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# PERSPECTIVES

ON LABOUR AND INCOME

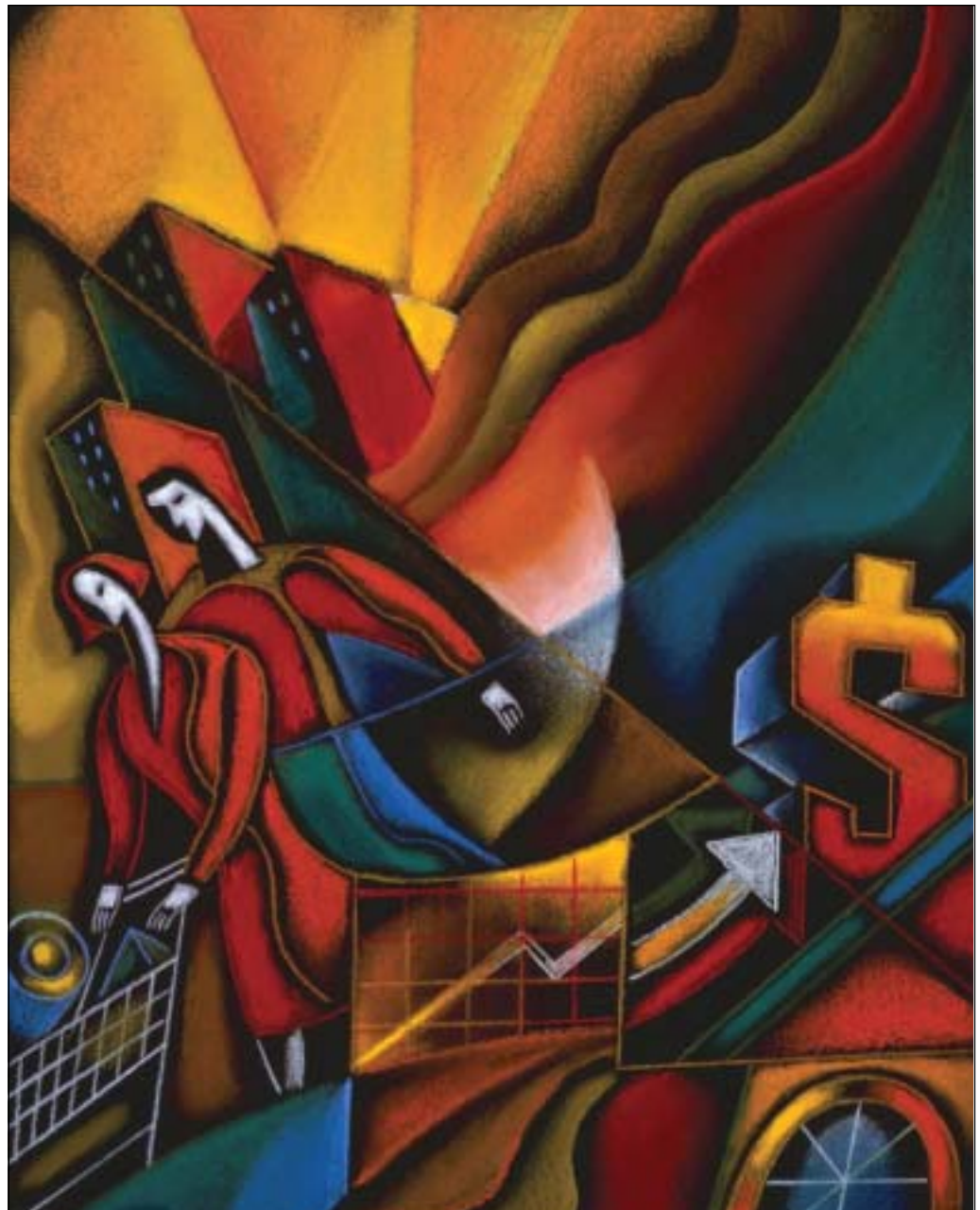
**DECEMBER 2001**

Vol. 2, No. 12

■ THE MALE-FEMALE  
WAGE GAP

■ PRIVATE PENSION  
SAVINGS, 1999

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### Perspectives on Labour and Income

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# Highlights

## *In this issue*

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### ■ The male-female wage gap

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- In 1997, the average annual earnings of women working full-year, full-time were 73% of men's. Using the average hourly wages of all employees, the ratio was 80%. This sizeable difference results mainly from differences in the study population and differences in work volume.
- Male-female differences in labour market experience, education and major field of study, occupation, job responsibilities, and industry can explain half of the wage gap. Actual labour market experience and major field of study, rather than proxy measures of experience and education, further help to understand the issue.
- Most studies examine the *average* pay differential and assume that the size and components of the gap are constant along the whole wage distribution. However, about 47% of the difference in pay at the 90<sup>th</sup> percentile and 57% at the 25<sup>th</sup> percentile are explained by differences in observable characteristics. This suggests that the 50% of the wage gap due to men and women possessing different wage characteristics at the mean fails to accurately represent the differences encountered along the wage distribution.
- Questions related to pay differentials are often framed in a manner that examines the extent to which women are paid the same as comparable men. Adopting alternative comparative wage structures can lead to quite different interpretations of the components of male-female pay differentials. For example, the portion of the gap attributable to differences in worker characteristics can vary from 6% to 61%.

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#### Perspectives

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| 2 years  | 92.80  |   |  |                                   |   |  |  |  |              |                |          |              |        |       |  |  |         |       |  |  |         |        |  |  |          |  |  |  |  |  |  |  |  |  |  |  |                                    |  |  |  |  |  |  |  |                    |  |  |
| 3 years  | 121.80   |   |  |                                   |   |  |  |  |              |                |          |              |        |       |  |  |         |       |  |  |         |        |  |  |          |  |  |  |  |  |  |  |  |  |  |  |                                    |  |  |  |  |  |  |  |                    |  |  |
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# The male-female wage gap

Marie Drolet

**T**HE ISSUE OF male-female wage inequality is complex and requires analysis from a number of different perspectives. The goal of this article is *not* to provide a single, definitive estimate of the wage gap, but to demonstrate the importance of measurement, decomposition techniques, and differences in the gap within the distribution of wages.

## Measures of earnings

For three decades, the Survey of Consumer Finances (SCF) was the primary source of data on the earnings of Canadians. As of 1997, the Survey of Labour and Income Dynamics (SLID) replaced the SCF. According to the SCF, among full-year, full-time (FYFT) workers, women working full-year, full-time earned 72.5% of what men earned (Table 1). Using the 1997 SLID, the ratios varied from 61.6% (using annual wages and salaries for all employees in their main job) to 68.3% (using annual wages and salaries for full-year, full-time employees in their main job) to 80.4% (using the hourly wage rate for all employees in all jobs).

## Why the large differences in earnings ratios?

The SLID ratio, based on the hourly wages of all employees, was eight percentage points greater than

**Table 1: Female-male earnings ratios, 1997**

| Source | Measure | Coverage       | Earnings |        | Female-male ratio |
|--------|---------|----------------|----------|--------|-------------------|
|        |         |                | Men      | Women  |                   |
|        |         |                |          | \$     | %                 |
| SCF    | Annual  | FYFT workers   | 42,600   | 30,900 | 72.5              |
| SLID   | Annual  | FYFT employees | 44,800   | 30,600 | 68.3              |
| SCF    | Annual  | All workers    | 33,200   | 21,200 | 63.8              |
| SLID   | Annual  | All employees  | 38,900   | 24,000 | 61.6              |
| SLID   | Hourly  | All employees  | 18.81    | 15.12  | 80.4              |
| SLID   | Hourly  | FT employees   | 18.92    | 15.31  | 80.9              |

Sources: Survey of Consumer Finances; Survey of Labour and Income Dynamics

the SCF ratio for full-year, full-time workers. This sizeable disparity arises from several conceptual differences between SLID and the SCF:

First, the ratios are for different populations of workers. The SCF ratio considers both employees and the self-employed, while the SLID ratio reflects only employees. Analyses based solely on FYFT workers tend to exclude a significant portion of the labour force—especially women. According to 1997 SLID data, roughly 76% of men and 60% of women worked full year, full time. Ratios based on hourly wage rates avoid these definition problems *and* are representative of female-male pay differences.

Second, the definition of *earnings* is different for each survey. SCF annual earnings include wages and salaries from all jobs, and net income from self-employment. SLID annual earnings include only wages and salaries. Hourly wage rates are job-specific, thus facilitating comparisons between the wages of men and women in comparable jobs.

Third, pay ratios based on annual earnings do not accurately account for differences in work volume. Even among men and women working full year, full time, the number of hours worked per week varies considerably. According to the Labour Force Survey, men employed full time in 1997 worked 43.1 hours per week, while women worked 39.0 hours per week. Ratios based on hourly wage rates overcome this problem.

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## Data source

The data are from the 1997 Survey of Labour and Income Dynamics (SLID). SLID is designed to capture the nature and the pattern of individuals' labour market experiences from the types of jobs they hold, their earnings and selected employer characteristics. However, to get a full picture of economic well-being, SLID also collects information about income, using categories similar to those used by the Survey of Consumer Finances.

Since January 1993, SLID has conducted annual cycles of labour and income interviews with 15,000 to 20,000 households across the country. A new panel is introduced

every three years (the second, in 1996) and remains in the survey for six years.

This study looks at employees, aged 18 to 64, who are not enrolled as full-time students during the year. Self-employed individuals, with or without an incorporated business; and individuals with missing data on hourly wages, full-year full-time work experience, years of schooling, or total usual hours worked in the job during the year are excluded. The analysis is based on 28,303 jobs—14,604 held by men and 13,699 held by women.

The remainder of this article focuses on 1997, when women earned on average \$15.12 per hour and men earned \$18.81. In other words, women earned about 80% of the average male hourly wage.<sup>1</sup>

### Measures of experience

A major limitation of previous studies is the lack of sufficient information on the determinants of the wage gap. One such determinant is the quantity of lifetime work experience. Often age or the Mincer measure of experience (age – schooling – 6) is used as a proxy for the acquisition of general human capital skills or for potential work experience. However, proxy measures tend to overstate the *actual* work experience of women by not accounting for interruptions related to parenting (that is, complete withdrawals from the labour market) or for any restrictions on the number of hours worked per week or the number of weeks worked per year.

SLID collects information on work experience starting with the first full-time paid job. It asks respondents the years in which they worked at least six months (full year), as well as the years in which they did not work at all, since starting to work full time. The remaining years are coded as working part year. Respondents are then asked the years in which they worked six months or more, and if they worked full time (30 or more hours per week), part time, or both. Part-time or summer jobs while in school are not included. From the information provided, a measure of full-year, full-time equivalent (FYFTE) work experience is calculated:

$$\begin{aligned} \text{FYFTE} = & \text{years worked full year, full time} \\ & + 0.5 \cdot (\text{years worked full year, part time}) \\ & + 0.5 \cdot (\text{years worked full year; some full} \\ & \quad \text{time, some part time}) \\ & + 0.25 \cdot (\text{years worked part year, part time or} \\ & \quad \text{part year, full time}) \end{aligned}$$

Men and women bring different work experience to the labour market (Table 2). The Mincer proxy for potential work experience shows little difference in the work experience of men and women (19.5 and 19.1 years respectively). A different story emerges when actual labour market experience is applied. The average FYFTE work experience of men is 18.3 years

**Table 2: Differences in work experience, by sex**

|   | Men   | Women |
|---|-------|-------|
|   | Years |       |
| Average age   | 39.2  | 39.0  |
| Average years of schooling  | 13.6  | 13.8  |
| Mincer proxy for experience:  |       |       |
| Average potential years of work experience (age – schooling – 6)                    | 19.5  | 19.1  |
| Actual labour market experience:  |       |       |
| Average years of full-year, full-time equivalent work experience (FYFTE)            | 18.3  | 14.4  |
| Proportion of potential years of work experience spent working full year, full time | 93.8  | 75.4  |

Source: Survey of Labour and Income Dynamics, 1997

compared with 14.4 for women. Men also spend a greater proportion of their potential years of work experience working full year, full time (94% versus 75% for women).

In absolute terms, the actual experience of young women is similar to that of their male counterparts but, with age, the gap widens (Table 3). This may be partially because older women (aged 55 to 64 in 1997) were less inclined to combine work and family than later cohorts (age 25 to 34 in 1997). As well, young men and women are new to the labour market and have not yet experienced the effects of career interruptions.

The SLID measure of experience, although a welcome addition to the study of pay differentials, is far from perfect. Information is missing on the *continuity* of work experience, the *duration* of labour force withdrawals, and the *frequency* and *timing* of withdrawal. These factors may influence the pay women receive in several ways (Corcoran and Duncan, 1979).

First, men and women differ considerably in the amount of time they work and in the continuity of their work experience. Women are more likely to combine periods of paid work with periods of labour force withdrawal for family-related reasons. This affects job tenure—a factor that influences wages.

Second, human capital skills may depreciate during long periods of labour force withdrawal. Women returning to the same employer after an interruption in employment may be less likely to be promoted. Or, women not returning to the same employer may have to accept lower wages than they received prior to their withdrawal.

Third, women expecting several withdrawals from the labour force may postpone training, or may decide to accept low-wage jobs in industries or occupations that are easy to enter and exit.

Fourth, the timing of labour force withdrawals may affect wages. Job-related skills are usually acquired at the start of careers—which generally coincides with

decisions regarding children. A significant portion of real lifetime earnings growth has been found to occur during the first years after graduation (Murphy and Welch, 1990). If so, the timing of labour force withdrawals may have important long-term implications for future earnings patterns.

Using definitions of full year, full time to calculate FYFTE work experience may be problematic. *Full year* refers to working at least six months in a calendar year and *full time* refers to working at least 30 hours per week. As noted earlier, among full-time workers, the number of hours usually worked per week varies considerably. For example, Person A works 45 hours per week for 12 months, while Person B works 32 hours per week for 7 months. Under the SLID measure of FYFTE, each person would have one year of FYFTE experience despite the significant variation in work hours. As well, the measure of FYFTE work experience does not account for short-term (less than six months) labour force withdrawals in a given year. Almost 40% of working women take less than six months off work after giving birth (Marshall, 1999). If these unrecorded work interruptions and hours of work become more important as experience increases, then the measure of FYFTE work experience may become less accurate in reflecting the relative amount of work done by men and women.

The unadjusted wage gap is small for workers with less than two years of experience (4%) but grows larger as years of work experience increase.<sup>2</sup> A study of recent post-secondary graduates from the

**Table 3: Actual versus potential work experience**

| Age      | Men       |        |       | Women     |        |       | Female/<br>Male      |
|----------|-----------|--------|-------|-----------|--------|-------|----------------------|
|          | Potential | Actual | Ratio | Potential | Actual | Ratio | Actual<br>experience |
|          | Years     |        | %     | Years     |        | %     | %                    |
| 18 to 64 | 19.5      | 18.3   | 93.8  | 19.1      | 14.4   | 75.4  | 78.7                 |
| 18 to 24 | 3.4       | 2.9    | 85.3  | 2.8       | 2.4    | 85.7  | 82.8                 |
| 25 to 34 | 10.0      | 9.2    | 92.0  | 9.4       | 7.9    | 84.0  | 85.9                 |
| 35 to 44 | 19.4      | 18.2   | 93.8  | 19.6      | 15.6   | 79.6  | 85.7                 |
| 45 to 54 | 29.6      | 27.9   | 94.3  | 29.2      | 21.5   | 73.6  | 77.1                 |
| 55 to 64 | 40.2      | 37.1   | 92.3  | 40.2      | 23.8   | 59.2  | 64.2                 |

Source: Survey of Labour and Income Dynamics, 1997

Note: Ratio refers to the proportion of potential work experience spent working full year, full time.

National Graduates Survey found that the gender pay gap was relatively small two years after graduation (7%) but widened two to five years after graduation (16%) (Finnie and Wannell, 1999): “These findings have interesting implications for the longer-term earnings profiles of graduates as they suggest that longer run (permanent) reductions in the earnings gap amongst cohorts of graduates might not be nearly as great as immediate post-graduation records suggest.”

### Education and major field of study

Canadian women have increased their educational attainment, matching and at some levels surpassing men. The importance of human capital characteristics—notably education—in the wage determination process has been firmly established in the economics literature. SLID contains information on educational attainment as well as major field of study. Not surprisingly, many fields of study are dominated by one of the sexes. For instance, graduates of engineering, applied sciences, technologies, and trades fields are mostly men. On the other hand, women are overrepresented among graduates with a commerce or business administration degree, and in the health and education fields. Since wages differ by major field of study, the choices made by men and women may account for some of the pay gap.

### Explaining the gap

In describing the causes of labour market differentials, economists look first at the attributes different workers bring to the workplace. There is no universally accepted set of conditioning variables that should be included. However, the consensus is that controls for productivity-related factors such as education (level and major field of study), experience, experience squared, job tenure, marital status, presence of children, part-time status, union status, firm size, region, and urban size should be included. It is debatable whether occupation and industry should be included. If employers differentiate between men and women through their tendency to hire into certain occupations, then occupational assignment is an outcome of employer practices rather than an outcome of individual choice (Altonji and Blank, 1999). Analyses that omit occupation and industry may overlook the importance of background and choice-based characteristics on wage outcomes, while analyses that fully control for these variables may undervalue the significance of labour market constraints on wage outcomes. (see *Accounting for male-female pay differences*).

Using actual rather than potential experience allows *more* of the wage gap to be explained (Table 4). The explained component is about 9.2% to 37.4% in the conventional model (using potential work experience) and 29.2% to 49.3% in the augmented model (using actual work experience). This finding is novel for Canada but similar to findings in other countries (for example, Wright and Ermisch, 1991, for the United Kingdom; O’Neill and Polachek, 1993, for the United States).

The portion of the wage gap attributable to differences in work experience between men and women is severely underestimated when potential instead of actual labour market experience is used. Differences in actual work experience account for at most 12% of the gap, while potential work experience explains less than 1%. This may be explained as follows: First, as stated earlier, men and women differ little in the mean characteristics of potential experience but they differ

**Table 4: Accounting for male-female differences in hourly earnings**

|                                      | Fraction of the gap explained by... |      |           |      |
|--------------------------------------|-------------------------------------|------|-----------|------|
|                                      | Conventional                        |      | Augmented |      |
|                                      | A*                                  | B**  | A*        | B**  |
|                                      | %                                   |      |           |      |
| Mincer proxy                         | 0.5                                 | 0.6  |           |      |
| Education level                      | -4.9                                | -3.3 |           |      |
| Actual experience                    |                                     |      | 11.9      | 10.8 |
| Education level/major field of study |                                     |      | 5.4       | 4.1  |
| Job tenure                           | 3.3                                 | 2.6  | 2.7       | 2.2  |
| Part-time status                     | 8.4                                 | 2.9  | 6.8       | 2.2  |
| Union status                         | 0.5                                 | 0.8  | 0.5       | 0.8  |
| Firm size                            | 1.0                                 | 0.8  | 1.1       | 0.8  |
| Marital status                       | 1.0                                 | 0.9  | 1.1       | 1.0  |
| Age of youngest child                | 0.0                                 | 0.3  | 0.4       | 0.5  |
| Region                               | -0.3                                | -0.2 | -0.3      | -0.2 |
| Urban size                           | -0.3                                | -0.4 | -0.4      | -0.5 |
| Occupation                           |                                     | 9.2  |           | 6.8  |
| Job responsibilities                 |                                     | 6.2  |           | 5.7  |
| Industry                             |                                     | 17.0 |           | 15.1 |
| Explained                            | 9.2                                 | 37.4 | 29.2      | 49.3 |
| Unexplained                          | 90.8                                | 62.6 | 70.8      | 50.7 |

Source: Survey of Labour and Income Dynamics, 1997

\* Ignoring industry and occupation.

\*\* Controlling for industry and occupation.



significantly in actual FYFTE work experience.<sup>3</sup> Second, although potential and actual work experience are highly correlated, an additional year of FYFTE experience gives greater returns than a year of potential work experience. So, when FYFTE experience is used, both the difference in means and the difference in returns produce a greater explained component than when potential experience is used.

Differences in men's and women's educational attainment reduce the explained component by at most 5%, while differences in the major field of study by educational attainment account for no more than 5% of the wage gap. The contribution of each major field of study to the wage gap varies considerably. About 15%<sup>4</sup> can be explained because men are more likely to graduate from engineering and applied sciences programs, and degrees in these programs yield high returns. However, the prevalence of women graduating from health science and education programs—occupations associated with high earnings—reduces the explained component by 5% to 9%.

Despite the long list of productivity-related factors used in this study, a substantial portion of the wage gap cannot be explained. The same results were found in other notable Canadian studies (Baker et al., 1995; Gunderson, 1998; Christofides and Swidinsky, 1994). Such large, unexplained differences may be related to productivity-related factors, labour market decisions, or skill measures that are not captured by SLID.

### **The choice of non-discriminatory wage structure matters**

Questions related to pay differentials are often framed in a manner that examines the extent to which women are paid the same as comparable men. For this reason, the male wage structure is often considered the 'competitive' or the 'non-discriminatory' wage structure. Alternative competitive wage structures may be employed. If the female pay structure is used, the question would be: What is the hypothetical wage men would receive if they were paid according to the female wage structure?<sup>5</sup> Other approaches hint that the competitive norm falls somewhere between the male and female wage structure. One suggestion is that the competitive wage structure should be more similar to the structure for the larger group (Cotton, 1988). That is, the returns are estimated as the weighted average of the male and female coefficients, where the weights are simply the proportion of the total population that

are men and women. Another suggestion is that the least squares estimates from a combined or *pooled* model be used as the estimate of the competitive wage structure (Neumark, 1988).

When the male wage structure is adopted as the competitive standard, 51% of pay differentials result from differences in the returns to wage-determining characteristics, while 49% result from differences in the endowments of wage-determining characteristics. When the female wage structure is adopted, male-female differences in characteristics explain 6%, while differences in the returns to wage-determining characteristics account for 94% of the pay differential.

By construction, the weighted average method yields decomposition techniques that are bounded by those obtained from the separate wage structures of men and women. This method yields an explained component of 30% and an unexplained component of 70%. Finally, the pooled method attributes a smaller proportion (39%) of the wage differential to differences in the returns to wage-determining characteristics, and a larger proportion to gender differences in characteristics, than the other three competitive wage structures.

These results suggest that adopting alternative comparative pay structures can lead to quite different interpretations of the components of male-female pay differentials.

### **The pay gap differs within the wage distribution**

A major drawback in the preceding methodology is that it considers only the information of the *average* pay differential, and it assumes that the size of the wage gap and its components are constant along the whole wage distribution.

In relation to the absolute predicted wage gap based on the attributes of the typical worker, about 47% of the difference in pay at the 90<sup>th</sup> percentile compared with 57% at the 25<sup>th</sup> percentile was explained by male-female differences in observable characteristics. This suggests that the 50% of the wage gap due to men and women possessing different wage-determining characteristics *at the mean* fails to accurately represent the differences encountered *along* the wage distribution. As well, the contribution of relevant factors in explaining pay differentials varies throughout the wage distribution. Work experience, job responsibilities and industry contribute more to understanding pay differentials at the upper end of the distribution relative to the

lower end, while occupation, union status and part-time status explain more at the lower end of the distribution relative to the upper end.<sup>5</sup>

### Other factors may contribute

The regression models used in the decomposition analysis account for no more than half of the variation in the hourly wages of men and women. The fit of the model to the SLID data can be improved by including other variables deemed to influence wages. The data typically used come from household surveys. Researchers have been unable to document the potential effect of firm characteristics—other than industry and firm size—on the wages of men and women. The new Workplace and Employee Survey will allow researchers to move beyond the individual worker to consider the importance of the workplace. But as noted earlier, pay differentials can be explained only if the factor in question influences wages *and* differences exist in the distribution of the factor among men and women.

People differ in their preference for particular types of work (that is, paid work or self-employment, hours, location, responsibilities). Differences between men and women in the labour market may reflect genuine differences in preferences, pre-labour market experiences, expectations, or opportunities. It is therefore difficult to distinguish between choice-based decisions and differential treatment based on sex. For example, pre-market experiences—which are related to expectations based on sex, both at home and in the education system—may influence the level of educational attainment and the choice of major field of study, labour force participation, job selection, and work habits.

Much of the literature has emphasized the importance of imperfect information about worker attributes. Employers are constantly making decisions regarding hiring and promotion and may use sex to predict future work commitment. Some firms may hesitate to hire women because women have, on average, more career interruptions and more absences for family reasons than men. Consequently, statistical discrimination may result (Arrow, 1973). This would be especially true in firms with substantial hiring or training costs, or where wages are higher. Insofar as employer behaviour changes as a result of women's increased

participation in the labour force, women's access to high-paying jobs will improve due to decreases in statistical discrimination.

### Summary

While earnings differences between men and women have narrowed since the 1970s, they continue to be remarkably persistent. Measurement and methodological issues play important roles in studying these differences.

Estimates of the pay ratio are sensitive to the measurements used. Conceptual differences in data sources and earnings measures that do not fully account for differences in work volume lead to different estimates of the ratio. The portion of the wage gap attributable to differences in work experience between men and women is severely underestimated when proxies for experience are used instead of actual labour market experience. Education level plays little role in explaining wage differentials, but choice of major field of study furthers our understanding of the issue.

Conclusions are often sensitive to the methodology chosen by the researcher. Questions are often framed in a manner that examines the extent to which women are paid the same as comparable men. Most studies use the male pay structure to make comparisons. However, alternative pay structures can be employed, with estimates of the unexplained portion of the differential ranging from 39% to 94%.

One drawback is that only the average difference is considered. When the size of the wage gap and its components along the whole wage distribution are examined, a different story emerges.

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### Perspectives

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#### ■ Notes

- 1 In terms of mean-log wages, the female-male hourly wage differential is 0.220.
- 2 The female-male hourly wage ratios are 0.96 for 0 to 2 years of actual FYFTE work experience, 0.87 for 3 to 5 years, 0.85 for 6 to 9 years, 0.82 for 10 to 19 and 20 to 29 years, and 0.80 for 30 or more years.
- 3 Men have 0.4 years more potential and 3.9 years more actual years of work experience than women.

4 The contribution of each major field of study to the female-male wage gap is calculated using results from the augmented model including detailed occupation and industry.

5 Work experience, job responsibilities and industry explain 14%, 13% and 29% of pay differences between men and women at the 90<sup>th</sup> percentile compared with 12%, 4% and 15% at the 25<sup>th</sup> percentile. Occupation, union status, and part-time status contribute 6%, 5% and 7% to pay differentials at the 25<sup>th</sup> percentile compared with the 90<sup>th</sup> percentile, where these factors tend to reduce the explained component by -15%, -3% and -4% respectively. The experiment is best framed using the characteristics of the typical worker around the percentile since the characteristics of workers at the upper end of the distribution differ from those of the average worker or workers at the lower end of the wage distribution.

## ■ References

- Altonji, J.G. and R.M. Blank. "Race and gender in the labor market." In *Handbook of Labor Economics*, Vol 3C, edited by O. Ashenfelter and D. Card, 3143-3259. Amsterdam, New York and Oxford: Elsevier Science, North-Holland, 1999.
- Arrow, K. "The theory of discrimination." In *Discrimination in Labor Markets*, edited by O. Ashenfelter and A. Rees, 3-33. Princeton, N.J.: Princeton University Press, 1973.
- Baker, M. et al. "The distribution of the male/female earnings differential, 1970-1990." *Canadian Journal of Economics* 28, no. 3 (August 1995): 479-501.
- Christofides, L. and R. Swidinsky. "Wage determination by gender and visible minority status: evidence from the 1989 LMAS." *Canadian Public Policy* 20, no. 1 (March 1994): 34-51.
- Corcoran, M. and G. Duncan. "Work history, labor force attachment, and earnings differences between the races and sexes." *Journal of Human Resources* 14 no. 1 (Winter 1979): 3-20.
- Cotton, J. "On the decomposition of wage differentials." *The Review of Economics and Statistics* 70 no. 2 (May 1988): 236-243.
- Finnie, R. and T. Wannell. "The gender earnings gap amongst Canadian bachelor's level university graduates: A cross-cohort, longitudinal analysis." In *Women and work*, edited by R. Chaykowski and L. Powell. Kingston, Ont.: John Deutsch Institute for the Study of Economic Policy, Queen's University, 1999.
- Gunderson, M. *Women and the Canadian labour market: transitions towards the future*. Census monograph series. Statistics Canada catalogue no. 96-321-MPE no. 2. Ottawa/Toronto: Statistics Canada/ITP Nelson, 1998.
- Marshall, K. "Employment after childbirth." *Perspectives on Labour and Income* (Statistics Canada, Catalogue no. 75-001-XPE) 11 no. 3 (Autumn 1999): 18-25.
- Mueller, R. "Public-private sector wage differentials in Canada: evidence from quantile regressions." *Economics Letters* 60 no. 2 (August 1998): 229-235.
- Murphy, K. and F. Welch. "Empirical age-earnings profiles." *Journal of Labor Economics* 8 no. 2 (April 1990): 202-229
- Neumark, D. "Employers' discriminatory behavior and the estimation of wage discrimination." *Journal of Human Resources* 23 no. 3 (Summer 1988): 279-295.
- O'Neill, J. and S. Polachek. "Why the gender gap in wages narrowed in the 1980s." *Journal of Labor Economics* 11, no. 1, Part 1 (January 1993): 205-228.
- Wright, R. and J. Ermisch. "Gender discrimination in the British labour market: a reassessment." *Economic Journal* 101 no. 406 (May 1991): 508-522.

## Appendix: Accounting for male-female pay differences

The wage structures of men and women were examined by estimating the relationship between hourly wage rates and observed characteristics in semi-logarithmic form:

$$\ln w_i = X_i \beta + u_i \quad i = m, f \quad (1)$$

where the natural logarithm of wages is used as the dependent variable,  $X_i$  is a vector of worker and employer characteristics,  $\beta$  is a vector of coefficients measuring the returns to those characteristics, and  $u$  is the error term. Each coefficient is the percentage change in hourly wage rates associated with a one-unit change in the explanatory variable.

From the estimated regressions, the difference in the mean log wages between men and women is decomposed into three terms (Table A1):

$$\overline{\ln w_m} - \overline{\ln w_f} = (\overline{X_m} - \overline{X_f}) \beta^* + \overline{X_m} (\beta_m - \beta^*) + \overline{X_f} (\beta^* - \beta_f) \quad (2)$$

where  $\beta^*$  is the choice of comparative wage structure. The choice of comparative wage structure is examined in the section *The choice of non-discriminatory wage structure matters*. The first term represents the explained portion, which includes male-female differences in worker characteristics  $\overline{X_m} - \overline{X_f}$  evaluated at the competitive wage structure  $\beta^*$ . The residual or unexplained component is the proportion of the gap due to differences in the returns to

wage-determining characteristics and consists of a male advantage (second term) and a female disadvantage (third term). This decomposition is made possible by the ordinary least squares (OLS) property that the sample average wage,  $\overline{w}$ , is equal to the product of the average vector of characteristics  $\overline{X}$  and the estimated regression coefficients  $\hat{\beta}$ .

Previous work has shown that men and women differ in ways that may affect their productivity, but these differences do not necessarily explain the pay gap. It can only be explained if the differences in the factors in question are themselves important determinants of the pay received. The wage gap between men and women may be the result of either differences in their productivity-related characteristics or differences in the compensations they receive for the same productivity-related characteristics.

Quantile regression methods reveal dispersions in the wage differential that cannot be captured by OLS models. The properties of the OLS model used above (Equation 1) ensure that the average wage,  $\overline{w}$ , is equal to the sample average characteristics  $\overline{X}$  evaluated at the estimated regression coefficients  $\hat{\beta}$ . However, the quantile regression model does not have a comparable property and as a result, no exact decomposition is possible. The difference in the log wage between men and women can be formulated (following the notation of Mueller, 1998) as:

$$\ln w_m^q - \ln w_f^q = \beta_m^q (\overline{X_m} - \overline{X_f}) + \overline{X_f} (\beta_m^q - \beta_f^q) \quad (3)$$

where  $\ln w_i^q$  is the natural logarithm of hourly wages for sex  $i$  evaluated at quantile  $q$ ,  $\beta_i^q$  is a vector of estimated coefficients for sex  $i$  evaluated at quantile  $q$ ,  $\overline{X}_i$  is a vector of average characteristics of worker  $i$  ( $i = m, f$  denotes male and female respectively and  $q = 0.10, 0.25, 0.50, 0.75$  and  $0.90$ ).

Two sets of predicted values can be calculated from the coefficients of the quantile regression model of the log hourly wages. The first is conditioned on a vector of characteristics of men and women around the percentile, while the second is conditioned on the vector of average characteristics of all men and women (Table A2). To calculate the predicted wages of men and women at the 25<sup>th</sup> percentile, the first set of conditioning variables includes the characteristics of individuals falling within the 20<sup>th</sup> – 30<sup>th</sup> percentile. The second set of conditioning variables used to calculate the predicted wages is simply the average characteristics of all men and women respectively.

For each percentile, both the actual and predicted wages are always greater for men than for women. The predicted wage gap can deviate from the actual wage gap. For instance, the actual wage gap at the 10<sup>th</sup> percentile is about

**Table A1: Decomposition of male-female wage differences**

| Structure | $\beta^*$ value<br>(Equation 2) | Log wage differential = 0.220 |                |
|-----------|---------------------------------|-------------------------------|----------------|
|           |                                 | Explained†                    | Unexplained††  |
| Male      | $\beta_m$                       | 0.108<br>49.3%                | 0.112<br>50.7% |
| Female    | $\beta_f$                       | 0.013<br>5.9%                 | 0.206<br>93.6% |
| Weighted  | $\beta_m p_m + \beta_f p_f$     | 0.067<br>30.5%                | 0.153<br>69.5% |
| Pooled    | $\tilde{\beta}$                 | 0.135<br>61.1%                | 0.086<br>39.1% |

Source: Survey of Labour and Income Dynamics, 1997.

† Due to differences in wage-determining characteristics.

†† Due to differences in returns to wage-determining characteristics.

## Appendix: Accounting for male-female pay differences (concluded)

23%. But the predicted wage gap is 18% when the characteristics of the *typical* worker are used, and 19% when the average characteristics are used. Using the characteristics of the *average* worker, the predicted wage gap

increases along the wage distribution. However, a similar conclusion cannot be reached when the predicted gap is based on the characteristics of a typical worker in the percentile or when the actual wage gap is computed.

**Table A2: Wage ratios and decomposition across the wage distribution**

|                 | Log wage gaps |   |  | Decomposition <sup>†</sup> of |                      |
|-----------------|---------------|---|--|-------------------------------|----------------------|
|                 | Actual        | Predicted-1*<br>$= \beta_m^q X_m^q - \beta_f^q X_f^q$ | Predicted-2**<br>$= \beta_m^q \bar{X}_m - \beta_f^q \bar{X}_f$ | Quantile log explained-1      | Wage gap explained-2 |
|                 |               |   |  |                               | %                    |
| 10th percentile | 0.230         | 0.182   | 0.192  | 51.8                          | 55.6                 |
| 25th percentile | 0.237         | 0.237   | 0.210  | 57.3                          | 55.0                 |
| Median          | 0.226         | 0.193   | 0.231  | 46.0                          | 46.4                 |
| 75th percentile | 0.215         | 0.209   | 0.238  | 54.1                          | 49.8                 |
| 90th percentile | 0.209         | 0.214   | 0.258  | 47.0                          | 40.6                 |

Source: Survey of Labour and Income Dynamics, 1997

\* The log wage gap is calculated using the coefficients of the quantile regression model of log hourly wages conditioned on a vector of characteristics of the typical worker falling between +/- 5 of the selected percentile.

\*\* The log wage gap is calculated using the coefficients of the quantile regression model of log hourly wages conditioned on a vector of the mean characteristics of workers.

† The characteristics of the typical worker falling between +/- 5 of the selected percentile is used in the calculation of explained-1 while the characteristics of the average worker are used in the calculation of explained-2.

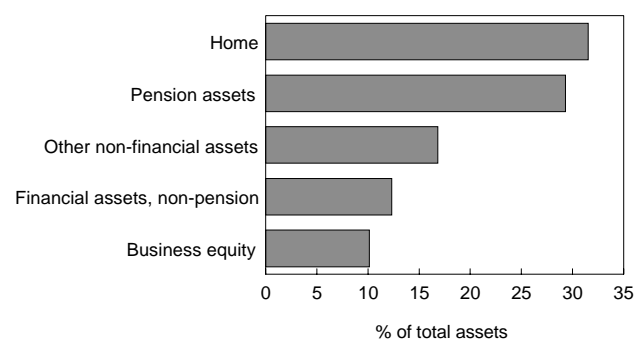
# Private pension savings, 1999

*Karen Maser and Thomas Dufour*

As defined by the Survey of Financial Security, private pension assets include individual savings in registered retirement savings plans (RRSPs) and registered retirement income funds (RRIFs), the value of pension plan benefits 'earned' through participation in an employer pension plan (EPP), and other pension savings held in vehicles such as annuities and deferred profit-sharing plans. Together, they are referred to as *private* pension savings to indicate that they do not include the value of the income to be received from the Old Age Security/Guaranteed Income Supplement (OAS/GIS) program, and the Canada and Quebec Pension Plans (C/QPP).

Private pension assets are a major component of the assets of Canadian families, accounting for close to 29% of the value of all assets. Despite the size and importance of these assets, they are still second to the most valuable asset: the home. It too must be

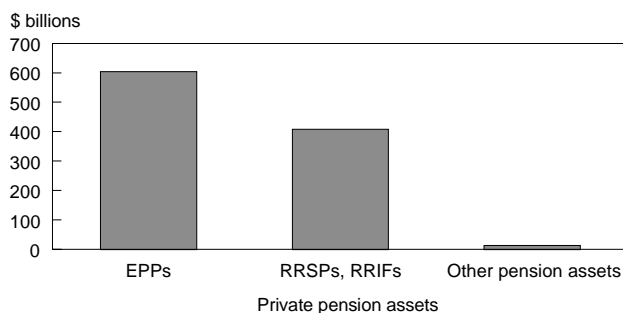
**Chart A: Private pension savings and homes are the major assets of most Canadians.**



Source: Survey of Financial Security

considered in any discussion of readiness for retirement, since it can also serve a very important role in providing for a more financially secure future.

**Chart B: Employer pension plans account for the largest amount of private pension assets.**



Source: Survey of Financial Security

The total estimated value of private pension assets is just over \$1 trillion. This money will be essential in providing a large part of the income of seniors. It also, however, plays a very important role in the current financial markets as one of the largest pools of investment capital in the country.

The value of the benefits to be paid from employer pension plans (\$604 billion) is well over half the total amount in private pension savings. This is considerably more than the amount saved in RRSPs and RRIFs (\$408 billion). Close to 60% of family units have RRSPs or RRIFs, with a median value of \$20,000. Although fewer family units have EPP assets (47%), their median value is much larger (\$49,300). The value of employer pension plan benefits includes that of current plan members as well as those receiving this income.

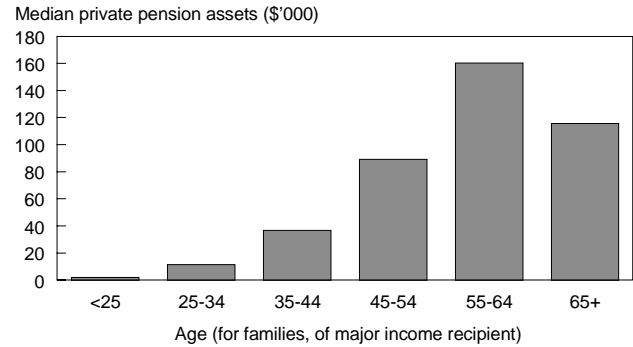
*Karen Maser and Thomas Dufour are with the Income Statistics Division. Karen Maser can be reached at (613) 951-0793 or karen.maser@statcan.ca. Thomas Dufour can be reached at (613) 951-2088 or thomas.dufour@statcan.ca.*

The amount held by family units as private pension assets increased significantly with the age of the individual or, in the case of families, the person with the highest pre-tax income. Pension assets peaked for family units with a major income recipient between 55 and 64 years of age. These family units, who would have been approaching retirement or just recently retired, had median pension assets of \$160,300. It is not surprising that these families led the way in terms of pension holdings, given that the value of employer pension plan benefits increases with the number of years of membership in the plan. As well, these people had a longer period in which to accumulate RRSP assets.

Senior family units (those in which the person with the highest pre-tax income was 65 years and older) also had significant private pension assets, second only to those with a major income recipient aged 55 to 64. Median pension assets for these family units was about \$115,700. Most of the major income recipients in these families were retired and would already have been drawing on these assets, reducing the amount from a pre-retirement peak.

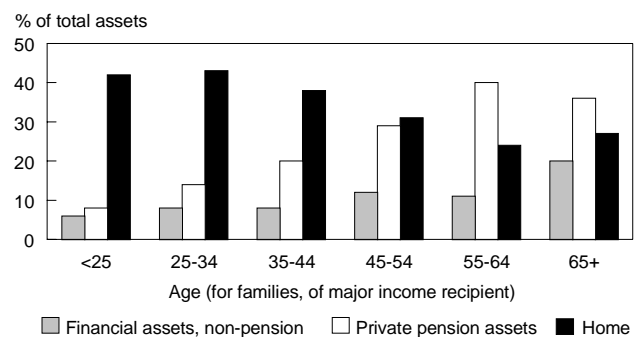
As the age of the major income recipient increased, private pension assets became a much larger proportion of total assets. For family units with a major income recipient aged 55 to 64, pension assets were by far the most significant component of total assets (40%). On the other hand, pension assets represented only about 20% of the assets of family units with a major income recipient between 35 and 44; for these families the home was the most valuable asset (38% of total assets). Financial assets held outside private pension plans were a more important asset for the older age groups—for those family units with a major income recipient 65 years and older, these assets accounted for 20% of the total. These assets are important since they generate income for this age group.

**Chart C: Median private pension assets are greatest for those 55 to 64.**



Source: Survey of Financial Security

**Chart D: Private pensions are the largest asset for those 55 and over.**



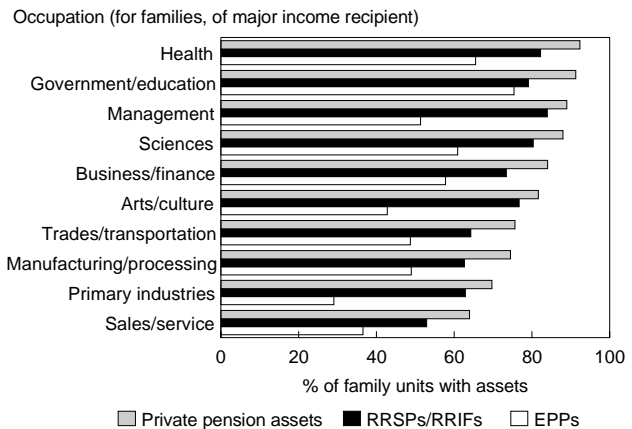
Source: Survey of Financial Security

Families with a major income recipient employed in the public sector (with the government or in education) were not only among the most likely to have private pension assets (91%), they also had the highest median pension value (\$84,400). Almost all public-sector employers offer an employer pension plan.

Family units with a major income recipient whose occupation was classified as “management” also had relatively large private pension assets; the median value was \$74,300. In addition, this group had the highest median RRSP/RRIF holdings (\$35,000). This is likely because they had the highest median after-tax family income (\$56,100) and therefore were in a better position to save.

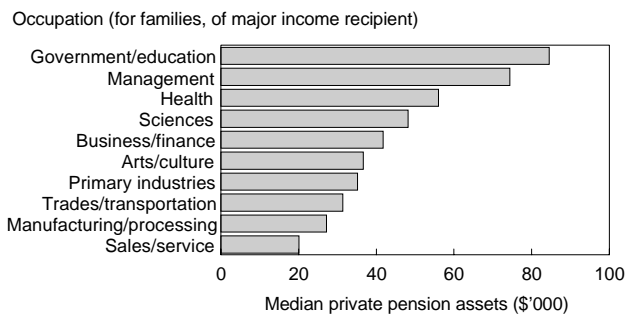
Those employed in certain occupations in the private sector were not only less likely to have pension assets, they also had assets with a lower median value. Some of these occupations account for a large proportion of the labour force. For example, 13% of individuals or major income recipients were employed in sales and service. A much lower proportion of the family units in this occupation had pension assets (64%), and the median value of those assets (\$20,000) was lower than for any other occupation. Family units with a major income recipient also had the lowest median after-tax family income, providing them with less opportunity to contribute to RRSPs.

**Chart E: Government, education and health employees are the most likely to have private pension assets.**



Source: Survey of Financial Security

**Chart F: Those employed in government and education have the highest median private pension assets.**



Source: Survey of Financial Security

### Data source

The 1999 Survey of Financial Security, which covered about 16,000 responding households, collected information from May to July 1999 on the assets and debts of families and unattached individuals. It captured the value of all major financial and non-financial assets, as well as money owing on mortgages, vehicles, credit cards, student loans and other debts. The survey was developed with the support of Human Resources Development Canada, Canada Mortgage and Housing Corporation, Industry Canada and the Policy Research Initiative.

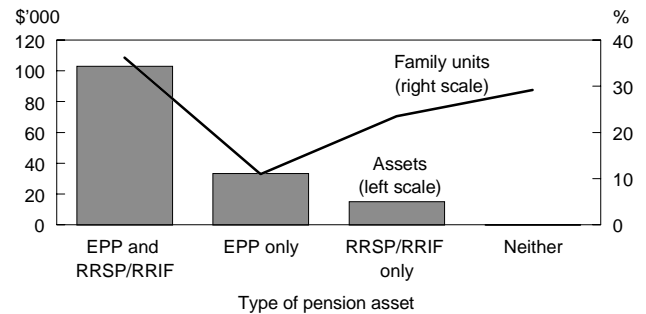
This note analyzes Canadians’ retirement savings. It makes a number of assumptions such as the age of retirement, income required, assets available to generate that income, and the expected earnings on those assets. These assumptions and the methodology used are described in more detail in *Survey of Financial Security: Methodology for estimating employer pension plans benefits* (Catalogue no. 13F0026MIE), free on Statistics Canada’s Web site ([www.statcan.ca](http://www.statcan.ca)).



Families with both employer pension plan assets and RRSP/RRIF assets had significantly higher pension assets than those holding only one or the other. The 36% of families with both types had a median pension value of \$102,900, compared with \$33,300 for those with only EPP assets and \$15,000 for those with only RRSP/RRIF assets. Interestingly, people who belong to EPPs tend to contribute more to their RRSP than those who do not. This is largely related to income. Half of the family units with EPP and RRSP assets had after-tax family incomes of \$40,000 or more, compared with 17% of those family units that had only EPP assets.

Significantly more family units had only RRSP assets than had only EPP assets (24% compared with 11%). This is largely because RRSPs are more widely available. Any person with earned income (largely employment income) could have contributed to an RRSP, while only those working for an employer that provided a pension plan would have EPP assets.

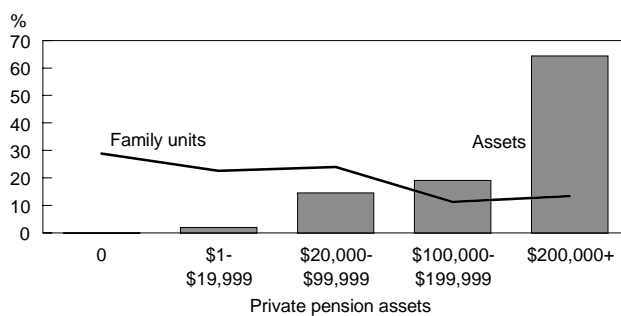
**Chart G: Largest median private pension assets held by family units with both EPPs and RRSPs/RRIFs.**



Source: Survey of Financial Security

Family units holding only EPP assets had much higher median pension assets than those with only RRSP/RRIF assets. Again, this is because EPPs require that regular contributions be made, while RRSPs do not.

**Chart H: About 25% of family units had 84% of private pension assets.**



Source: Survey of Financial Security

Private pension assets were concentrated in a relatively small percentage of family units. The 25% of family units with \$100,000 or more in private pension savings held 84% of these assets. About half of these (13%) had at least \$200,000 in pension assets—this

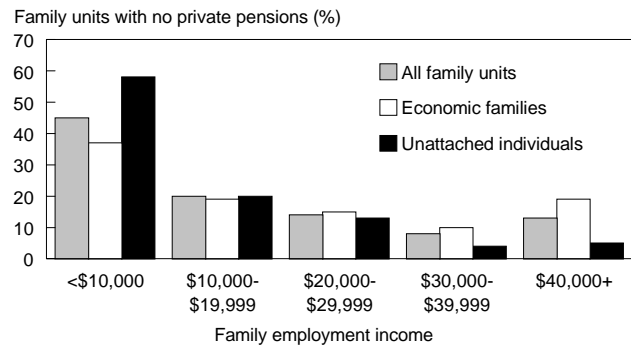
group alone held close to two thirds (64%) of the total. However, almost 29% of all family units did not have any private pension assets in 1999.

Close to half (49%) of the family units in which the major income recipient was between 55 and 64 had at least \$100,000 in private pension assets. This age group also had the lowest percentage of family units with no pension assets (21%). A much smaller percentage (36%) of family units in which the major income recipient was likely to be retired (being 65 or older) had pension assets of \$100,000 or more. Many of these family units would already have been drawing on their pension assets, thereby reducing the amount held.

Notably, 34% of the family units with a major income recipient 65 or older had no pension assets. These families may not necessarily be less well off than in pre-retirement years since their income from government programs (OAS/GIS and C/QPP) may be sufficient to maintain their former standard of living.

The large majority of family units with no private pension assets had lower employment incomes. Considering only those economic family units with a major income recipient between 25 and 64, just over 70% of families of two or more with no pension savings had earnings of less than \$30,000. Approximately 78% of unattached individuals had earnings of under \$20,000. Even though these families and individuals have little saved privately, public plans such as OAS/GIS and C/QPP will provide them with a minimum income in retirement. This income would replace a substantial portion of their pre-retirement earnings. Using 1998 rates, a single person with no other income would receive from OAS/GIS an annual income of just under \$11,000 at 65; a couple, both 65, would get about \$17,800.

**Chart I: Most family units aged 25 to 64 with no private pension assets had earnings of less than \$30,000.**

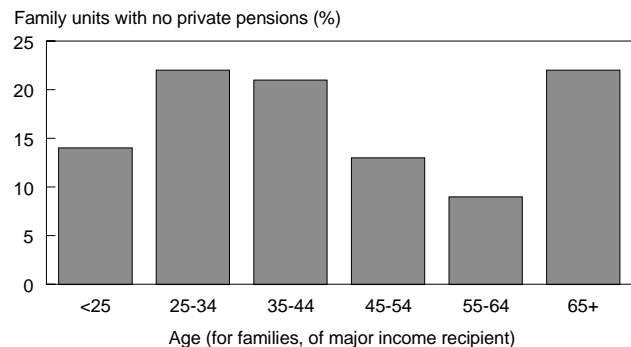


Source: Survey of Financial Security

Most of those with no private pension assets were relatively young. This puts them further from retirement and means they still have a number of years in which to accumulate assets. More than half (57%) of families with no private pension assets had a major income recipient under age 45.

However, the remaining 43% of family units (1.5 million in total) without private pension assets had a major income recipient 45 or older. For these family units, the government-sponsored programs (OAS/GIS and C/QPP) will, or do now, constitute an essential source of income in retirement.

**Chart J: The majority of family units with no private pension assets were under 45.**



Source: Survey of Financial Security

How much income does a family require in retirement? Because certain work-related expenses (for example, contributions to C/QPP, Employment Insurance, and employer pension plans) cease at retirement, it is not necessary to have the same gross income after retirement in order to receive the same net income. Also, because expenditures for consumer goods often decrease while mortgage payments and child-rearing costs are eliminated or reduced, a similar standard of living after retirement is possible with less net income than was earned through employment.

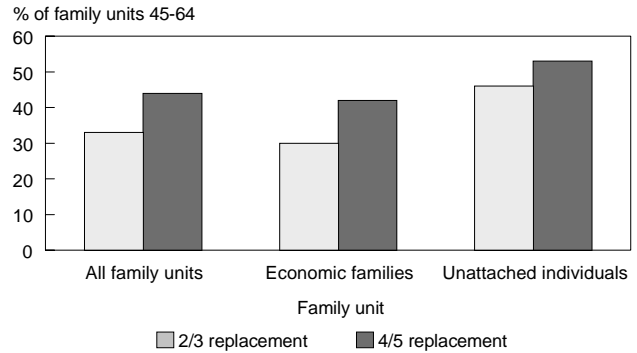
An estimated 33% of family units with a major income recipient aged 45 to 64 may not, given their current asset situation, have saved enough to replace two-thirds of their earnings, or to generate an income in retirement that is likely to be above the low income cutoff (LICO). This increases to 44% if four-fifths of the pre-retirement earnings is to be replaced. The proportion is much higher for unattached individuals because of the number that may not be able to generate an income above the LICO.

The amount of income that a family must replace from private sources increases with their pre-retirement earnings. It is therefore not surprising that the percentage of family units with high employment incomes (of \$75,000 or more) that might not be able to replace two-thirds of their earnings is relatively high, at 41%. Family units earning at least \$75,000 represent over one-third of all family units that might not have saved enough; their median net worth was \$235,300. By comparison, those with earnings of \$75,000 or more that appear to have sufficient savings had a median net worth of \$628,400.

A lower proportion (just under one-quarter) of those with employment incomes of between \$20,000 and \$40,000 may not be able to replace two-thirds of their earnings. The income this group will receive from public pension programs (OAS/GIS and C/QPP) will help most of them to maintain a similar standard of living in retirement.

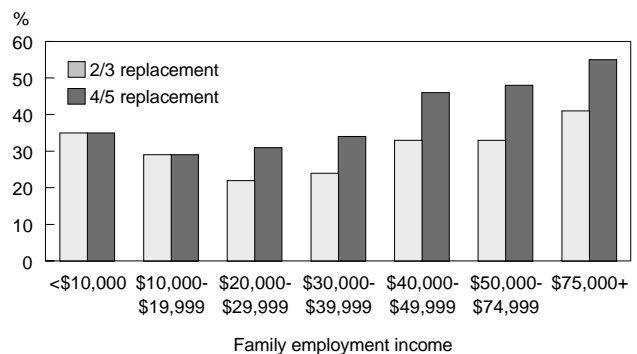
Just over 35% of those with employment incomes under \$10,000 may not have saved enough to generate an income in retirement above the low income cutoff. For many in this group, the result may not be a drop in standard of living but a continuation of one that is restricted.

**Chart K: One-third of family units aged 45 to 64 may not have sufficient retirement savings.**



Source: Survey of Financial Security

**Chart L: Family units with lower and higher employment incomes are the least likely to have saved enough.**

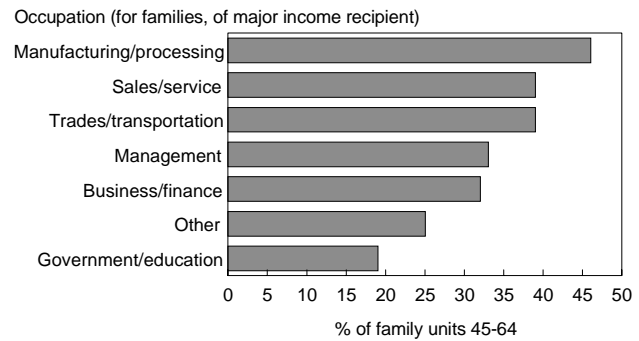


Source: Survey of Financial Security

Family units with a major income recipient employed in the public sector—with some level of government or in an education-related occupation—were most likely to have saved enough for retirement. A relatively small 19% of this group did not appear to have sufficient assets. This group also had the largest proportion of family units with both employer pension plan assets and RRSPs (63%). Only 9% had no savings in either of these private pension programs.

The family units that may have the most difficulty replacing two-thirds of their earnings in retirement have major income recipients working in occupations associated with processing and manufacturing (46%). About 26% did not have any assets in employer pension plans or RRSPs.

**Chart M: Those working in manufacturing and processing are more likely to have difficulty replacing at least two-thirds of their earnings in retirement.**

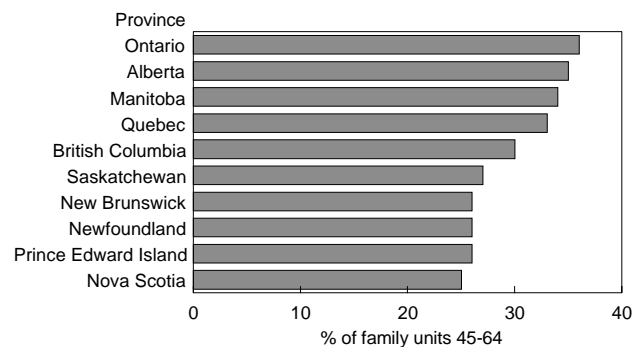


Source: Survey of Financial Security

Alberta and Ontario had the largest proportion of family units aged 45 to 64 that may not have saved enough to replace two-thirds of their earnings in retirement (just over 35%). This is true even though the median net worth of all family units 45 to 64 in Alberta and Ontario was higher than in any other province except British Columbia (\$255,000 in Alberta and \$267,000 in Ontario). However, median employment income for this same population was also among the highest in these provinces and, as was seen earlier, the proportion who may have difficulty replacing their earnings when they retire rises with income.

The Atlantic provinces and Saskatchewan had lower proportions of family units that may not have saved enough. For the most part these provinces have lower median employment income; income from OAS/GIS and the C/QPP will help many family units in these provinces to maintain their standard of living when they retire.

**Chart N: The proportion of family units aged 45 to 64 that may not be able to replace at least two-thirds of their earnings in retirement is highest in Alberta and Ontario.**

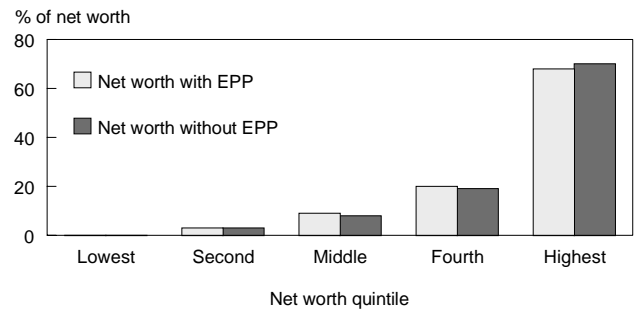


Source: Survey of Financial Security

The net worth of Canadians, excluding the value of employer pension plan benefits, is about \$81,000. Including EPP benefits increases net worth by almost 35% to approximately \$109,200. This indicates the importance of considering these retirement savings when examining the financial situation of Canadians. Although EPP benefits are not savings that can be withdrawn and used for other purposes prior to retirement, they nevertheless constitute an essential part of the financial picture of Canadians.

Including the value of employer pension plan benefits in the net worth of Canadians changed the distribution of net worth only very slightly. Because a relatively large proportion of Canadians belong to employer pension plans (47% of family units had at least one member who belonged to an EPP), it might be expected that adding the value of the EPP benefit would result in a more even distribution of net worth. However, using the estimate of net worth including the value of EPP benefits, the wealthiest 20% of family units continued to hold the largest percentage of

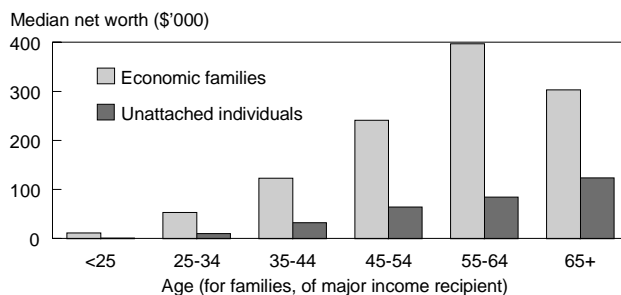
**Chart O: Including the value of employer pension plan benefits changed the distribution of the net worth of Canadians only slightly.**



Source: Survey of Financial Security

personal wealth: 68%. This is slightly less than the 70% excluding EPP. The proportion of the net worth held by the 40% of Canadians with the lowest personal wealth did not change.

**Chart P: Median net worth is highest for families with the major income recipient aged 55 to 64.**



Source: Survey of Financial Security

Families and individuals generally acquire their assets over their lifetime, so it is not surprising that net worth increases with age. Median net worth was highest for those families of two or more in which the major

income recipient was 55 to 64 years of age (\$397,000). It dropped for those 65 and over to \$302,800. This is to be expected since many elderly families may be required to use some of their assets to generate or supplement their income.

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

Those under 25, who have had less time to accumulate savings and purchase assets, had the lowest median net worth. Unattached persons under 25 had a median net worth of \$1,000. Families in which the major income recipient was under 25 had a median net worth of \$11,400.

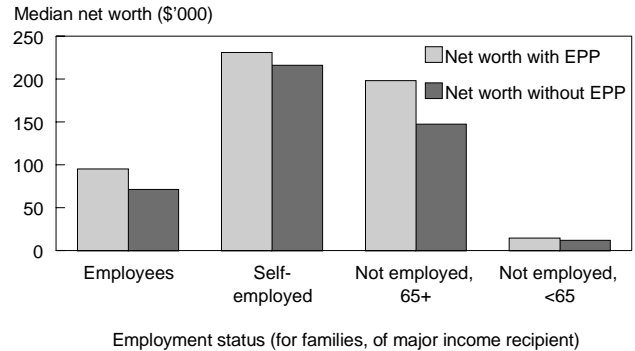
Adding the value of employer pension plan benefits to net worth increased the median net worth of employees by 33%, compared with 7% for the self-employed. Despite this, the median net worth of family units in which the major income recipient was self-employed was still almost two and a half times greater than for an employee (\$231,100 compared with \$95,200). This reflects the effect of business equity on the net worth of the self-employed; for that group business equity represented 31% of total assets, compared with 6% for employees.

The net worth of those not working and at least 65 years of age also increased substantially (to \$198,300) with the addition of the value of employer pension plan benefits. Many in that group were retired and collecting pensions from previous employment. The net worth of those not working and under 65 also increased 22% because of those receiving pensions or having employer pension plan assets from previous employment.

The highest level of education makes a significant difference to the financial situation of the family unit. It is one of the most important determinants of net worth, since it affects both income and occupation. Median net worth for family units in which the individual or major income recipient had not graduated from high school was \$79,600, compared with \$419,600 for those with a professional degree in law, medicine, dentistry, veterinary medicine or optometry.

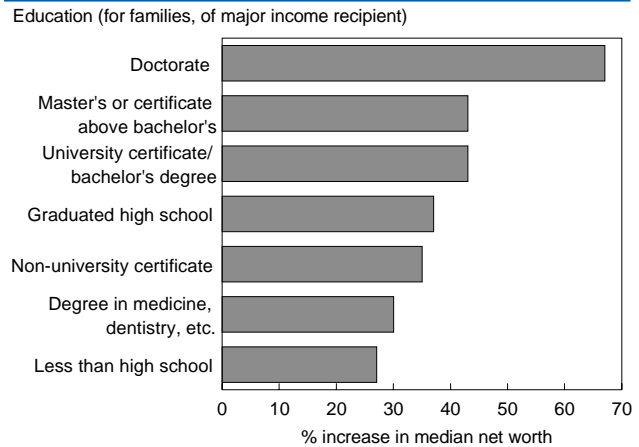
Adding the value of employer pension plan benefits to net worth had the largest effect on those with doctorates. This group had the largest percentage of family units with EPP assets (71%). Although those with a professional degree in law, medicine, dentistry, veterinary medicine or optometry had the highest median net worth, they were less affected by the addition of the value of EPP benefits since a much smaller percentage of family units in that group belonged to EPPs (37%). Many are self-employed and would therefore not be eligible to participate in an EPP. This group would depend more heavily on RRSPs.

**Chart Q: Median net worth of the self-employed is higher than for employees.**



Source: Survey of Financial Security

**Chart R: Increase in net worth with addition of the value of EPP is greatest for those with doctorates.**



Source: Survey of Financial Security

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1989–2001

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**Perspectives**