Monthly wage	Monthly wage PPP * adjusted
	US\$	
Germany, 1994	1,555	1,197
Denmark, 1992 **	1,662	1,111
United States, 1994	1,101	1,101
New Zealand, 1994	971	1,087
Japan, 1993	1,709	1,031
Canada, 1993	1,007	1,028
Austria, 1994	1,259	1,024
United Kingdom, 1993	947	992
Belgium, 1992	1,068	921
France, 1993	1,056	910
Spain, 1992 **	938	848
Mexico, 1994	268	485
Portugal, 1989	194	320

Sources: International Labour Office (ILO); United Nations; OECD

* PPP is the rate at which the currency of one country must be converted into the currency of another country in order to buy an equivalent basket of goods and services.

** Includes footwear.

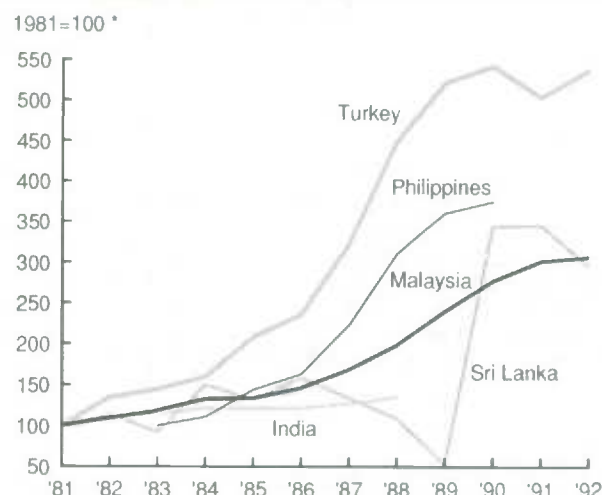
Employment in clothing manufacturing is declining in industrialized countries ...



Sources: Survey of Manufactures; ILO; OECD

* Except for the Philippines where 1983=100.

and increasing in many developing countries.



the adoption of advanced manufacturing technology (AMT). In general, state-of-the-art machinery and computers tend to increase labour productivity⁶ (output per person). Certainly, this is true for clothing

manufacturing, although its adoption rate has been slower than many other industries⁷ (see *Technology helps increase productivity*). However, since the production of clothing in Canada has seen only modest

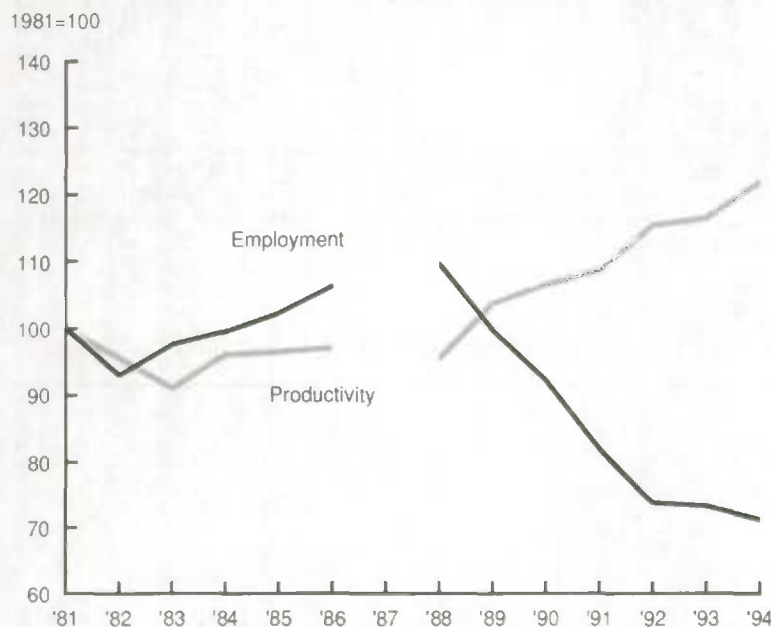
gains in recent years, the concurrent increase in productivity has resulted in a substantial decrease in the need for unskilled labour.⁷ At the same time, AMT has created a need for more skilled labour.

Technology helps increase productivity

Labour productivity in clothing manufacturing has shown annual gains from 1988, the same year employment began to decline. General findings from the 1993 Survey of Innovation and Advanced Technology

support these trends: improvements in productivity were cited as the most important benefit from adopting AMT, and reduction in labour requirements was the reason most often given by manufacturers for doing so.

Labour productivity * in clothing manufacturing has increased since 1988, while employment ** has dropped.



Sources: National Accounts and Annual Survey of Manufactures

* Measured as the ratio of gross domestic product at factor cost by paid production hours; in other words, output per labour unit.

** A change in commodity classification systems introduced a break in the time series for 1987.

Industry slow to adopt AMT

The initial stages of the garment manufacturing process (that is, designing, pattern-making and grading, and fabric-cutting) have been most affected by technology. Computer-aided design and computer-numerically controlled cutting systems have improved production efficiency. Also, automated garment-pressing equipment and sort-

ing and packaging systems have streamlined the final production phase. However, the assembly stage is still labour intensive, having seen few major technological developments. Certain sub-sectors have been quicker to adopt AMT, such as knitting (which is more capital intensive than other sub-sectors) and men's wear (which is less susceptible to style changes).

Despite these and other advances, Canada's clothing manufacturing industry lags behind that of Europe and the United States in adopting AMT (Kurt Salmon Associates, 1991). One reason for the lag may be that Canada lacks the major manufacturers of technology for clothing production.

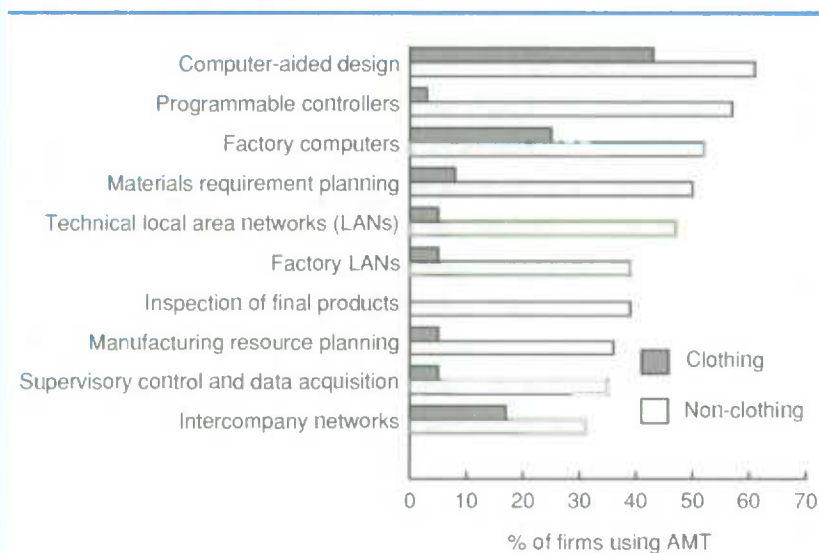
As of 1993, 46% of clothing manufacturers had adopted at least one AMT, compared with 82% of other manufacturers. While only 4% of firms had adopted 10 or more technologies, one-third of all other manufacturers had done so. Similarly, clothing shows much lower adoption rates for the 10 leading advanced technologies. For example, computer-aided design, the technology most embraced by clothing manufacturers (43%), is still used by a greater proportion of other manufacturers (61%) (Chart D).

Among the reasons for the industry's lower rate is the complexity of design required for machinery capable of converting soft, limp fabric into three-dimensional garments. Also, 90% of clothing manufacturing establishments employ fewer than 100 people, which suggests that many may not have the resources to invest in the newest technologies, or would do so only on a replacement or ad hoc basis.

Skilled workers in demand

In general, the acquisition of AMT creates a need for more technically trained people to manage and work with the new technologies. Where the clothing industry differs from other manufacturing is its problem in acquiring the skilled labour now in demand. In 1993, 47% of clothing firms using AMT reported a shortage of skills, compared with 24% of non-clothing firms. Furthermore, over the past 15 years clothing manufacturing has experienced more production difficulties because of skilled labour shortages

Chart D

Clothing manufacturing has adopted AMT * at lower rates.

Source: Survey of Innovation and Advanced Technology, 1993

* See Definitions.

(14% of firms reporting difficulties in 1995) than have other industries (4%) (Chart E). Clothing manufacturing also reports more unskilled labour shortages: 3% of firms in 1995, versus virtually no firms for all other manufacturing. The industry's low wage rate may help explain why some firms report such shortages even in recession periods, such as in the early 1980s and 1990s.

Low wages also account for the chronic shortage of skilled workers in the industry. And efforts to train some workers in new technologies and new work methods, such as team work, may be hampered by their education levels and relatively poor communication skills in English or French. Another reason for the shortage is the nature of training programs offered by Canadian schools: the few programs that exist focus more on fashion design than on technical skills. Data gathered from apparel schools showed that in 1995 only

390 of the 1,582 students graduated in production or management (Cariou, 1996). Finally, hiring and keeping skilled labour may be hindered by the "sweat shop" image of the clothing industry. Potential employees may be unaware of the increase in skilled job opportunities.

Tougher competition on the horizon

From 1974 to 1994, most clothing (and textile) products did not fall under the standard world trade rules of the General Agreement on Tariffs and Trade (GATT). Trade was governed by the Multi-Fibre Arrangement (MFA), which allowed participating countries to set quotas on imported textile and apparel products from individual countries. Quotas were intended to prevent developing countries from flooding industrialized markets with low-cost imports. (Canada currently has 43 bilateral clothing import restrictive agreements in

place.) However, as a result of the Uruguay Round of multilateral trade negotiations, quotas on imports of textiles and apparel were to be eliminated over 10 years, starting in January 1995, in all countries covered by the MFA. During the transition period, the remaining quotas will be increased according to a set schedule. Furthermore, the negotiations specified a clothing tariff reduction, from an overall average of 25% to 18%, to be phased in over the same 10-year period (Industry Canada, forthcoming). Although the Canadian industry appears to be adjusting under freer North American trade rules, the effects of dismantling the MFA are still unknown.

Without doubt, a more liberalized trade environment will affect the Canadian clothing industry. Foreign suppliers will be able to increase their share of the Canadian market. However, the FTA and NAFTA have also made the U.S. market more accessible to Canadian manufacturers. The industry's ability to adjust to a more competitive environment will be critical to its success. Sustained growth in exports to the United States and other developed countries will play a key role in the viability of the clothing manufacturing industry in Canada.

Conclusion

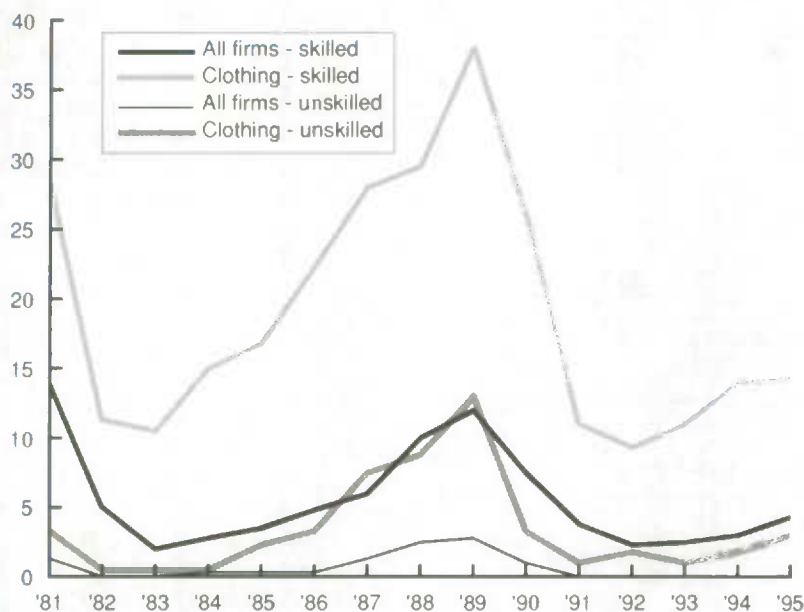
Employment in clothing manufacturing has been steadily declining since 1989, the same year production began to fall. And it has continued to drop despite recent production increases made possible largely by more efficient technology.

Although both production and demand have increased again, the impetus for growth has come solely from rising exports (\$1.3 billion in 1995), as domestic demand has actually decreased annually since 1989. Imports continue to account

Chart E

Chronic shortage of skilled labour hampers production.

Firms * (%)



Source: Business Conditions Survey

* Percentage of firms reporting production difficulties as a result of labour shortages.

for more of the Canadian market, reaching a market share of 42% or \$3.6 billion in 1995. This increase will likely continue with the phasing out of the Multi-Fibre Arrangement.

In sum, further acquisition of advanced technology, and tougher global competition, will be key issues in determining future employment needs for the Canadian clothing industry. □

Notes

1 Under the FTA, all clothing tariffs between Canada and the United States (which, with a few exceptions, ranged from 15% to 25% in 1988) will be removed by January 1998 (External Affairs Canada, 1988). Under NAFTA, clothing tariffs between Canada and Mexico (which ranged from 10% to 25% in 1993, with some exceptions) will be phased out by January 2003 (Foreign Affairs and International Trade, 1993).

2 Statistics Canada has estimated the total value of underground economic activity to be between 1% and 5% of the gross domestic product (Smith, 1994). It is not known how much of that can be attributed to the clothing industry.

3 The Survey of Employment, Payrolls and Hours and the Annual Survey of Manufactures, both of which are establishment-based surveys, show similar employment trends. The Labour Force Survey (LFS) also shows employment losses from 1989 to 1992; however, unlike the other two surveys, it reveals employment gains from 1993 to 1995, with a decrease in 1996. The LFS shows generally higher employment counts as well as differing trends mainly because it is a respondent-based survey and therefore captures the self-employed (who accounted for 11% of all employment in clothing manufacturing in 1996, up from 7% in 1993).

4 From 1988 to 1995, apparel imports from the United States grew at an average rate of over 25% annually, while overall imports rose only 4% a year.

5 This refers to paid employees only, not to the self-employed.

6 There may be other reasons for increased productivity. For example, the economic recession in the early 1990s likely forced many inefficient companies to close, whereas more efficient companies survived, thus increasing overall productivity.

7 Paradoxically, selected regions of Canada are experiencing an unskilled labour shortage. For example, in response to a chronic shortage in the Manitoba apparel industry, a Canada-Manitoba agreement recently allowed up to 200 off-shore sewing operators into the province.

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RRSP participation – the sooner the better

David Aldridge

To maximize registered retirement savings plan (RRSP) opportunities, “the golden rule is: start saving early” (Gay, 1995). Recently, much attention has focused on the magic of compound interest (Stokes, 1995) and its effects on long-term contributions. In particular, financial institutions’ RRSP marketing campaigns seem to have tapped into concerns about a possible reduction or elimination of public pension programs. Growing numbers of young workers are contributing to RRSPs.

Past analysis has dealt with the RRSP population as a whole (Frenken, 1995; Frenken and Maser, 1993). This article focuses on eligible taxfilers aged 25 to 29. It examines their rate of participation, frequency of contribution and average amounts deposited from 1983 to 1992. It also looks at the incidence of cash withdrawals and analyzes some of the characteristics that increase or decrease the likelihood of RRSP participation.

Increasing popularity of RRSPs

The overall RRSP participation rate has increased dramatically in recent years. In fact, from 1983 to 1992 the proportion of eligible taxfilers of all ages who contributed to an RRSP grew from 20% to 36%, or from 2.5 million contributors to 4.9 million. Not all participated every year, however. There were 8.6 million different RRSP contributors during this period and they participated, on average, 4.2

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Data source and definitions

This article uses the Small Area and Administrative Data Division’s longitudinal administrative data (LAD) file. The LAD, derived from the T1FF (File on Families based on the T1 income tax form), represents a random sample of 1% of all taxfilers and their dependants who have social insurance numbers. Once individuals are selected for inclusion, they remain in the file. In 1992, the LAD contained information on 202,390 individuals. It is estimated (on the basis of demographic estimates of the population) that in 1992 almost 96% of Canadians were represented in the weighted file. A new LAD file based on a 10% sample is also available.

The focus of this article is younger taxfilers, those aged 25 to 29 in two specific years, 1983 and 1988. Only taxfilers eligible in at least one year of 5 – 1983 to 1987 for the first group or 1988 to 1992 for the second group – were analyzed. Those under 25 were excluded from the analysis, since few contribute to RRSPs at that age (Frenken, 1995).

years out of 10. Over half participated 3 years or less, while only 7% reported contributions in all 10 years.

To determine how actively young people have participated, two cohorts of younger taxfilers were studied (see *Data source and definitions*): those aged 25 to 29 in 1983 (1983 cohort) and in 1988 (1988 cohort). Each cohort was followed for 5 years, the first from 1983 to 1987, and the second from 1988 to 1992.¹

In 1983, 11% of eligible taxfilers in the 1983 cohort contributed to an RRSP. This proportion rose to 22% in 1987 (Table 1). Of the 2.2 million taxfilers eligible to contribute over that 5-year

Averages of contributions and withdrawals exclude non-participation years. All amounts are in 1990 dollars.

Cohort: persons of the same age range grouped together for the purpose of studying specific characteristics over time.

Eligible taxfiler: an individual who has income that qualifies for RRSP contribution purposes, which in this study means employment income from both paid work and self-employment for the tax year. The definition of eligible income was changed in 1991, but this change had little effect on younger taxfilers.

Frequency: in this study, refers to the number of years the person contributes to or withdraws from an RRSP during the study period. The years need not be consecutive. Some individuals may have filed tax returns annually, but contributed sporadically; others may not have filed each year.

Low income: in this study, refers to a range from one dollar to \$19,999.

period, 30% (679,000) did so at least once. Over 60% of contributors participated in only one or 2 years, while 11% did so all 5 years.

On average, members of this cohort participated in RRSPs 2.4 years of the 5. Many of those who participated in only one or 2 years did so at the end of the period of study.

Some 987,000 of the 2.5 million eligible taxfilers in the 1988 cohort contributed at least once over the 5 years, for a participation rate of 40%. For each year the rate was considerably higher than that of the equivalent year in the first cohort. In year one it was 19%, 8 percentage points higher than it had been in the 1983 cohort. In

Table 1
Young RRSP contributors

	Eligible taxfilers	Contributors	
		Number	% of eligible taxfilers
	'000	'000	%
1983 cohort *			
1983	1,845	212	11
1984	1,858	275	15
1985	1,847	328	18
1986	1,889	391	21
1987	1,900	410	22
1988 cohort **			
1988	2,036	393	19
1989	2,059	480	23
1990	2,061	525	25
1991	2,039	602	30
1992	2,033	655	32

Source: Small Area and Administrative Data Division

* Aged 25 to 29 in 1983.

** Aged 25 to 29 in 1988.

year 5 it was nearly 11 percentage points higher.

The average frequency of participation in the 1988 cohort was 2.7 years of the 5, an increase of 0.3 over that recorded in the 1983 cohort. Although the 51% of contributors who participated only one or 2 years was down almost 10 percentage points, the percentage who contributed in all 5 years (17%) was much higher than the previous 11% (Chart A). So, not only did the percentage of young eligible taxfilers contributing to RRSPs increase, their frequency of participation was also higher.

Differences in average contributions

From 1983 to 1987, the 679,000 contributors in the 1983 cohort deposited \$4.2 billion for an average annual amount of \$2,600 (1990 dollars). Men's average annual contributions were larger than women's: \$2,800 versus \$2,300. This can be explained in part by their higher earnings, as RRSP contributions are highly correlated with income level (Frenken, 1995).

During the study period, these men earned on average \$40,200 and women, \$28,000.

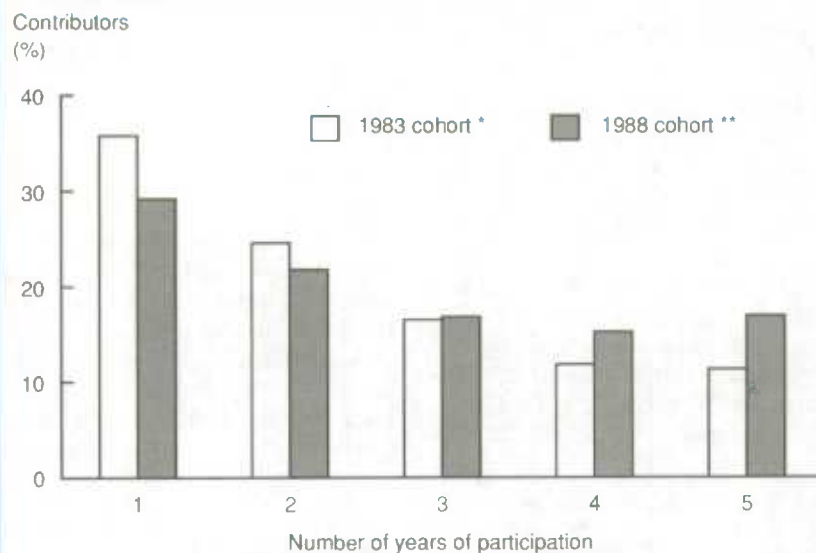
Despite the fact that the 1988 cohort's total contribution (\$5.8

billion) was considerably higher than the 1983 cohort's, the average annual deposit for the second period was 15% lower, or \$2,200 (Table 2) and the number and proportion of small contributions higher (Chart B). Both men's and women's averages decreased by about \$400. Contributions dropped significantly each year, especially in 1990,² when there was a 20% decrease from the same point (1985) in the earlier cohort. The decline can be attributed to lower employment incomes, which averaged only \$37,300 for men and \$27,200 for women. Overall, the proportion of employment income contributed fell from 7.2% (1983 cohort) to 6.6% (1988 cohort).

More contributors with low earnings

At the same time, the proportion of eligible taxfilers who contributed rose from 30% to 40%. Much of the growth was attributable to individuals with low earnings. The

Chart A
The proportion of frequent RRSP contributors has increased.



Source: Small Area and Administrative Data Division

* Aged 25 to 29 in 1983.

** Aged 25 to 29 in 1988.

Table 2
RRSP contributions and employment income of young RRSP contributors

	Number of contributors	Contributions		Employment income	
		Total	Average	Total	Average
	'000	\$ millions	1990 \$	\$ millions	1990 \$
1983 cohort *					
Overall	1,616 †	4,151	2,600 ††	56,898	35,300 ††
1983	212	496	2,300	6,924	32,800
1984	275	674	2,400	9,248	33,700
1985	328	833	2,500	11,472	35,100
1986	391	1,062	2,700	14,043	36,100
1987	410	1,085	2,600	15,212	37,200
1988 cohort **					
Overall	2,654 †	5,779	2,200 ††	87,333	33,000 ††
1988	393	844	2,100	12,505	31,900
1989	480	980	2,000	15,789	33,000
1990	525	1,075	2,000	17,485	33,300
1991	602	1,319	2,200	19,710	33,000
1992	655	1,561	2,300	21,844	33,600

Source: Small Area and Administrative Data Division

* Aged 25 to 29 in 1983.

** Aged 25 to 29 in 1988.

† Contributors were counted once for each year of contribution.

†† These figures represent the average amounts deposited and/or earned by contributors per year of participation over the 5-year period.

viduals with lower employment incomes represented 33% of the gain; those with higher earnings, 20%. Thus, women with low earnings accounted for most of the drop in average contributions from the 1983 to the 1988 cohort.

At the family level, most contributors with low earnings belonged to families with low earnings, including those where spouses worked. Some 98% were married, and 63% of these had family earnings less than double their individual level.

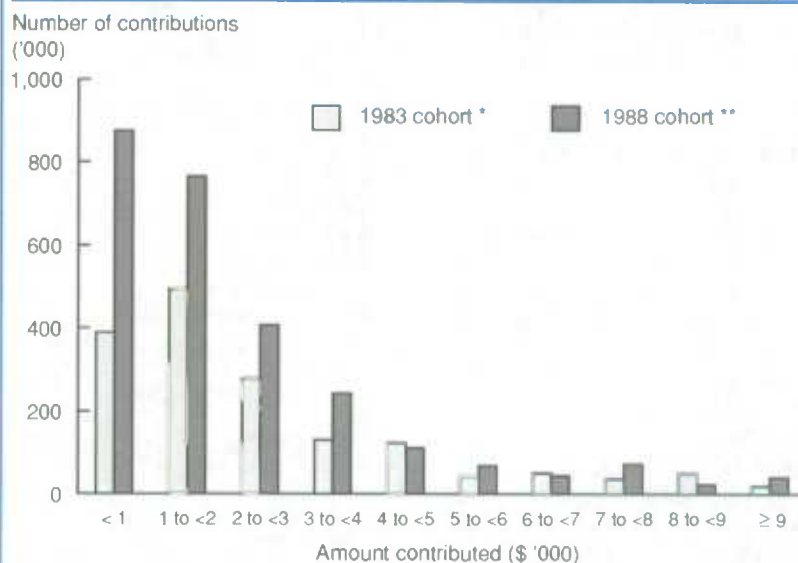
Lower frequency of contribution

The average contribution of those who participated all 5 years was not significantly different from one cohort to the next (Table 3). Neither did the income dynamics of this group change. These people continued to have relatively high annual earnings and, in most cases, contributed annually to defer taxes. On

number of RRSP participants with low employment income jumped 64% from one cohort to the next, to over 400,000. Because they were responsible for over 43% of the increase in the total number of contributors, they had a dampening effect on both employment income and RRSP contribution averages. Those earning \$40,000 and over were also contributing in greater numbers, but their growth was much lower (20%). They were responsible for just 13% of the increase in contributors.

The differences between men's and women's contribution patterns are considerable. In 1988, women who earned under \$20,000 (but greater than zero) were responsible for 58% of the increase in the number of female contributors, while those who earned \$40,000 and over accounted for less than 3%. Among male taxpayers growth was more evenly distributed. Indi-

Chart B
The number of small contributions has grown dramatically.



Source: Small Area and Administrative Data Division

* Aged 25 to 29 in 1983.

** Aged 25 to 29 in 1988.

Table 3
Average RRSP contribution by cohort and frequency of contribution

	Frequency	Contribution
	years	1990 \$
1983 cohort *	1	2,300
	2	2,500
	3	2,500
	4	2,700
	5	2,800
1988 cohort **	1	1,700
	2	1,800
	3	2,000
	4	2,200
	5	2,700

Source: Small Area and Administrative Data Division

* Aged 25 to 29 in 1983.

** Aged 25 to 29 in 1988.

the other hand, participants with lower earnings tended to contribute more sporadically. Of those who contributed only one or 2 years, members of the 1988 cohort contributed on average over 25% less than their predecessors. So, although the number of contributors with lower employment incomes grew, the size of contribution diminished and continued to be infrequent.

Characteristics of RRSP contributors

Characteristics likely to affect participation in an RRSP are similar for both cohorts. Most influential is the younger worker's level of earnings (Table 4). In the 1988 cohort, 21% of individuals earning less than \$10,000 contributed at least once to an RRSP. This proportion increased for each group to 88% for those earning \$50,000 or more. And persons with some investment income (which is highly correlated with levels of employment income) had a participation rate of 58%, 2.5 times higher than those with no in-

vestment income. Also, eligible taxfilers with some self-employment income were significantly more likely to participate than those reporting no such income. This may be because self-employed individuals are not able to participate in employer-sponsored pension plans, and therefore have a greater need to plan for their own retirement. Being married also dramatically increases the odds of contributing, while having children decreases the odds.

Significant withdrawals

RRSP savings cashed in annually by taxfilers of all ages must be taken into account in a study of RRSP contributions. (For a detailed analysis of RRSP withdrawals in recent years see Frenken, 1996.) Since withdrawals have been iden-

tifiable from tax data only since 1988, this analysis considers those from the second cohort.³ Of the 2.5 million younger taxfilers eligible to contribute during this time, over 10% or 256,000 withdrew at least once from their RRSPs. The average annual amount withdrawn was \$3,200 for men and \$2,600 for women (Table 5).

Persons who withdrew at least once did so on average 1.3 years out of 5. Their average frequency of contribution was 2.7 years out of 5, which may explain, in part, why the average amount withdrawn was significantly higher than the average amount of contribution. Those cashing in all their RRSP savings in one year may have had more than one years' contribution available to them.

Table 4
Characteristics of young RRSP contributors (1988 cohort *)

	Eligible taxfilers	Contributors	
		Number **	% of eligible taxfilers
	'000	'000	%
Total	2,476	987	40
Employment income			
\$1 to 9,999	1,170	241	21
\$10,000 to 19,999	409	167	41
\$20,000 to 29,999	422	233	55
\$30,000 to 39,999	276	186	67
\$40,000 to 49,999	126	96	76
\$50,000 and over	73	64	88
Investment			
Income declared	1,177	683	58
None declared	1,299	304	23
Self employment			
Income declared	340	152	45
None declared	2,136	835	39
Marital and parental status			
Married			
With children	1,439	593	41
Without children	445	251	56
Single			
With children	340	81	24
Without children	253	62	25

Source: Small Area and Administrative Data Division

* Aged 25 to 29 in 1988.

** Number eligible to contribute who did so at least once over the 1988-to-1992 period.

Table 5
Average withdrawal made by
persons aged 25 to 29 in 1988

Year	Men	Women
	1990 \$	
Overall	3,200 *	2,600 *
1988	3,100	2,400
1989	3,100	2,500
1990	3,500	2,700
1991	3,400	2,700
1992	3,100	2,800

Source: Small Area and Administrative Data Division

* These averages represent the average withdrawal per year of withdrawal, over the 5-year period.

People dipping into these savings were still fewer than those contributing, and total amounts cashed in were small compared with contributions. For every young person withdrawing over the 5-year period there were almost four contributors, and for every one dollar withdrawn there were six in contributions. In 1992, the most recent year in this study, 655,000 young people contributed \$1.6 billion to RRSPs while just 81,000 withdrew \$241 million.

Contributors and withdrawers were not mutually exclusive in any given year; some people both contributed and withdrew in a single tax year. Of those who withdrew, 44% contributed the same year. Most were not sporadic or first-time contributors, but participated an average 3.2 years of the 5.

This pattern may have been caused in part by the timing of these transactions. While withdrawals are reported on a calendar year basis, allowable contributions can be made up to 60 days after December 31.⁴ During the year these young workers may have

needed to draw on their RRSP savings to meet immediate financial obligations. However, they could have made a contribution before the end of the following February for a number of reasons: their financial situation may have improved by year end; they may have taken advantage of arrangements offered by financial institutions;⁵ or they may have decided to contribute to their RRSPs to reduce their tax liability.

Conclusion

More young people than ever before are investing in RRSPs. While middle and high income earners have always used the tax deferral opportunity, much of the recent increase in contribution activity has come from those with lower earnings. This development has caused the average amount of contribution to drop.

Younger workers contribute regularly to RRSPs in order to achieve greater financial independence for future retirement, which should result in less reliance on government transfers. There are indications that their growing RRSP participation will likely persist, particularly because of their concern over future availability of government pensions (Cohen, 1996).

Acknowledgements

This paper was originally prepared as a course requirement in the Data Interpretation Workshop, under the direction of Cécile Dumas. The author also wishes to thank Hubert Frenken, formerly of the Labour and Household Surveys Analysis Division, for his advice and assistance.

Notes

1 The ages in each cohort were evenly distributed, that is, each one represented about 20% of the total in each cohort.

2 During the recession of the early 1990s, fewer young people would have had the discretionary income to invest in RRSPs. For details on the 1990 decline in overall RRSP participation and the contrasting 1991 growth, see Frenken and Maser (1993).

3 Excluded are withdrawals under the Home Buyers' Plan, which are not reported on tax returns (Frenken, 1996).

4 Therefore, the withdrawals shown are those made from January 1 to December 31 of a given year, whereas contributions reported may have been made from January 1 of a given year to the end of February (or beginning of March) of the subsequent year. In fact, in the past up to 80% of annual contributions claimed on each year's tax returns were actually deposited in January and February of the next year.

5 Many institutions offer RRSP contribution loans to their clients, with a postponed repayment schedule effective only after a tax refund.

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Low incomes and RRSPs

Hubert Frenken

People with medium and high incomes are not the only ones contributing to registered retirement savings plans (RRSPs). In 1994 (the most recent data at the time of writing), 782,000 contributors (almost 15% of all RRSP participants) reported under \$20,000 in total income on their tax returns, and 158,000 (3%) had less than \$10,000. This situation was unheard of not many years ago. But, just as the percentage of young contributors has increased significantly since the early 1980s (Aldridge, 1997), so too has the participation of persons with low incomes.

The advantages of contributing by the latter group have been questioned (Canadian Institute of Actuaries, 1995; McCarthy, 1996). Indeed, workers with low incomes have little incentive to participate (see *Low motivation*). This article looks at their growing participation and suggests reasons for the increase. Using longitudinal data (see *About the data*) it examines participation by sex and income (both personal and family).

Significant increases

In 1982, RRSP contributors numbered less than 2.1 million, 17% of all eligible taxfilers (Table). By 1992, there were 4.6 million participants, representing 37% of all those eligible. Not unexpectedly, filers with personal incomes of \$30,000 or over (1990 dollars) were responsible for the bulk of this growth. Their numbers grew from less than 1.5 million to almost 2.8

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About the data

The data for 1982 and 1992 are from the Small Area and Administrative Data Division's original (1% sample) longitudinal administrative data (LAD) file. Information for 1994 is from the Labour Division's RRSP room file. For descriptions of the LAD file see "RRSP participation – the sooner the better" in this issue. For information about the RRSP room file see Frenken (1995).

For 1982 and 1992 all income amounts were converted to 1990 dollars. The presence of employment

income (from both paid work and self-employment) in 1982 was used to determine RRSP eligibility that year. For 1992, employment income in 1991 was used. This process may have understated the number of eligible taxfilers (and slightly overstated RRSP participation), since some people with no employment income in 1991 could still contribute in 1992, because of unused RRSP room carried forward. For details on RRSP eligibility rules see Frenken (1995).

million, and their participation rate increased from 34% of those eligible, to 59%. The rate for those with under \$20,000² increased as well, from just 4% to 16%; for filers with incomes from \$20,000 to \$29,999, it grew from 15% to 37%. In 1982, RRSP contributors with under \$20,000 were just 10% of the total. By 1992, they represented 17% of all participants. For those with \$20,000 to \$29,999 the percentage increased from 18% to 22%.

Many more women

Women have accounted for most of the growth in RRSP participation in the last 15 years. They represented less than 33% of contributors in 1982, but 42% by 1992. Although their proportion has grown more rapidly among high income than low income contributors, women still make up the majority of the latter. Those with incomes of \$30,000 or more increased from 23% of participants in 1982 to 31% in 1992, and those with under \$20,000, from 60% to 65%.

More contributors with low family income

Married taxfilers (legally married only) who were eligible to contribute to RRSPs and had family

Low motivation

For taxfilers with low incomes, RRSP deductions claimed from gross income may result in little, if any, tax savings. In 1993, only 45% of taxfilers with total income under \$20,000 (but greater than zero) paid taxes and just 18% with less than \$10,000 did so (Revenue Canada, 1995).

Furthermore, government pension programs, namely, Old Age Security (OAS), Guaranteed Income Supplement (GIS) and the Canada and Quebec Pension Plan (C/QPP), provide many of these people with pension benefits equivalent to or even higher than their pre-retirement earnings.¹ For example, a single person retiring in 1993 at age 65, with previous employment income of \$10,000, could be entitled to government pensions amounting to \$11,200 annually. Someone with \$15,000 in employment income could have nearly 80% replaced by the public programs (Maser, 1995).

Table
Number and percentage of eligible taxfilers contributing to RRSPs

Income *	Both sexes		Men		Women	
	Number	% of eligible taxfilers	Number	% of eligible taxfilers	Number	% of eligible taxfilers
	'000	%	'000	%	'000	%
1982						
Total	2,075	17	1,399	20	676	14
\$1 to 29,999	600	8	261	7	339	8
\$1 to 9,999	25	1	9	1	16	1
\$10,000 to 19,999	192	7	78	6	114	7
\$20,000 to 29,999	383	15	174	13	209	18
\$30,000 and over	1,475	34	1,138	33	337	38
1992						
Total	4,581	37	2,636	39	1,945	34
\$1 to 29,999	1,792	23	711	21	1,081	25
\$1 to 9,999	139	7	46	6	93	8
\$10,000 to 19,999	635	22	222	18	413	25
\$20,000 to 29,999	1,018	37	443	33	575	42
\$30,000 and over	2,789	59	1,925	58	864	63

Source: Small Area and Administrative Data Division
* 1990 dollars.

incomes under \$30,000 decreased by nearly 300,000 over the 10-year period; on the other hand, married contributors in this income group increased by almost 100,000, or from 5% to 16% of these taxfilers. Again, this growth can be attributed largely to the increasing participation of women – from 22% to 39% of married contributors with family incomes under \$30,000.

Why the continued high participation?

There is no indication that RRSP participation for taxfilers with low incomes has declined since 1992. In fact, the number of contributors with income under \$20,000 was unchanged in 1994 (774,000).

If tax benefits for this group are modest and government pensions more or less adequate, why do these individuals continue to participate in such large numbers? Many may have been influenced by

financial institutions' advertising campaigns and by growing public concern over the future of government-sponsored programs (Cohen, 1996). A considerable number are young and, although they may realize small immediate tax savings, their long-term benefits may be quite significant, given the tax-free compound interest credited to them.

Not all contributions are saved until retirement. Many people may withdraw some or all deposits shortly after contributing, even within the same tax year. Previous analysis has found that for every five dollars contributed in recent years, one is cashed in before taxfilers reach age 65. Many of those dipping into their RRSP savings have low incomes (Frenken, 1996). Nevertheless, most of these taxfilers' deposits will probably remain until retirement, which should mean reduced dependency on the government safety net. □

Note

1 As a result of the March 1996 budget, the OAS and GIS program will be phased out and replaced with a new Seniors Benefit by 2001. It will provide greater payments to those with zero or modest income from other sources, but will reduce benefits for those with high incomes. Under the new system an estimated 75% of seniors will receive benefits the same as or higher than those under the current programs (Department of Finance, 1996). This increase in benefits and beneficiaries may affect future RRSP participation by workers with low incomes.

2 This and all subsequent references to income under a stated amount exclude zero and negative income. (In contrast, the first paragraph of this article refers to all amounts, including zero).

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Work arrangements: 1995 overview

Ernest B. Akyeampong

In November 1995, Statistics Canada, with financial support from Human Resources Development Canada, conducted the second Survey of Work Arrangements (SWA) of Canadian workers. The objectives of this survey were to update 1991 SWA data relating to business practices, juggling work and school, balancing work and family, and job quality; to fill in data gaps in the earlier survey; and to extend coverage to the self-employed (see *Data source*).

This overview presents some of the findings and highlights conspicuous relationships. Fuller analysis will appear in future issues of *Perspectives* and elsewhere.

Business practices

While much has been heard or written about ongoing corporate restructuring (for example, contracting out, relocation, mergers, downsizing), not much is known, statistically speaking, about changes in the work arrangements of employees.¹ A comparison of the results from the 1991 and 1995 Surveys of Work Arrangements (both held in November to eliminate the effects of seasonality) provides some of the missing information. However, since there are only two observation points, and because the two surveys took place at different phases of the business cycle, it is not clear to what extent the changes observed reflect real trends as opposed to cyclical patterns. It is also unclear to what extent shifts in industries and occupations may have contributed to revised practices;

such effects, if any, are likely to be small during the short interval between the two surveys.

Since most findings will be presented in percentages, it is worth noting that employees aged 15 to 69 in 1991 counted 10.8 million,² and in 1995, 11.1 million. The self-employed in that same age group in 1995 totalled 2.1 million. Unless otherwise stated, this paper refers to paid workers (employees) only.

Changes

A comparison of the 1991 and 1995 data reveals the following:

- The proportion of employees aged 15 to 69 usually working a five-day, Monday-to-Friday schedule (that is, no weekends) was around 60% for both surveys.
- However, weekend work has increased considerably. In 1991, approximately 10% of employees reported usually working on Saturdays, and 4% on Sundays; in 1995, the proportions had risen to 14% and 8%.
- The proportion of workers with a regular daytime schedule, the so-called "9 to 5" schedule, was little changed – it was 70% in 1991 and 68% in 1995. Though the percentage who had a shift, irregular, on-call or casual schedule also remained fairly stable, the proportion for whom such an arrangement was a requirement of the job (no choice) went up from 69% to 78%.
- The proportion of workers with a flexitime work arrangement (that is, an arrangement that permitted, within limits, some variation of work start and end times) rose from 16% to 24% (to 2.6 million).

Data source

The 1991 Survey of Work Arrangements (SWA), a supplement to the November Labour Force Survey (LFS) of the same year, gathered data on work schedules, shift work, flexitime, on-call work, working from home, and moonlighting. The November 1995 survey extended coverage to the self-employed and added new information on job quality, among other topics. Included in both surveys are questions on rates of pay, union membership and paid overtime. Combined with the LFS data on the personal and family characteristics of workers, the SWA offers a wealth of information on these issues, as well as on the broader topics of business practices, balancing work and family, and juggling work and school.

- Similarly, work at home saw an increase. The proportion of employees who regularly did some or all of their paid work at home rose from 6% to 9% (to one million).

New data

Among the new key findings are the following:

- Approximately 8% (171,000) of all part-time employees shared their job with another worker in November 1995. Close to 84% of all job-sharers were women.
- The survey asked the one million respondents who did all or part of their work from home if they were provided with certain equipment to help them carry out their duties. Approximately 22% of these employees said they were issued a computer; 14%, a modem, and 11%, a fax machine.

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- Roughly 14% of employees usually worked paid overtime each week, for an average of about 6 hours. This finding may be useful in discussions on the redistribution of paid overtime as a means of reducing unemployment.
- Approximately 12% of respondents (1.3 million) described their job as non-permanent.³ Of this group, close to one-half described their job as term, contract or temporary; another one-third, as casual, and the rest, as seasonal or other.
- On average, employees' hourly earnings were \$15.01.⁴
- In addition, over one-half of workers (51%) were covered by an employer-sponsored retirement plan or group RRSP; 59%, by a health plan, and 55%, by a dental plan. Furthermore, 57% of employees were entitled to paid sick leave, and 73%, to paid vacation leave.⁵
- Only one-quarter (26%) of young employed students had a regular daytime work schedule, compared with 60% of non-students. Shift, irregular, on-call or casual work schedules were the norm for students; 71% working these schedules did so to accommodate their school demands.
- In terms of work arrangements, only a small fraction of young students and non-students worked from home (3% each), although a higher proportion of the former enjoyed a flexitime work arrangement (18% versus 13%). Also, the incidence of non-permanent employment among students (31%) was almost double that of non-students (17%).
- As expected, the volume of work was much heavier among non-students. Only 18% worked part time, compared with 89% of students. Approximately 25% of employed young people in school worked less than 10 hours each week; hardly any of those not in school put in so few hours. In contrast, 16% of employed non-students worked more than 40 hours each week, compared with almost no students. Finally, 16% of non-students usually worked paid overtime, three times the incidence among working students.

The differences in work schedules, volume and arrangements lend some support to the view that the need to balance work and school plays a crucial role in the decisions of young students.

Balancing work and family responsibilities

Balancing work and family also presents challenges (Marshall, 1994). While family demands come in all forms and affect workers of all ages and both sexes, this overview looks at female workers aged 25 to 44 with pre-school aged children,

a group with particularly high work absence rates owing to family demands (Akycampong, 1995).⁶ In November 1995, these women numbered 788,000, while their counterparts without pre-schoolers totalled 2,259,000. How did these two groups compare with respect to work schedules, volume and arrangements?

- Employed women aged 25 to 44 with pre-school aged children were only slightly less likely to have a Monday-to-Friday inclusive work schedule (59% versus 64%) than those without. Though they were also only slightly more likely to work shift, irregular, on-call or casual schedules (29% versus 25%), about one-quarter cited care for children as the main reason for doing so. In terms of weekend work the two groups were identical: about 10% worked on Saturdays and about half that proportion (5%) on Sundays.
- Some 12% of both groups described their job as non-permanent.
- As expected, the volume of work provided by employed women with pre-schoolers was lower than that of their counterparts without young children. Approximately 31% of the former worked part time, compared with 21% of the latter. Also, the proportion working under 10 hours each week (4%) was double that of the other group, and the percentage working over 40 hours (7%), about half.
- Employed women with pre-schoolers were also slightly more likely to have work arrangements that helped to balance work and care of children. Approximately 28% had flexitime arrangements, compared with 25% of their counterparts without pre-schoolers. Some 13% worked from home, compared with 11%.

Juggling school and work

Balancing work and school is a persistent issue (Sunter, 1992). This overview examines the extent to which the work arrangements of youths (15 to 24 year-olds) in full- or part-time school attendance (736,000) differ from those of their counterparts not in school (1,060,000), and whether the differences demonstrate an attempt by students to strike a better balance between the competing demands.

- As one would expect, the Monday-to-Friday inclusive work schedule is rare among employed youths in school. Only 9% had this schedule in 1995, compared with 51% of their counterparts not in school. In contrast, weekend work was more common among students (43% for Saturday work and 29% for Sunday work). Only 19% of young non-students worked on Saturdays, and 10% on Sundays.

Job quality

There is a growing public perception that the "quality" of jobs is deteriorating. Advocates of this thesis argue that good jobs – as judged by such attributes as wage rate, availability of employer-sponsored pension, health and dental plans, and entitlement to paid sick and vacation leave, to name a few⁷ – are being replaced by not so good ones. They often note that in absolute and relative terms, temporary jobs are increasing (Krahn, 1995), part-time jobs are growing (Statistics Canada, 1996a), public sector⁸ employment is declining (Statistics Canada, 1996b), and small businesses have become key players in employment growth (Picot, Baldwin and Dupuy, 1994). In effect, they are saying that, looked at in isolation, permanent jobs seem better than non-permanent ones, full-time better than part-time, public sector better than private sector, and jobs in large firms better than those in small firms.⁹ Data from the 1995 SWA shed some light on this debate (Appendix). Among the major findings are the following:

- Average hourly earnings in permanent jobs in November 1995 (\$15.39) were almost three dollars better than those in non-permanent jobs. The difference between full-time (\$16.05) and part-time jobs was around five dollars.
- Employees with permanent, with full-time, or with public sector jobs had greater access to non-wage benefits. For example, on average, 60% of employees in permanent or full-time jobs were covered by an employer-sponsored pension, health or dental plan, compared with about 20% in non-permanent or part-time jobs. The corresponding proportion in public sector jobs was even higher, at around 80%. The picture was similar for paid sick leave entitlement.

- The likelihood of being covered by non-wage benefit plans and of having paid sick leave entitlement also increased with firm size – from around 30% in the smallest firms to approximately 80% or more in the largest. Hourly earnings also rose by firm size – from \$12.16 in firms with under 20 employees to a little over \$20.00 in those with more than 500.
- The proportion of employees entitled to paid vacation leave was generally higher than that with paid sick leave entitlement. Again, coverage was higher in permanent, full-time, or public sector jobs and in those in larger firms: about 80% or more of these employees enjoyed such benefits.
- In a world of increasing stress and conflicting demands, a flexi-time work arrangement offers some relief: it is a good job attribute, more likely to be found in permanent, full-time or public sector jobs: about one in four such workers had this privilege compared with one in five in non-permanent, part-time or private sector jobs. Very large firms seem to offer greater opportunities for flexitime work arrangements.

Self-employment

Approximately 2.1 million people aged 15 to 69 were self-employed¹⁰ in their main job in November 1995. This was 15% higher than the level in November 1991. This growth was greater than that among paid workers (just 3%). Following are some key findings of the 1995 SWA:

- As expected, working from home is very common among the self-employed. Over half (53%) of the 2.1 million operated their businesses from home.
- The main reasons for engaging in self-employment were enjoy-

ment of independence (42%), carrying on a family business (17%), no other work available (12%), and a desire to make more money (10%).

About 184,000 moonlighters, some of whom were employees in their main job and some who were self-employed in their main job, worked for themselves in the second job. Most (78%) operated these second jobs from home.

Work hour preferences of employees

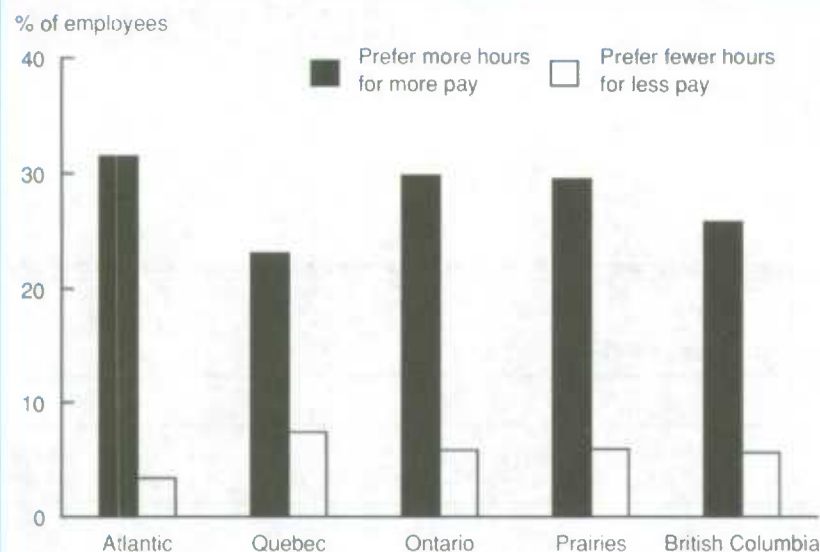
One question in the 1995 SWA sought information on the work hour preferences of Canadian paid workers. The question read: "At this job, given the choice, would [you] at [your] current wage, prefer to work (mark one only)

1. Fewer hours for less pay?
2. More hours for more pay?
3. The same hours for the same pay?"

Answers to this question, along with information collected in other parts of the survey, would be of interest to people concerned with issues of underemployment, overemployment, and redistribution of work.¹¹ A few findings are presented here:

- Approximately two in three paid workers (66%) preferred to work the same hours for the same pay.
- About 6% of paid workers (the majority being women) indicated a preference for fewer hours for less pay.
- About 28% preferred to work more hours for more pay. However, almost 50% of youths, of part-timers and of persons in non-permanent jobs preferred to work more hours.
- Except for Quebec, higher than average proportions of workers preferring more hours were observed in slack labour market

Chart

Three out of ten employees would prefer to work more hours.

Source: Survey of Work Arrangements, 1995

regions (that is, areas with unemployment rates higher than the national average). The proportions declined as one moved west: from 32% of workers in the Atlantic region to 26% in British Columbia (Chart). In Quebec, only 23% of workers indicated such a preference.

- Similarly, only 3% of workers in the Atlantic region preferred fewer work hours, compared with about 6% in Ontario, the Prairies and British Columbia. In Quebec, the percentage was a bit higher, over 7%.

A public-use microdata file of SWA survey results is available for \$1,500.00 (product number 71M0013XDB). To order, please contact Mike Sivyer at 1 800 461-9050 or (613) 951-4598; fax (613) 951-0562.

■ Notes

- 1 The distribution between full- and part-time jobs and, to some extent, temporary and non-temporary jobs (as defined by the General Social Survey) are exceptions.
- 2 Unlike the previously published figure (10.3 million), this count was reweighted to the 1991 Census and includes 65 to 69 year-olds.
- 3 The SWA definition of a non-permanent job went beyond the restrictive definition of temporary job used in the General Social Survey (that is, a job with an end date) or by several past household-based surveys such as the Labour Market Activity Survey (that is, a job lasting less than six months). It was based simply on the agreement when the job began, irrespective of a specified end date or duration.
- 4 This figure is the derived average for all respondents, whether they are salaried or paid by the hour.
- 5 Although federal and provincial employment standards and labour laws generally entitle employees to at least two weeks of

paid vacation, some workers do not enjoy such a benefit. These include some contract, term, on-call and casual workers. It is also conceivable that some workers who are expected to take pay in lieu of vacation time may have responded negatively to the related survey question. A close examination of the profile of respondents who indicated they were not entitled to paid vacation is under way.

6 Working men of the same age in similar family situations lost hardly any work time for this reason.

7 Other relevant job characteristics, not covered by the SWA, include the degree of stress associated with the job, promotion prospects, boredom and repetitiveness.

8 The public sector includes employees working for the federal government, provincial or local governments, agencies or other government bodies, Crown corporations, or government-owned institutions such as schools or hospitals. The private sector includes all other employees and the self-employed.

9 There is doubtless a high correlation between these job types. For example, public sector jobs are more likely to be permanent and full-time. These factors have not been controlled for in this overview.

10 Self-employed workers include working owners of incorporated or unincorporated businesses who work for themselves, with or without paid help.

For another look at SWA data on the self-employed, see "Key labour and income facts" in this issue.

11 A detailed analysis of data pertaining to this question, including differences in proxy/non-proxy responses, is planned for release sometime in 1997.

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Appendix

Job quality indicators by job type and firm size, 1995

		Job type *						
		All	Permanent	Non-permanent	Full-time	Part-time	Public sector	Private sector
Number of employed	('000)	11,084	9,683	1,272	8,968	2,116	2,058	9,016
Hourly wage rate	(\$)	15.01	15.39	12.42	16.05	11.01	19.46	13.97
Coverage in employer-sponsored					%			
Pension plan/group RRSP		51	55	20	59	19	83	44
Health plan		59	64	19	69	18	79	54
Dental plan		55	60	17	64	16	72	51
Paid sick leave entitlement		57	62	19	66	18	83	51
Paid vacation leave		73	78	28	82	31	78	71
In flexitime work arrangement		24	24	21	25	19	27	23
Firm size (number of employees)								
		Under 20		20-99		100-500		Over 500
Number of employed	('000)	11,084		3,799		2,292		1,178
Hourly wage rate	(\$)	15.01		12.16		17.37		20.16
Coverage in employer-sponsored					%			
Pension plan/group RRSP		51		25		75		85
Health plan		59		34		80		85
Dental plan		55		31		74		81
Paid sick leave entitlement		57		38		74		79
Paid vacation leave		73		59		85		89
In flexitime work arrangement		24		24		24		33

Source: Survey of Work Arrangements

Note: A worker is considered full-time if he or she usually works 30 hours or more a week at the main job. Part-timers usually work less than 30 hours. For other definitions see notes 3 and 8.

* These job types are not mutually exclusive of each other.

What's new?

■ JUST RELEASED

■ *Three income studies from the Survey of Consumer Finances and Household Facilities and Equipment Survey*

Earnings of Men and Women, 1995

With private sector wage settlements being outstripped by inflation, and public sector wage freezes common, how do earnings of men and women compare? And how do education, age, full- and part-time status and job tenure affect earnings differences? *Earnings of Men and Women, 1995* (Catalogue no. 13-217-XPB) helps to answer these questions. This publication presents average and median earnings, earnings distributions and female-to-male earnings ratios by various characteristics, including province, age, education, occupation and work experience. Statistics for this publication are derived from the Survey of Consumer Finances, an annual supplement to the Labour Force Survey.

Household Facilities by Income and Other Characteristics, 1996

How does the level of household income affect Canadian households? What is the relationship between household income and home ownership or the presence of various household facilities and equipment? *Household Facilities by Income and Other Characteristics, 1996* (Catalogue no. 13-218-XPB) looks at these and other relationships between income and household characteristics, by linking 1996 facilities with 1995 income data. This publication also looks at the relationship between monthly cash rent and annual income. It provides selected statistics on low income households as well. Statistics are derived from a database linking the Survey of Consumer Finances, the Household Facilities and Equipment Survey, the Labour Force Survey and the Rent Survey.

Family Incomes, Census Families, 1995

What are the trends and patterns of income for census families (that is, nuclear families as opposed to extended families) and people who are not in a census family? *Family Incomes, Census Families, 1995* (Catalogue no. 13-208-XPB) looks at the incomes of husband-wife

families, single-parent families and persons not in families. It shows their distribution by size of income, major source of income, region or province, age, sex and other characteristics. The census family concept used is identical to that of the Canadian census. Statistics for this publication are derived from the Survey of Consumer Finances.

For further information concerning these three publications, contact Réjean Lasnier at (613) 951-5266; Internet: income@statcan.ca. □

■ *Rural labour markets*

The Organisation for Economic Co-operation and Development (OECD) has released a new report on the characteristics and dynamics of rural labour markets in Canada and other member nations of the OECD.

Territorial Indicators of Employment: Focusing on Rural Development, compiled with the assistance of Statistics Canada, shows that agriculture is no longer the dominant sector providing employment for rural populations in OECD countries. Today, in all member nations, most rural employment opportunities are in non-agricultural activities.

Even in the predominantly rural regions, less than a quarter of total employment is in agriculture, forestry and fisheries. At least every second job is in the service sector, and in some countries, the proportion is even higher.

Employment growth in these regions has been primarily, if not exclusively, due to substantial increases in service sector employment. Between 1980 and 1990 employment in this sector grew 15% to 25% in these areas. In most countries, this was often better than the national average.

Such was the case for Canada and Norway. So, the rural setting is not a handicap to job creation. On the contrary, it can yield both innovative and dynamic approaches to such a challenge.

Territorial Indicators of Employment: Focusing on Rural Development is now available. For further information on this release, or to order this report, contact Ray Bollman, Agriculture Division, Statistics Canada at (204) 727-9734, or Ken Donnelly, Human Resources Development Canada at (819) 994-6701. □

■ **Temporary help agencies**

The feature article in the second-quarter 1996 issue of *Services Indicators*, "The temporary help service industry: Its role, structure and growth," studies the industry that supplies temporary help to business and industry. Temporary help plays an important role in human resources management, similar to that of just-in-time technology in inventory management and bridge financing in financial markets.

In 1991, there were 514,000 workers in temporary jobs, or 5% of the total employment figure. But revenue, rather than employment, offers a more accurate measure of the industry.

In 1993, business, governments and individuals paid \$1.4 billion to purchase services from temporary help agencies. There were 1,191 temporary help agencies in Canada, many of which were small; more than half (635) earned less than \$250,000 in revenue.

Services Indicators (Catalogue no. 63-016-XPB, \$34/\$112) is a quarterly publication that profiles the communication, business services, and finance, insurance and real estate sectors. It presents statistics on key economic indicators, finances, employment, salaries and output. The second-quarter issue for 1996 is available. For further information, contact George Sciadas, Services, Science and Technology Division, at (613) 951-3177. □

■ **Report on children**

Statistics Canada, along with Human Resources Development Canada, has released *Growing Up in Canada, 1994-95* (Catalogue no. 89-550-MPE, \$25), which contains analyses of data from the National Longitudinal Survey of Children and Youth.

This joint undertaking is an important step in learning more about how Canadian children are developing today, and what can be done to prepare them for the challenges of tomorrow. The survey is a long-term research program that will track a large sample of children over many years, enabling researchers to monitor children's well-being and development.

This report, which contains several early analyses of the survey's data, presents the findings and conclusions of studies undertaken by experts on child development. The studies illustrate the richness and diversity of the database, the analytic value of which will grow in years to come as further survey cycles are completed.

For further information on this release, contact Gilles Montigny, Special Surveys Division, at (613) 951-9731. □

■ **SEPH data on diskette**

The Survey of Employment, Payrolls and Hours has recently produced *Annual Estimates of Employment, Earnings and Hours, 1983-1995* in electronic format, using easy-to-load, user-friendly Adobe Acrobat software.

Users can browse the information and print any or all pages, as well as export the data into the spreadsheet of their choice.

Provided are data tables that cover 281 industries at the national and provincial levels, with information such as employment, average weekly and hourly earnings, average weekly hours and total weekly payrolls. A review article for 1995 is also featured, along with the survey methodology.

Annual Estimates of Employment, Earnings and Hours, 1983-1995 (Product no. 72F0002XDE, \$120) is now available. For further information on this new electronic product, or to order, contact the Client Services Section at (613) 951-4090; fax (613) 951-4087, or the Labour Division on the Internet: labour@statcan.ca. □

■ **LHSAD studies families and separation**

Family Income after Separation looks at after-tax income as well as family composition before and after separation. The study is restricted to legally married couples (with children) who became separated from 1987 through 1993. For the first time, the effects of alimony on the income of those who make payments can be addressed, as data on alimony are now available as a distinct component. The study also includes an extensive section on the analytical methodology used.

Family Income after Separation (Catalogue no. 13-588-MPB, no. 5) is part of the Income Analytical Reports series from the Labour and Household Surveys Analysis Division. For further information, contact Diane Galarneau at (613) 951-4626; or on the Internet: galadia@statcan.ca. □

■ **Analytical Studies Branch research papers series**

Were Small Producers the Engines of Growth in the Canadian Manufacturing Sector in the 1980s?

J.R. Baldwin

Research Paper Series no. 88

Small firms are often seen to be the engines of growth. Two facts are cited as proof of this belief. The first is that job creation has been coming mainly from small firms.

The second is that small firms' share of employment has increased in the past two decades. Both of these sources rely on a simple measure – employment. This paper asks whether changes in this measure affect the view of the role that small firms play in the growth process.

The first section of the paper uses employment to evaluate the importance of small firms, but modifies the raw measure to correct for the lower wages paid by these firms. The paper examines evidence of this differential in the manufacturing sector and notes how it has grown over time. It then uses relative wage rates to show that these small producers did not outperform large producers in creating jobs in the 1970s and 1980s.

The second section of the paper changes the measure used to evaluate relative performance by moving from employment to output and labour productivity. Thus, while small producers have increased their employment share dramatically, they have barely changed their output share. Small firms have been falling behind large firms in wages paid and in labour productivity. In relative terms, large producers have been decreasing their employment while maintaining their output share, making great strides in labour productivity.

Longitudinal Aspects of Earnings Inequality in Canada

R. Morissette and C. Bérubé
Research Paper Series no. 94

In this paper the following questions are asked: 1) even after controlling for cyclical effects, do new spells of low earnings now last longer than they used to? 2) once a male worker starts a new spell of low earnings, does he receive lower real annual wages than his counterparts did in the mid-seventies? 3) did long-term inequality in earnings rise in the eighties? The answers to these questions follow. First, even after taking account of the relatively high unemployment rates observed since the mid-eighties, workers under 35 were less likely to move out of the bottom of the earnings distribution during the 1985-92 period than they were during the 1976-84 period. In other words, new spells of low earnings lasted longer for these workers. Second, real annual wages received by young men who went through a new spell of low earnings were significantly lower from 1985 to 1993 than from 1975 to 1984. Third, during the eighties, inequality in earnings cumulated over either six or ten years rose at the same pace as inequality in annual earnings.

Changes in Job Tenure and Job Stability in Canada

A. Heisz
Research Paper Series no. 95

This paper examines changes in job stability from 1981 to 1994. It examines changes in the complete length of new jobs and looks at changes in job survival. Although

the average complete length of new jobs showed no significant trend over the period, their distribution shifted from medium- to shorter-term jobs. This means that new job holders experienced more instability at the end of the period than at the beginning. However, once the six-month milestone was passed, workers enjoyed increasing job stability, leaving the proportion of long-term jobs unchanged. This conclusion is in contrast to comparable studies done with U.S. data, which could not examine changes in jobs less than four years in length.

This pattern of change persists when different demographic groups are studied. The probability that a new job would last beyond six months declined significantly, while chances that a six month-old job would last beyond five years increased significantly, or did not change. This change represents a polarization of jobs for most Canadian workers. The only exceptions were job starters aged 45 years or over and job starters in Atlantic Canada, where there was a shift towards more short-term jobs.

Despite the steady proportion of new jobs that become long-term, there is some evidence that long-lasting jobs held by older workers are at a higher risk of ending now than in the early 1980s. However, this decline is concentrated among older workers with high seniority, which is perhaps explained by an increase in early retirement. In addition, long jobs held in the manufacturing and trade industries are less stable now than in the early 1980s, although these changes are small and offset by increased stability of long jobs in the service industries.

This paper does not attempt to identify particular causes of such changes. Overall, the trends are consistent with others that have emerged in the economy, including the rise in non-standard work, polarization of earnings and hours, and the increasing use by firms of a core of permanent employees.

Unemployment in the Stock and Flow

M. Baker, M. Corak and A. Heisz
Research Paper Series no. 97

This paper presents a framework for analyzing unemployment and applies it to Canadian and U.S. data. The analysis looks at the distinction between being unemployed and becoming unemployed, that is, between the stock and the flow of unemployment. The share of a particular group in the stock of unemployed will differ from its share in the flow into unemployment to the extent that its average duration of unemployment differs from the economy-wide average. Significant differences in the average duration of unemployment in the two countries imply that stock shares are not good indicators of flow shares, that changes in the stock share of some groups are due to changes in the flow share,

while changes for others are due to changes in the length of unemployment spells. Explanations of the Canada-U.S. unemployment rate gap should try to accommodate at least three facts uncovered by the analysis: (1) employer-initiated permanent separations account for most of the unemployment numbers in Canada, while entry into the labour force plays a more important role in the U.S. figures; (2) unemployment spells are significantly longer in Canada than in the United States because of longer spells for most groups (regardless of reason for unemployment), not because of a compositional difference in the make-up of the unemployed; and (3) Canada's longer spells and higher incidence of unemployment contribute about equally to the trend increase in the rate gap during the 1980s.

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■ WHAT'S NEW WITH SLID?

■ *Release of final CD-ROM for 1993*

The final version of the SLID 1993 public-use microdata file has now been distributed. Those who had purchased the preliminary version should have received this final version automatically.

This product includes all files contained on the preliminary version, particularly the PERSON file and JOB file in ASCII format, along with SAS control cards containing the record layouts, variable labels and value labels for categorical variables.

Three major additions are intended to help users access the data more easily. First, the two microdata files are provided in IVISION format. This software allows users to construct data tables and to produce charts. Second, the microdata user's guide is provided in ACROBAT format. This allows on-line access to the guide, with searching capability to locate the section of interest. Finally, tutorials are provided to assist those who are unfamiliar with either IVISION or ACROBAT.

Users need not purchase additional software. The installation procedures copy the IVISION Browser and ACROBAT Reader to the user's machine. IVISION is a Windows-based software, so its use is restricted to those using Windows. ACROBAT can be used in Windows or on Macintosh computers.

For further information contact (613) 951-4607; fax (613) 951-3253; Internet: dynamics@statcan.ca. □

Key labour and income facts

The labour and income indicators are drawn from numerous sources, including published and unpublished annual data. These indicators, covering labour market, earnings, income and other household topics (for Canada, the provinces and territories), are kept in a database that is updated quarterly. For each indicator, a time series of 10 years (or more) is maintained.

The set of indicators can be obtained, on paper or diskette, at a cost of \$50. A document explaining the indicators is also available. Work is in progress to make the indicator data available on the Internet. For further information, contact Joanne Bourdeau at (613) 951-4722; fax (613) 951-4179, or on the Internet: bourjoa@statcan.ca.

Sources

Currently, the indicators are derived from the following sources:

Labour Force Survey

Frequency: Monthly

Contact: Deborah Sunter (613) 951-4740

Survey of Consumer Finances

Frequency: Annual

Contact: Réjean Lasnier (613) 951-5266

Absence from Work Survey

Frequency: Annual

Contact: Gabrielle Zboril (613) 951-0477

Help-wanted Index

Frequency: Monthly

Contact: Sylvie Picard (613) 951-4090

Unemployment Insurance Statistics Program

Frequency: Monthly

Contact: Sylvie Picard (613) 951-4090

Survey of Employment, Payrolls and Hours

Frequency: Monthly

Contact: Sylvie Picard (613) 951-4090

Major wage settlements, Bureau of Labour Information (Human Resources Development Canada)

Frequency: Quarterly

Information: (819) 997-3117

Labour income

Frequency: Quarterly

Contact: Ed Bunko (613) 951-4048

Household Facilities and Equipment Survey

Frequency: Annual

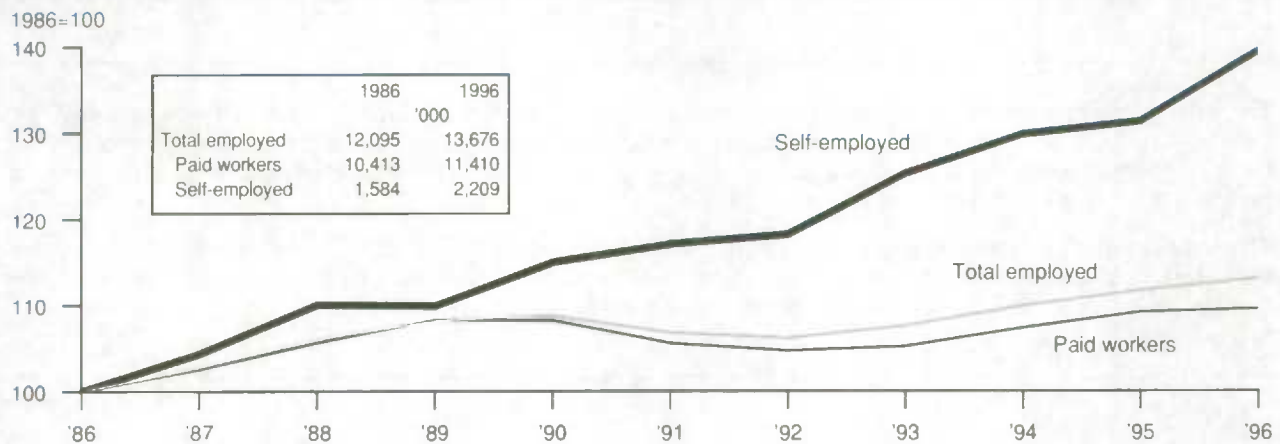
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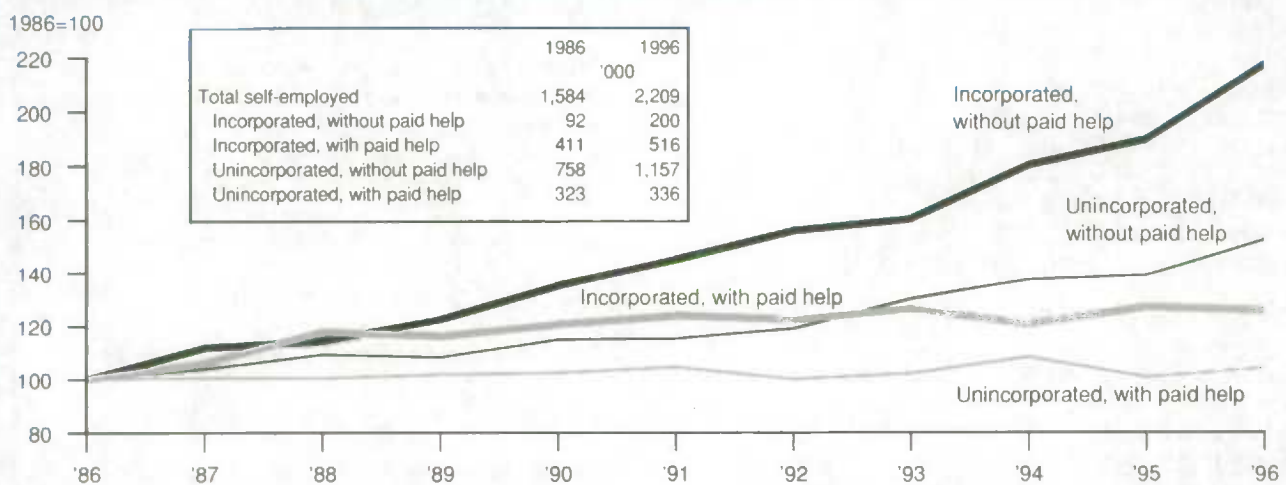
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Employment growth by class of worker



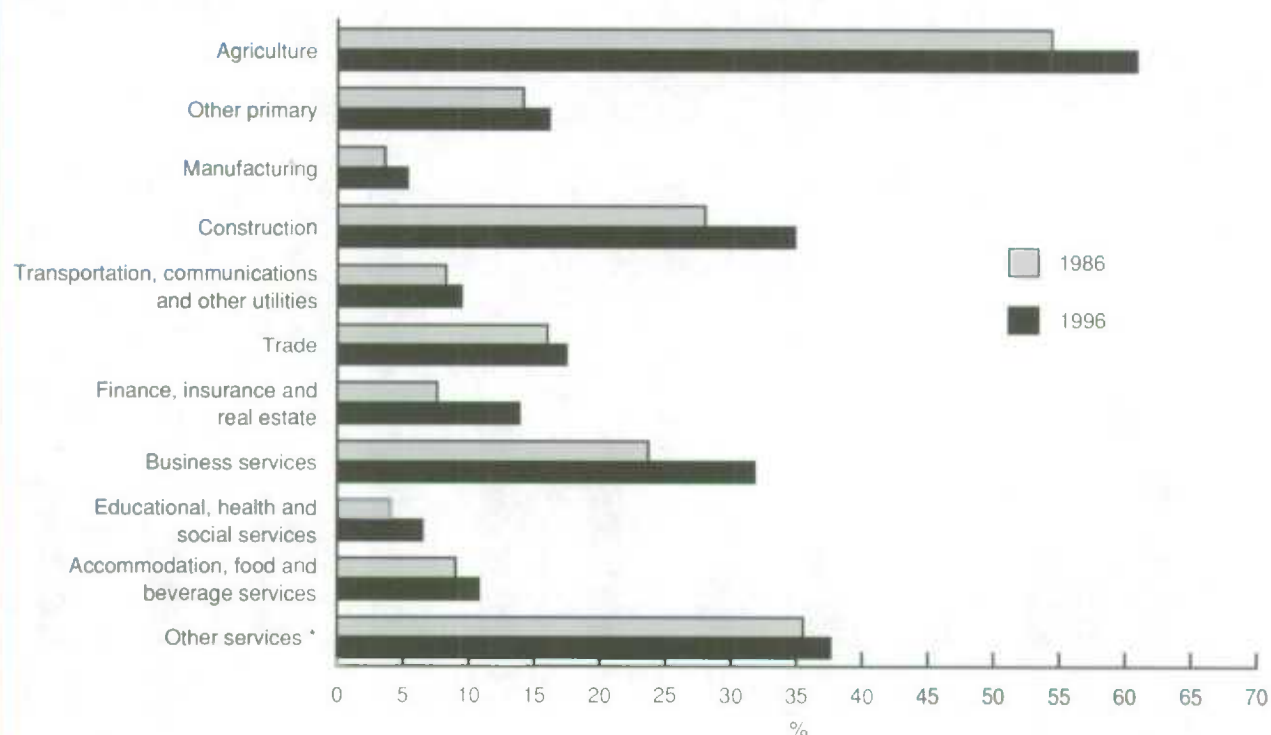
Growth in type of self-employment



Source: Labour Force Survey

- From 1986 to 1996, growth in self-employment (39%) was four times that of paid workers (10%).
- Accordingly, the proportion of all workers who were self-employed rose from 13% (1.6 million) to 16% (2.2 million).
- Among the four types of self-employment, the incorporated without paid help group experienced the greatest growth (117%) over the period. In 1996, this group numbered 200,000 or 9% of all self-employed.
- The largest group, the unincorporated without paid help, recorded the second largest growth (53%). In 1996, they numbered 1.2 million or 52% of total self-employment.

Incidence of self-employment by major industry

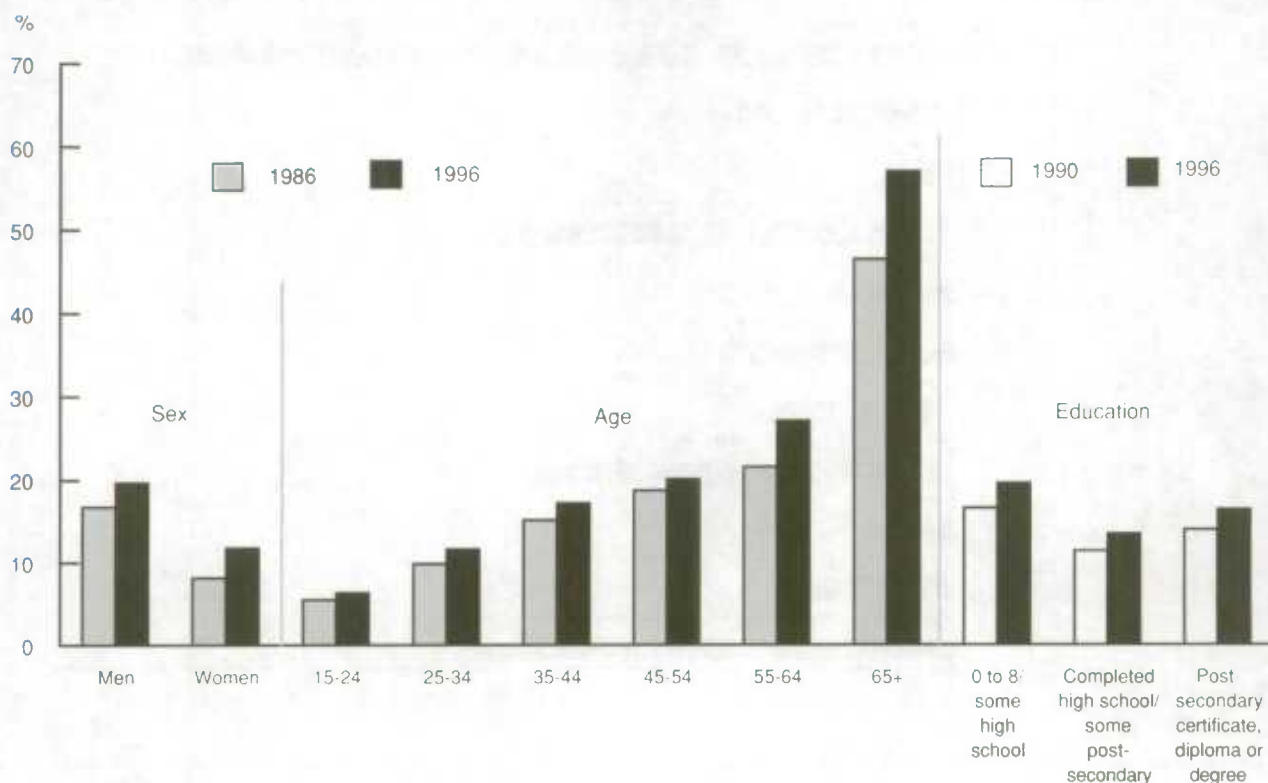


Source: Labour Force Survey

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

- The incidence of self-employment rose in all industries. The highest incidences in 1996 were in agriculture (61% of workers were self-employed), construction (35%) and business services (32%); the lowest was in manufacturing (5%).
- Major industries recorded a rise in the number of self-employed from 1986 to 1996, with growth rates ranging from 6% in agriculture and 9% in other primary industries to 111% in finance, insurance and real estate and 124% in business services.

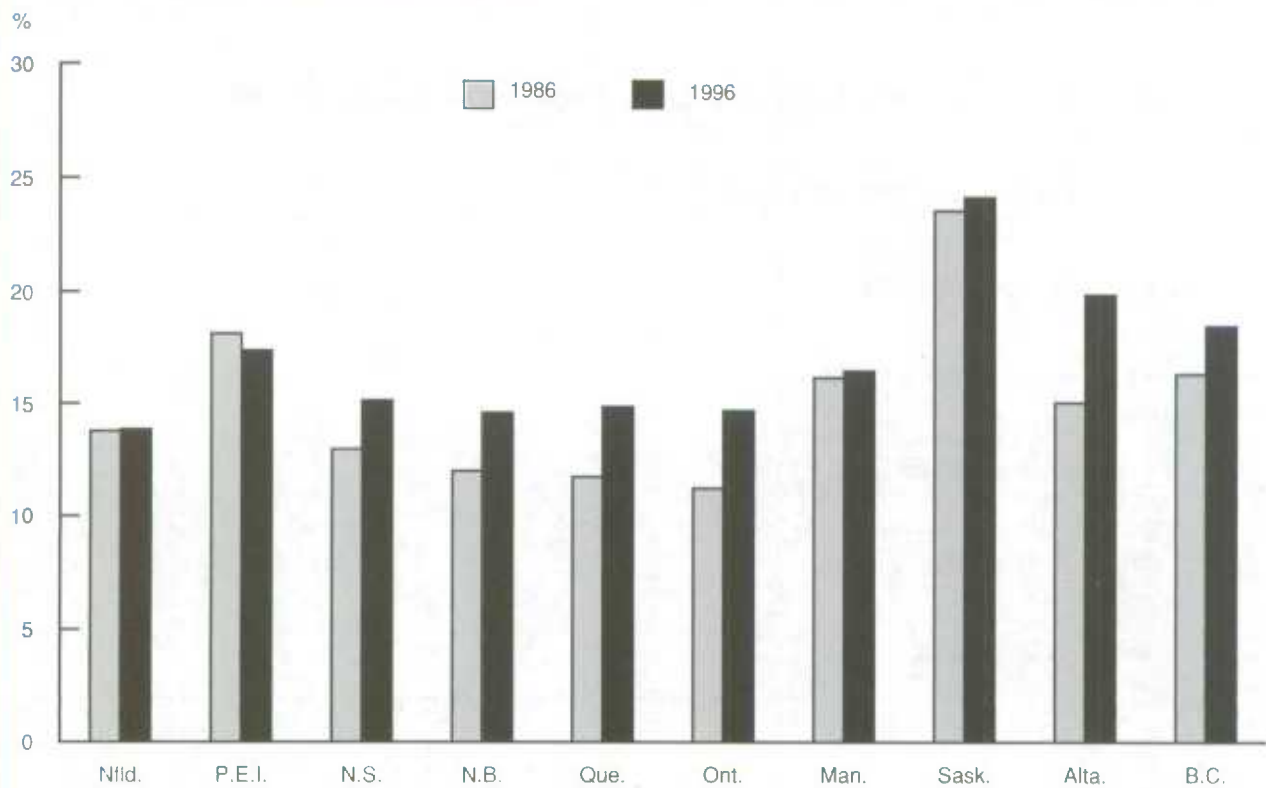
Incidence of self-employment by sex, age and education



Source: Labour Force Survey

- Although the incidence of self-employment is higher among men, the growth in the number of women self-employed has been approximately three times higher (74%) than that of men (27%) over the last 10 years. In 1996, women accounted for about one-third (733,000) of all self-employed workers – much higher than their one-quarter (422,000) share in 1986.
- The incidence of self-employment tends to increase with age. In 1996, it ranged from 6% among youths to 57% among workers aged 65 or over.
- Except for youths (aged 15 to 24), who recorded an 8% drop in number, self-employment grew among all major age groups over the decade. However, the best growth rates were enjoyed by workers aged 35 or over.
- The incidence increased for all three educational attainment groups during the period. The highest rates were found among the less-educated group, many of whom were older workers.
- Between 1990 and 1996, the number of self-employed grew by 48% among workers with postsecondary certificates, diplomas or degrees, but fell by 11% among those without high school diplomas.

Incidence of self-employment by province

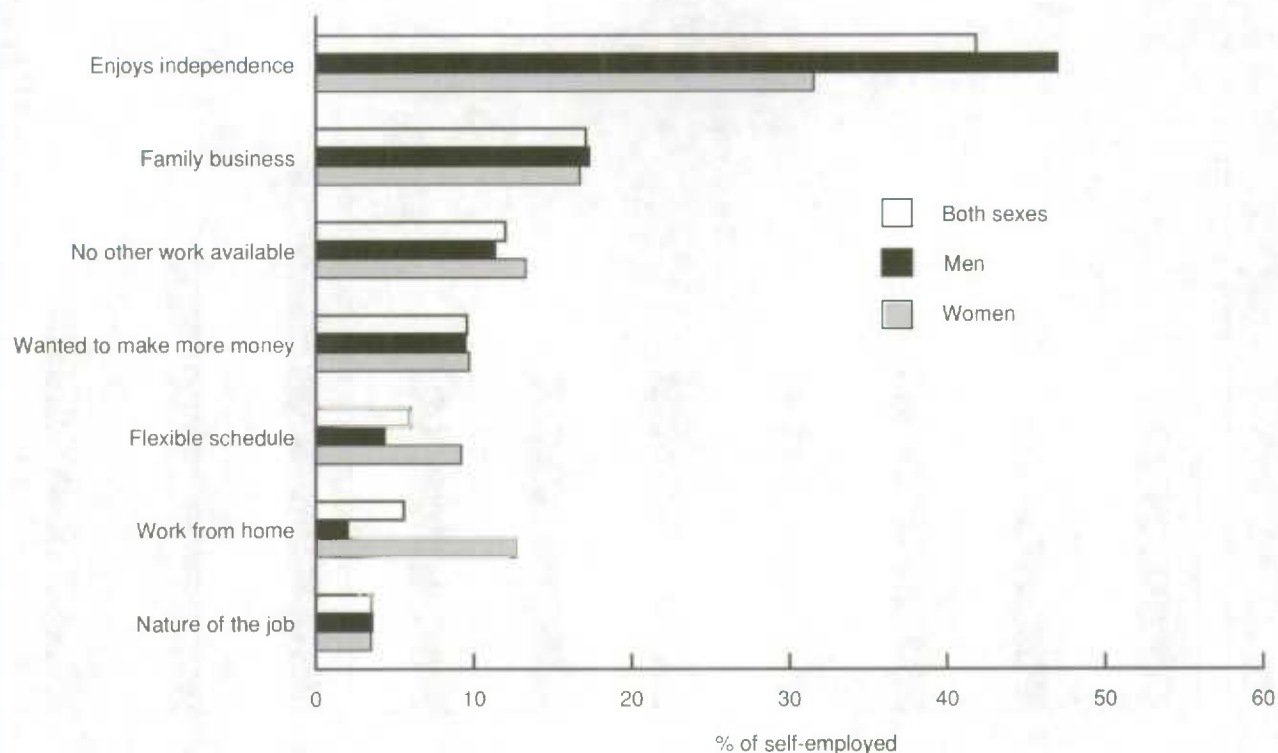


Source: Labour Force Survey

■ Differences in provincial rates are the result of many factors, particularly the industry mix. Not surprisingly, workers in the more heavily resource-based economies of the West had the highest incidences: Saskatchewan (24%), Alberta (20%) and British Columbia (18%). Prince Edward Island also boasted a high rate (17%).

■ Though all provinces recorded gains in the number of self-employed over the decade, the greatest growth occurred in Alberta (57%), British Columbia (51%) and Ontario (46%). The smallest increases were in Newfoundland (3%) and Saskatchewan (1%). Prince Edward Island was the only province to register a decline in the incidence of self-employment during the period.

Main reason for self-employment



Source: Survey of Work Arrangements, 1995

■ The November 1995 Survey of Work Arrangements asked respondents to indicate their main reason for engaging in self-employment (multiple responses were not allowed). There were some notable differences in responses by sex and by age.

- A larger proportion of men (47%) than women (32%) stated the enjoyment of independence as their main reason.
- Women, often more burdened with household or family demands, were about twice as likely as men to quote the flexible schedule afforded by self-employment as the main reason (9% versus 4%); they were also six times as likely as their

male counterparts (13% versus 2%) to have taken that route because it permitted them to work from home.

- Youths were twice as likely as adults to cite lack of other work as their main reason for being self-employed (20% versus 12%).

Charts and text for this issue's "Key labour and income facts" were prepared by Ernest B. Akyeampong and Jeannine Usalcas, of the Labour and Household Surveys Analysis Division. They can be reached at (613) 951-4624 and (613) 951-4628, respectively.

In the works

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

■ Job sharing

Job sharing occurs when two people voluntarily share the responsibilities of one full-time job. This arrangement provides flexibility for employees and allows employers to retain valued workers who do not want a full-time schedule. Do shared jobs differ from regular part-time jobs? First-time national data on job sharing offer some answers to this question.

■ Change in average family income

How have changes to income from various sources contributed to changes in average family income over the years? The effect of changing "family demographics" is also examined from two perspectives: the first classifies families by type, age and presence of children, and the second, by family type and earning status of major earner(s).

■ Workplace computerization

How quickly has new information technology been adopted in the workplace and how has its introduction affected workers, firms and the economy as a whole? Data from the 1989 and 1994 General Social Surveys reveal changes in computer literacy and in the use of computers in the workplace. This report also looks at the effect of computer technology on job content and job security.

■ Retirement age

This article uses Labour Force Survey data to determine the age of those who make the transition from work to retirement. It presents findings according to various characteristics of the retirees, such as sex, education and province of residence. The nature of the last job prior to retirement, such as class of worker, occupation, industry and tenure, is also examined.

■ Leaving high school

The 1995 School Leavers Follow-up Survey re-interviewed almost two-thirds of the respondents involved in the 1991 School Leavers Survey. This article presents updated findings on the education, training and labour market experiences of youths during the first few years after leaving or graduating from high school.

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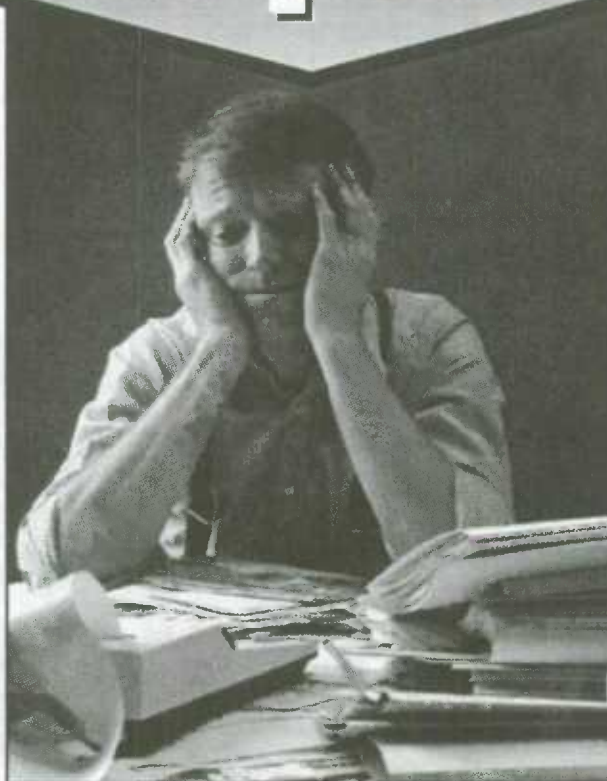
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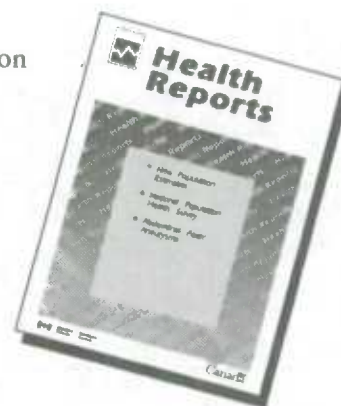
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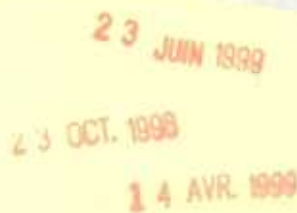
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